

SUMMARY OF NORTHERN FUR SEAL DATA AND COLLECTION PROCEDURES

Volume 3: Western Pacific Pelagic Data of the Soviet Union
and Japan, 1958-78 (Excluding Fur Seals Sighted)

Contributed by

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ABSTRACT

This is the third of several reports being produced as a result of the Seattle Data Workshop which the Standing Scientific Committee of the North Pacific Fur Seal Commission convened in December 1978. In a form suitable for detailed population studies, the Commission assembles here much of the biological data from fur seal collections made during 1958-78 by the Soviet Union and Japan in the Western Pacific and adjoining waters under the 1957 Convention. Data tables of each country are preceded by a text explaining the collection procedures. Records of fur seal sightings, sighting effort, and recoveries of tagged or marked seals are not included. The following data are compiled as agreed at the Workshop: age and sex composition, pregnancy rates, reproductive condition of females, length and weight, and stomach contents.

PREFACE

With the distribution of the English versions of Volumes 1-3 of these Data Reports during 1980, the original goal of the Seattle Data Workshop (December 1978) has been essentially met. The Commission's intent was to make available, in a form suitable for population studies, the data collected on land and at sea from commercially exploited stocks on both sides of the North Pacific Ocean. Publication of the voluminous tagging/marking and recovery/sighting data from all stocks and areas is among the projects still planned.

Unlike the situation for the Eastern Pacific Ocean, for which the data in Volume 2 were compiled and where sampling was suspended after 1974 to allow the analysis of data already collected by Canada and the United States, annual sampling by the USSR and Japan in the Western Pacific region continues. The present report contains data collected there during 1958-78.

A few comments are in order with respect to the data on age and reproductive condition in both Volumes 2 and 3. A Workshop on the reproductive classification of female fur seals was held in Ottawa just before the Twenty-First Meeting (1978). Examination of the material, which previously had been examined by Japan, revealed few differences in interpretation among scientists of the four countries. Past studies (most recently reported at the Twenty-Second Meeting in Washington, D.C., 1979) have demonstrated that scientists of the four countries who are experienced in age determination achieve accuracy of at least 98% when reading ages from the external ridges of canine teeth of younger males from the land harvest (i.e., usually ages 2-6 yr and mainly ages 3-4 yr). Comparable studies from young females are not available, however, and accuracy decreases as age increases; the older animals (to ages exceeding 20 yr) are sampled almost entirely as females taken at sea. A slight but nagging question remains concerning the apparently higher age specific pregnancy rates of the younger females (especially at ages 3-5 yr) from the Western Pacific stocks than from the Pribilof Islands.

We acknowledge the contribution of our colleagues in the USSR and Japan for compiling these data. Ethel Zweifel of the Northwest and Alaska Fisheries Center did a superb job of producing Volumes 1-3 on the offset press.

Inquiries about the data in Volume 3 should be directed to the Commission or to the contributing agencies. As with Volumes 1 and 2, copies of this report are available from the address inside the front cover.

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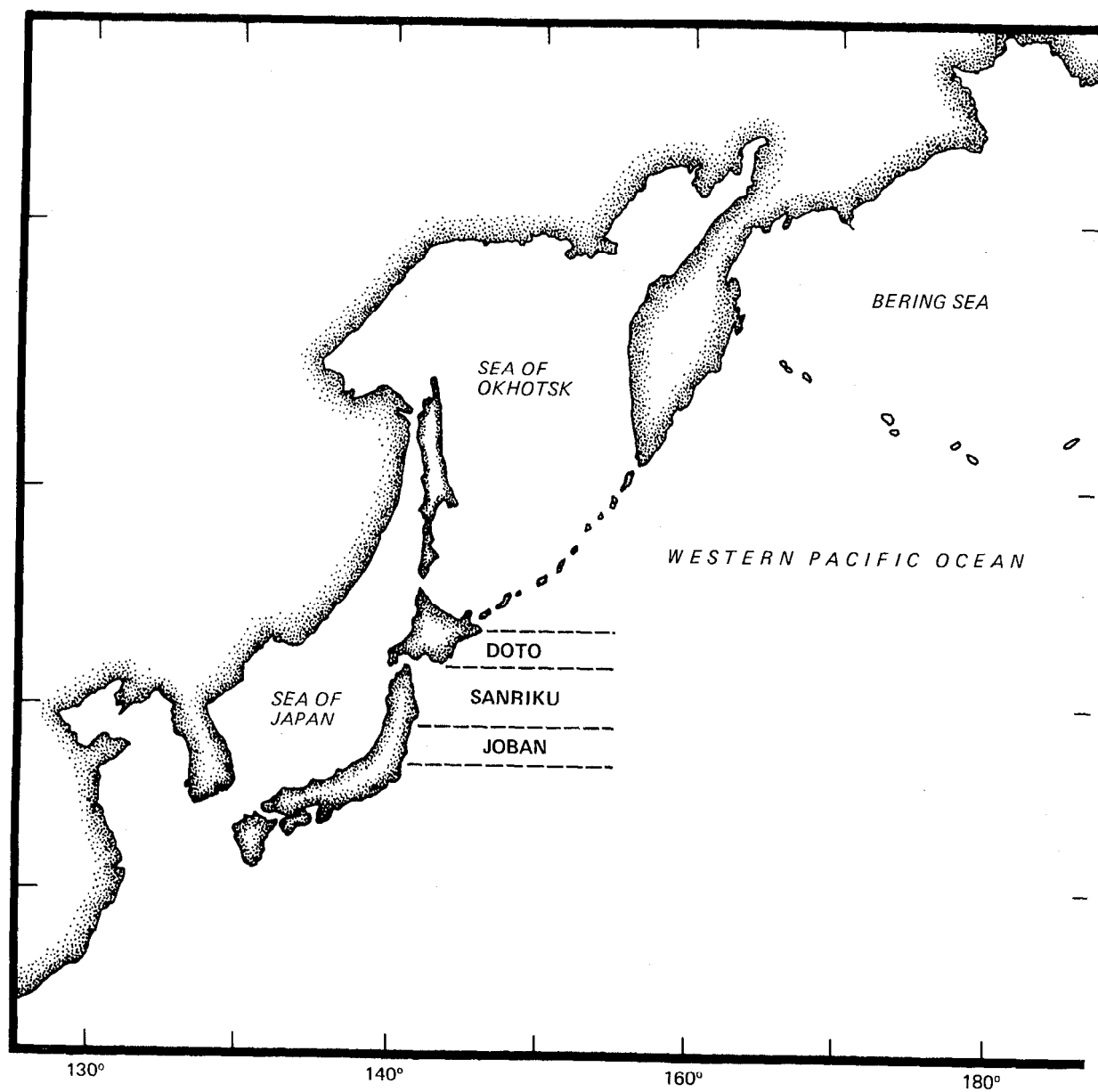


Figure 1. Map of areas for tabulating data from the Western Pacific and adjoining waters as agreed at the Seattle Data Workshop; divisions of the Western Pacific area are as follows: Joban. 26°N. to 38°N.; Sanriku, 38°N. to 41°30'N.; and Doto 41°30'N. to 43°30'N. (types of data and page numbers are on opposite page).

CONTENTS

| | Page |
|---------------------------------|------|
| COLLECTION OF DATA | |
| USSR | 1 |
| FIELD METHODS | 1 |
| LABORATORY METHODS | 8 |
| JAPAN | 129 |
| SHIPBOARD PROCEDURES | 129 |
| LABORATORY PROCEDURES | 134 |

DATA TABLES: PAGE NUMBERS FOR EACH TYPE OF DATA INDEX THE EARLIEST COLLECTION BY THE USSR AND JAPAN BY AREA. DATA ARE THEN ORDERED CHRONOLOGICALLY WITHIN EACH AREA (SEE FACING PAGE FOR AREA MAP).

| | SEA OF JAPAN -Page- | SEA OF OKHOTSK -Page- | JOBAN -Page- | SANRIKU -Page- | DOTO -Page- | BERING SEA -Page- |
|----------------------------|---------------------------|-----------------------------|-----------------|-------------------|----------------|-------------------------|
| AGE AND SEX | | | | | | |
| USSR | 10 | 12 | 13 | 13 | 16 | 17 |
| JAPAN | - | 147 | 148 | 148 | 148 | 154 |
| PREGNANCY RATES | | | | | | |
| USSR | 19 | 22 | 23 | 24 | 29 | 30 |
| JAPAN | - | 155 | 158 | 158 | 158 | - |
| REPRODUCTIVE CONDITION | | | | | | |
| UTERINE | | | | | | |
| USSR | 34 | 38 | 40 | 41 | 45 | 48 |
| JAPAN | - | 171 | 175 | 175 | 175 | - |
| OVARIAN | | | | | | |
| USSR | - | 51 | 52 | 52 | 52 | 53 |
| JAPAN | - | 185 | 188 | 188 | 188 | - |
| LENGTH AND WEIGHT | | | | | | |
| FETUSES | | | | | | |
| JAPAN | 194 | 194 | 195 | 198 | 207 | - |
| NONPREGNANT FEMALES. . | | | | | | |
| USSR | 54 | 57 | 59 | 59 | 59 | 67 |
| JAPAN | - | 208 | 215 | 219 | 234 | 235 |
| PREGNANT FEMALES . . . | | | | | | |
| USSR | 69 | 73 | 74 | 74 | 74 | 83 |
| JAPAN | 236 | 237 | 238 | 244 | 261 | - |
| POSTPARTUM FEMALES . . | | | | | | |
| USSR | - | 85 | 87 | 87 | 87 | 88 |
| JAPAN | - | 262 | - | - | 268 | - |
| MALES | | | | | | |
| USSR | 90 | 94 | 95 | 95 | 95 | 100 |
| JAPAN | 269 | 270 | 273 | 276 | 284 | 285 |
| STOMACH CONTENTS | | | | | | |
| USSR | 103 | 108 | 110 | 113 | 120 | 124 |
| JAPAN | - | 286 | 291 | 291 | 291 | - |

EXPLANATION OF DATA TABLES

For typing the English version, data were in some cases not available (size of fetuses - USSR) or were combined for two or more of the "Western Pacific" subareas (age and sex composition, pregnancy rates, and reproductive condition - Japan) identified at the Seattle Data Workshop as appropriate for tabulation. A few obvious misprints or errors are identified by an asterisk (*), but no systematic search was made for outlying values. These are minor points which need not delay analyses, however, and could be rectified in any Russian and Japanese versions produced by the Commission or individual member nations.

As in Volume 2 (Eastern Pacific) and as noted above, the data within each area are arranged chronologically for easy access after the earliest collection by either country is found. The data are arranged among areas as follows: Sea of Japan - Sea of Okhotsk - Western Pacific (Joban - Sanriku - Doto) - Bering Sea. In the case of combined "Western Pacific" data, only the first page number is indexed in the Contents.

TABLES

| Number | | Page |
|--------|---|------|
| 1 | Age (yr) and sex (M = male, F = female) of fur seals collected in the Sea of Japan. (X designates unknown age) | 10 |
| 2 | Age (yr) and sex (M = male, F = female) of fur seals collected in the Sea of Okhotsk. (X designates unknown age) | 12 |
| 3 | Age (yr) and sex (M = male, F = female) of fur seals collected in the Western Pacific Ocean. (X designates unknown age) | 13 |
| 4 | Age (yr) and sex (M = male, F = female) of fur seals collected in the Western Bering Sea | 17 |
| 5 | Age specific pregnancy rates of female fur seals (n = number of females examined, p = number pregnant, and % = percentage pregnant) | 19 |
| 6 | Reproductive condition (uterine) of female fur seals collected in the Sea of Japan. An X designates unknown age. (N = nulliparous, P = primiparous, M = multiparous). . | 34 |
| 7 | Reproductive condition (uterine) of female fur seals collected in the Sea of Okhotsk. An X designates unknown age. (N = nulliparous, P = primiparous, M = multiparous). . | 38 |
| 8 | Reproductive condition (uterine) of female fur seals collected in the Western Pacific Ocean. An X designates unknown age. (N = nulliparous, P = primiparous, M = multiparous) | 40 |
| 9 | Reproductive condition (uterine) of female fur seals collected in the Western Bering Sea. (N = nulliparous, P = primiparous, M = multiparous) | 48 |
| 10 | Reproductive condition (ovarian) of female fur seals collected in the Sea of Okhotsk | 51 |
| 11 | Reproductive condition (ovarian) of female fur seals collected in the Western Pacific Ocean | 52 |
| 12 | Reproductive condition (ovarian) of female fur seals collected in the Bering Sea | 53 |
| 13 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n>10) | 54 |

| | | |
|-----|--|-----|
| 14 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n>10) | 69 |
| 15 | Monthly mean length and weight of postpartum fur seals. (x = mean, n = sample size, s = standard deviation for n>10) | 85 |
| 16 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n>10) | 90 |
| 17 | Monthly stomach contents of fur seals taken in the Sea of Japan | 103 |
| 18 | Monthly stomach contents of fur seals taken in the Sea of Okhotsk | 108 |
| 19 | Monthly stomach contents of fur seals taken in the Western Pacific Ocean | 110 |
| 20 | Monthly stomach contents of fur seals taken in the Western Bering Sea | 124 |
| 21 | Summary of vessel and survey information from fur seal research in the Western Pacific region by Japan during 1958-78 | 130 |
| 22 | Age (yr) and sex (M = male, F = female) of fur seals. (X designates unknown age) | 147 |
| 23 | Age specific pregnancy rates of female fur seals. An X designates unknown age. (n = number of females examined, p = number pregnant, and % = percentage p r e g n a n t | 155 |
| 24 | Reproductive condition (uterine) of female fur seals. An X designates unknown age. (N = nulliparous, P = primiparous, M = multiparous) | 171 |
| 25 | Reproductive condition (ovarian) of female fur seals | 185 |
| 26 | Length and weight of fur seal fetuses, by sex (M = male, F = female), collected in the Sea of Japan. (x = mean, n = sample size, and s = standard deviation for n > 10) . . | 194 |
| 26a | Length and weight of fur seal fetuses, by sex (M = male, F = female), collected in the Sea of Okhotsk. (x = mean, n = sample size, and s = standard deviation for n > 10) . . | 194 |
| 26b | Length and weight of fur seal fetuses, by sex (M = male, F = female), collected off Joban. (x = mean, n = sample size, and s = standard deviation for n > 10) | 195 |

| | | |
|-----|---|-----|
| 26c | Length and weight of fur seal fetuses, by sex (M = male, F = female), collected off Sanriku. (x = mean, n = sample size, and s = standard deviation for n > 10) . . | 198 |
| 27 | Length and weight of fur seal fetuses, by sex (M = male, F = female), collected off Doto. (x = mean, n = sample size, and s = standard deviation for n > 10 | 207 |
| 28 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Okhotsk | 208 |
| 29 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n>10) Joban | 215 |
| 30 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n>10) Sanriku | 219 |
| 31 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n>10) Doto | 234 |
| 32 | Monthly mean length and weight of nonpregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10 Western Bering Sea | 235 |
| 33 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Japan | 236 |
| 34 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Okhotsk | 237 |
| 35 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Joban | 238 |
| 36 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sanriku | 244 |
| 37 | Monthly mean length and weight of pregnant fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Doto | 261 |
| 38 | Monthly mean length and weight of postpartum fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Okhotsk | 262 |

| | | |
|----|---|-----|
| 39 | Monthly mean length and weight of postpartum fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Doto | 268 |
| 40 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Japan | 269 |
| 41 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sea of Okhotsk | 270 |
| 42 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Joban | 273 |
| 43 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Sanriku | 276 |
| 44 | Monthly mean length and weight of male fur seals. (x = mean, n = sample size, s = standard deviation for n > 10) Doto | 284 |
| 45 | Monthly mean length and weight of male fur seals, (x = mean, n = sample size, s = standard deviation for n > 10) Western Bering Sea | 285 |
| 46 | Monthly stomach contents of fur seals taken in the Sea of Okhotsk | 286 |
| 47 | Monthly stomach contents of fur seals taken off Joban, Sanriku and Doto | 291 |
| 48 | Monthly stomach contents of fur seals taken off Joban and Sanriku | 297 |
| 49 | Monthly stomach contents of fur seals taken off Sanriku and Doto | 302 |
| 50 | Monthly stomach contents of fur seals taken off Sanriku . . . | 303 |
| 51 | Monthly stomach contents of fur seals taken off Doto | 304 |

FIGURES

| Number | | Page |
|--------|--|------|
| 1 | Map of areas for tabulating data from the Western Pacific and adjoining waters as agreed at the Seattle Data Workshop; divisions of the Western Pacific area are as follows: Joban, 26°N. to 38°N.; Sanriku, 38°N. to 41°30'N.; and Doto, 41°30'N. to 43°30'N. | iii |
| 2 | Vessel used since 1970 for pelagic research by the USSR | 2 |
| 3 | Grapnel used by the USSR for snagging fur seals shot during pelagic research (1-plummet of copper, bronze, or brass; 2-hook of spring steel). Cutaway at right indicates attachment locations. Measurements are in mm | 4 |
| 4 | Bamboo rod (upper) for retrieving dead fur seals is 5-6 m long. Line of nylon or similar material is 10-12 m long and 2 mm in diameter. The rod has a hand brake (lower) | 5 |
| 5 | Pole (upper) with spring steel hook (left, dimensions in mm) is for holding fur seals to the side of the vessel. They are lifted aboard with a dip net (lower) | 6 |
| 6 | Harpoon vessel of the type used by Japan for pelagic seal research during 1958-67 | 131 |
| 7a | Form used to record selected biological, atmospheric, and oceanographic observations | 132 |
| 7b | The English version of Figure 7a | 133 |
| 8a | Form used to record biological data collected from each individual seal processed aboard the research vessels | 135 |
| 8b | The English version of Figure 8a | 136 |
| 9a | Form used to record data on each tooth collected | 138 |
| 9b | The English version of Figure 9a | 139 |
| 10a | Form used to record reproductive data for each female seal collected | 140 |
| 10b | The English version of Figure 10a | 141 |
| 11a | Form used to record seal stomach contents | 142 |
| 11b | The English version of Figure 11a | 143 |

| | | |
|-----|--|-----|
| 12a | Form used for summarizing selected data as recorded on the forms shown in Figures 7 to 11 | 145 |
| 12b | The English version of Figure 12a | 146 |

DATA COLLECTION BY THE USSR

The USSR has been conducting research annually since 1958 on the pelagic phase of the life cycle of fur seals. The broad subjects of pelagic research are: wintering areas of the different fur seal populations, timing and routes of migration, distribution of particular age and sex groups as well as of general age and sex structure of animals wintering in particular areas, intermixture of various fur seal populations at sea, feeding and relationships with other marine life, environmental factors which limit the distribution and migrations of fur seals, and observations of behaviour and physiology including patterns of grouping, reproductive status of females, and prenatal growth and development. In addition to obtaining biological information, research at sea has included the study of killing techniques and of their impact on the quality of skins and on the status of populations.

Since the 1957 Convention went into effect, the pelagic research program has been broadened and changed several times in accordance with newly developed techniques and with proposals of the other Parties. In addition to investigating the general problems listed above, the USSR and the other member nations carry out more detailed research in accordance with national objectives.

FIELD METHODS

Vessels and Personnel

Different types of vessels have been used in pelagic research. During 1958-69 the predominant type was a sealing schooner, but since 1970 the SRTM type (medium trawler-refrigerator) has been used. In 1975 a whaling boat was employed experimentally (see Appendix I).

The sealing schooner is a one-deck vessel with single propellor; it has auxillary sails which were not used in pelagic research (Fig. 1). The vessel has a wooden hull of pine and oak, and was designed especially for cruising in ice so that it would be pushed out from crevices. The hull has four watertight bulkheads. The cargo capacity is 190,000 m³. Fuel tanks provide 900 hours of engine operation, and food and water for two months can be carried. Registered length is 40.6 m, beam is 9.2 m, and draft is 3.8 m. The main engine is rated at 300 hp with a cruising speed of 8 knots. The vessel complement totals 25, including 3 scientists.

The SRTM vessel is also one-decked and has a single propellor. Its hull is metal with watertight bulkheads. Fuel tanks provide 720 hours of operation; food and water last one month. Registered length is 50.4 m, beam is 4.7 m, and draft is 3.5 m. The main engine is rated at 800 hp, with a cruising speed of 11.6 knots. The complement is 26, including 4-5 scientists.

The basic means for hunting seals at sea is the small motor boat. The sealing schooner has 5 small boats and the SRTM has 2; at least one small boat is always kept on deck for emergency use. They are made of



Figure 2. Vessel used since 1970 for pelagic research by the USSR.

wood planks or fiberplastic. The hull is covered with thin steel (0.5-0.6 mm) for rigidity. The maximum length and beam are 5.9 m and 1.86 m, respectively, and the depth is 1.32 m. Cargo capacity is 0.9 tons. The boat has a 10-15 hp diesel engine.

The small boat carries emergency rations for at least 3 days for each man, and has fuel for 2 days, a walkie-talkie radio, and emergency rockets. Weapons and cartridges are taken on board only after the boat has been lowered to the water. Hunters use smooth-bore 12 gauge guns and pellet cartridges. The small boat is manned by a helmsman (in charge), engine operator, and hunter. Scientists may or may not be on board, depending on the situation.

Collecting Seals

One or two small boats are lowered with a crane when fur seals are found. A small boat is directed orally or via radio to the nearest group of seals. The hunter does most of the actual searching, often with binoculars, as he stands in the bow with his back resting on a short vertical board which is inserted during the hunt. Nearby the hunter has a gun, cartridges in a waterproof box, and a gaff for hoisting killed seals aboard.

Fur seals usually are shot from a distance of 20-30 m; animals beyond 50 m are considered to be too far away. After an effective shot, the motorman gets a signal to reduce speed and the small boat approaches the fur seal. The hunter throws a gaff and hoists the animal on board with the help of the motorman and sometimes of the helmsman. Wounded seals are followed and attempts made to catch them. Figures 3 to 5 show some of the equipment in use. The larger vessel (mothership) is always in visual contact with the small boat.

When small aggregations of seals are dispersed after little hunting effort, the small boat is usually left on the water and towed by the larger ship. The search proceeds from this larger vessel. When seals are sighted a signal is then sent to the small boat which chases the seals. The small boat is directed by radio whether the aggregations of fur seals are small or large.

During hunting, the man in charge of a boat records in a notebook the time of collection for each seal, number of animals in the group from which this seal was collected, number of animals observed and pursued, and the number of wounded and drowned seals. For identifying the sequence of collection and pinpointing the time of catch, marks on the flippers of each killed seal are cut with a knife. These data are entered on the catch documents.

Weather and Marine Mammal Observations

Officers of the vessel register weather and sea conditions in the ship's logbook. These data are used by the scientists. Surface water temperature is of special importance during pelagic research; it is registered each hour and additionally when seals are found. When the

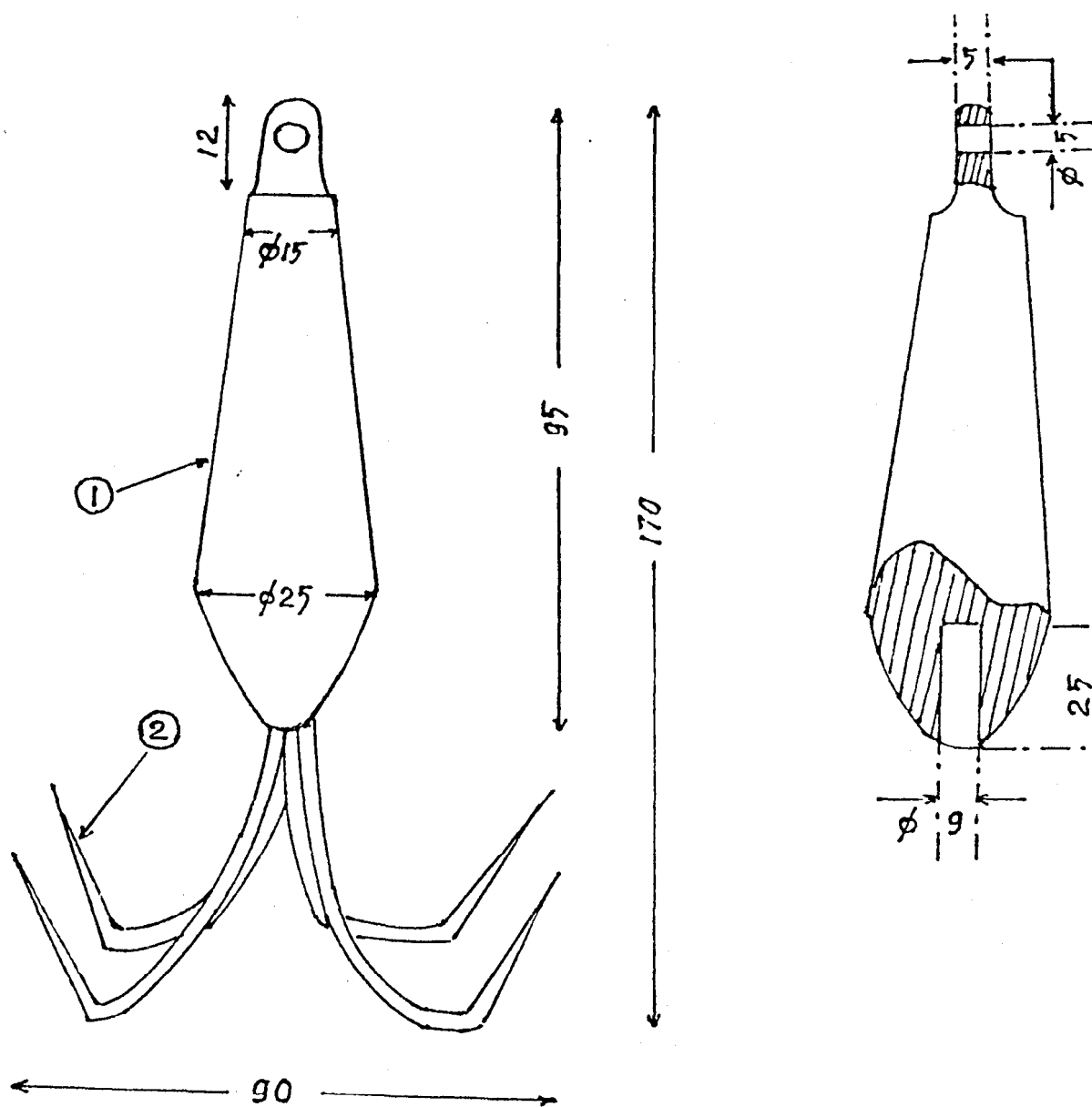


Figure 3. Grapnel used by the USSR for snagging fur seals shot during pelagic research (1 - plummet of copper, bronze, or brass; 2 - hook of spring steel). Cutaway at right indicates attachment locations. Measurements are in mm.

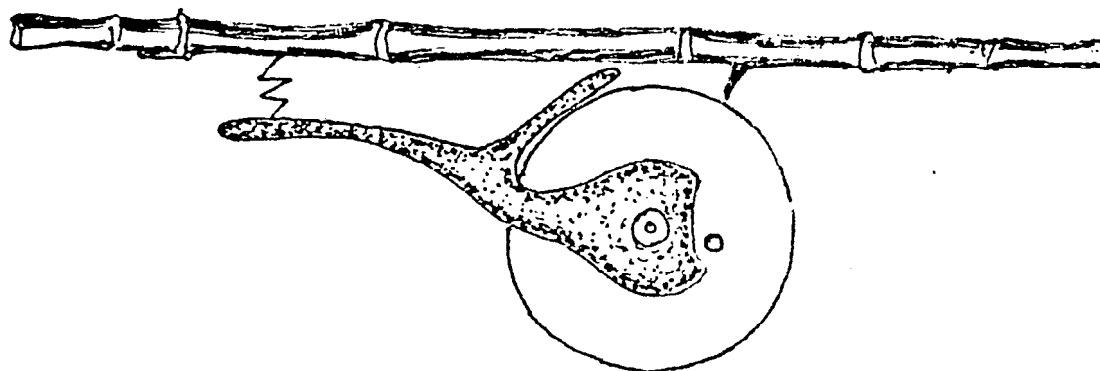
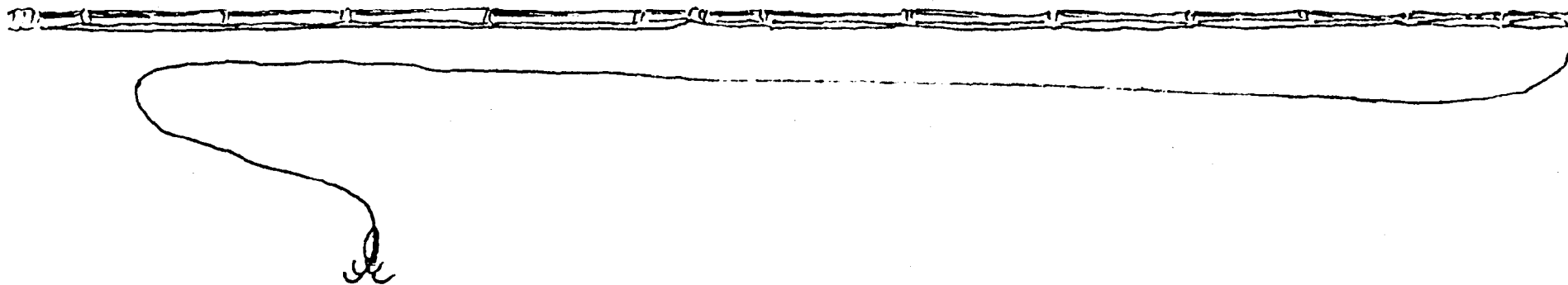
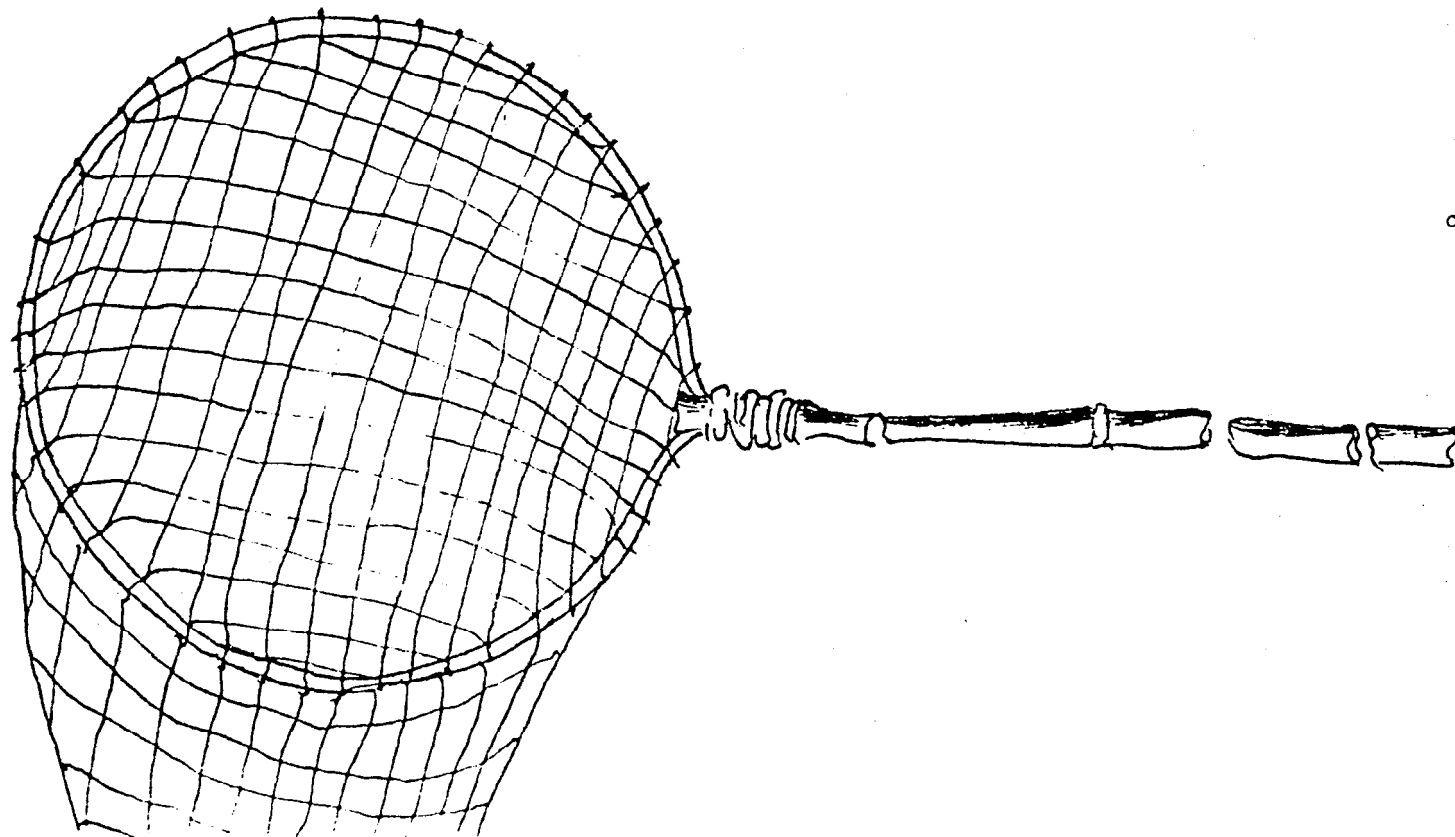
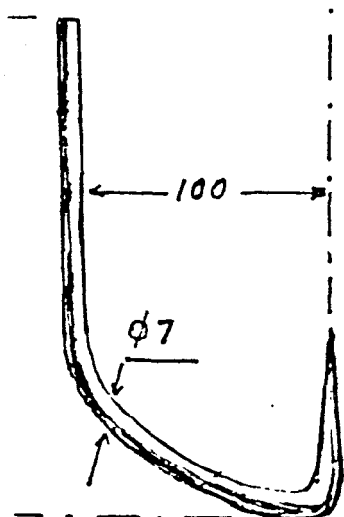
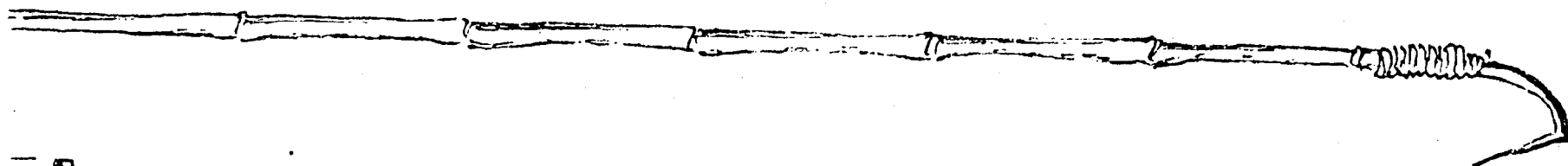


Figure 4. Bamboo rod (upper) for retrieving dead fur seals is 5-6 m long. Line of nylon or similar material is 10-12 m long and 2 mm in diameter. The rod has a hand brake (lower).



observation book is filed the data for each collected animal is accompanied by the complete set of weather data. Investigations by hydrologists who were on board the research vessel during 1970-73 included the collection of water temperature and salinity data at depths of 0, 20, 30, 50, 75, 100, 150, and 200 m.

Observations of the sea surface are made from the upper bridge during daylight hours. All crew members take part according to a schedule. Two persons observe simultaneously with binoculars, one from the port side and the other from the starboard. When animals are sighted, the observers tell officers in the pilot house the direction, distance, species, numbers and behaviour. These data are recorded in an observation book. Not only marine mammals, but other forms are also recorded along with the observer's signature.

Processing Seals

Killed seals are hoisted on board and numbered successively according to the marks on the flippers. Then a kill card is filed with the identification number of the animal, date and time (hours and minutes), and latitude and longitude. Information on the number of animals in the group from which the animal was caught is taken from the hunting book, and surface water temperature at the location of kill from the observation book.

The animal is then examined externally to find any abnormalities (e.g., external parasites and algae). The animal's sex is determined and its flippers are scrutinized in order to find tags and tag-loss scars. The number and series of any tag are recorded on the kill card along with the length of any tag-loss scar as measured to the nearest centimeter with a sliding caliper made of a rule, fixed stock, and slide. The seal is then measured with its abdomen up; the fixed stock is put to the nose tip and the slide to the end of the tail. Weight is taken next. For weighing females and bachelors a spring balance of 100 kg capacity and 1.0 kg accuracy is used; for weighing bulls a spring balance of 500 kg capacity and 2.0 kg accuracy is used.

After length and weight are recorded the seal is skinned. The skin is processed, preserved, and later used commercially.

For age determination, the snout is chopped from the head with an ax; canine teeth are extracted and brought to the shore laboratory. During all years the USSR used both upper canines for age determination. During 1958-74, the age of fur seals was determined by counting external ridges (Scheffer 1950) while growth layers of cut and polished teeth have been used since 1975. Teeth are cut on a specially designed cutting machine and layers are examined under a binocular microscope.

The next procedure is dissection of the abdominal cavity. Reproductive condition is first determined in females. Both uterine horns and ovaries are examined. It should be noted that the reproductive condition of females was determined using only uterine horns during 1958-76 while the

condition of uterine horns as well as the gross structure of cut ovaries have been used since 1977. In determining the reproductive condition using gross structure, each ovary is cut with a lancet into thin layers ("a book"). Investigations are conducted in accordance with the detail on a reproductive card. Ovaries are first examined while fresh, then preserved in 10% formalin and brought to the shore laboratory for another inspection.

When samples are collected between the breeding season and implantation (June to November) scientists examine the ovaries of females for ovulation and the formation of a corpus luteum to determine the reproductive status for the coming reproductive season. The current or past reproductive status of females is determined from pregnant or postpartum animals. If an embryo or fetus is found in one of the uterine horns, its sex, weight to the nearest 50 g and length from tip of nose to tip of tail to the nearest 0.5 cm are measured. An effort is made to establish the reason for any abortion or resorption; if necessary, embryos are retained either frozen or preserved in 10% formalin for more detailed examination later.

To investigate feeding, the stomach is excised with the pyloric sphincter intact. The caudal end is tied with the pyloric sphincter intact, labeled, then preserved in 10% formalin. Stomach contents are investigated in the shore laboratory.

Other biological data are collected from time to time. In each case appropriate instructions concerning primary processing and transportation are formulated.

LABORATORY METHODS

Stomach Contents

A food card is completed at the shore laboratory for each stomach. This card includes basic data from the kill card and results of the identification of contents. The latter are removed from the stomach and dried on tissue paper. Weight is taken to the nearest 5 g and volume is determined by water displacement.

Stomachs are divided into three groups according to the degree of fullness: (1) food volume more than 10 cc, (2) food volume less than 10 cc, and (3) empty. Stomachs with traces of food containing mainly indigestible fish parts (otoliths) and squid beaks which permit conclusions on the rate of occurrence for each food item. These stomachs, however, are not used to determine the volume of food.

The identity, number, and weight of particular food items are determined next. Roundworms (helminths) are removed from the stomachs. Undigested individuals of smaller fish and squids are found, as well as their variously digested remains and indigestible mineralized otoliths and horny squid beaks. The degree of digestion of food items is classified by the 5-point scale proposed by Japanese scientists in 1958.

To facilitate the classification process, a reference collection of fish bones and otoliths and of squid beaks has been established from various areas of fur seal investigations. Specimens were taken from whole individuals of known species.

Remains were tabulated as "unknown" if digestion was advanced too far to permit species identification.

Changes in Names of Food Items

| <u>Current name</u> | <u>Former name</u> | <u>Year changed</u> |
|--|--------------------------------------|---------------------|
| <u>Fish</u> | | |
| <u>Laemonema longipes</u> | <u>Podonema longipes</u> | 1970 |
| <u>Scomber japonicus</u> | <u>Pneumatophorus japonicus</u> | 1970 |
| <u>Squid</u> | | |
| <u>Todarodes pacificus</u> | <u>Ommastrephes sloani pacificus</u> | 1975 |
| <u>Berryteuthis magister</u> | <u>Gonatus magister</u> | 1975 |
| <u>Onychoteuthis boreali-japonicus</u> | <u>Onychoteuthis banksii</u> | 1975 |

Table 1
Age (yr) and sex (M = male, F = female) of
fur seals collected in the Sea of Japan.
(X designates unknown age)

| Year and month | Sex | Age | | | | | | | | | | | | | | | | | | | | | | Total |
|-------------------|-----|-----|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | X | |
| 1959 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 1 | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | F | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 4 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 1960 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | F | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| April | M | 0 | 0 | 0 | 3 | 5 | 6 | 5 | 8 | 7 | 6 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 50 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 1 | 1 | 3 | 4 | 2 | 3 | 6 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| | F | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 7 | 1 | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 38 |
| April | M | 0 | 1 | 0 | 10 | 1 | 10 | 11 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 39 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 5 | 2 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 56 |
| May | M | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 1962 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 2 | 6 | 3 | 4 | 1 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | F | 0 | 1 | 0 | 2 | 1 | 3 | 5 | 2 | 3 | 7 | 2 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| April | M | 0 | 1 | 18 | 72 | 46 | 31 | 24 | 20 | 5 | 9 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 243 |
| | F | 0 | 0 | 2 | 5 | 2 | 5 | 6 | 9 | 13 | 12 | 4 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| May | M | 0 | 0 | 2 | 8 | 11 | 7 | 8 | 4 | 3 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 0 | 5 | 2 | 1 | 1 | 2 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| | F | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| April | M | 0 | 0 | 0 | 16 | 11 | 5 | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| | F | 0 | 0 | 2 | 7 | 6 | 6 | 6 | 12 | 17 | 9 | 3 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 |
| May | M | 0 | 0 | 2 | 8 | 12 | 7 | 5 | 5 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 8 | 2 | 2 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |

| Year and month | Sex | Age | | | | | | | | | | | | | | | | | | | | | | Total |
|-------------------|-----|-----|---|---|----|----|----|----|----|---|---|----|-----|----|----|----|----|----|----|----|----|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | X | |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | |
| February | M | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | F | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| March | M | 0 | 0 | 1 | 8 | 11 | 8 | 9 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| | F | 0 | 0 | 1 | 2 | 1 | 4 | 6 | 5 | 2 | 2 | 1 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| April | M | 0 | 2 | 0 | 5 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| | F | 0 | 1 | 3 | 4 | 2 | 5 | 4 | 3 | 3 | 3 | 3 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| May | M | 0 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | F | 0 | 0 | 2 | 3 | 1 | 2 | 7 | 2 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 1965 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | F | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 2 | 1 | 1 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| April | M | 0 | 0 | 2 | 14 | 16 | 14 | 12 | 4 | 3 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| | F | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 10 | 7 | 6 | 9 | 107 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 147 |
| May | M | 0 | 0 | 2 | 5 | 3 | 2 | 2 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | |
| January | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| February | M | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| March | M | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | |
| February | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | F | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 2 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | |
| April | F | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 0 | 1 | 2 | 3 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | F | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 5 | 3 | 6 | 5 | 1 | 2 | 1 | 6 | 34 |

Table 2
Age (yr) and sex (M = male, F = female) of
fur seals collected in the Sea of Okhotsk.
(X designates unknown age)

| Year and month | Sex | Age | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|-------------------|-----|-----|---|---|----|----|----|----|----|---|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | X |
| 1958 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sept. | M | 2 | 0 | 8 | 18 | 6 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 50 |
| | F | 0 | 0 | 5 | 13 | 40 | 28 | 28 | 15 | 8 | 3 | 1 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 205 |
| Oct. | M | 2 | 0 | 2 | 12 | 8 | 2 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 41 |
| | F | 0 | 0 | 2 | 9 | 33 | 32 | 21 | 12 | 7 | 10 | 5 | 78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 229 |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| July | M | 0 | 0 | 2 | 1 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | F | 0 | 0 | 2 | 0 | 2 | 1 | 3 | 4 | 4 | 2 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 2 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | F | 0 | 0 | 2 | 2 | 2 | 7 | 6 | 8 | 5 | 4 | 14 | 0 | 4 | 12 | 14 | 11 | 11 | 6 | 5 | 2 | 2 | 4 | 2 | 2 | 0 | 125 |
| Oct. | M | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | F | 1 | 0 | 3 | 4 | 2 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 28 |
| 1977 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | M | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | F | 0 | 0 | 7 | 11 | 8 | 13 | 10 | 4 | 6 | 2 | 2 | 0 | 2 | 3 | 5 | 6 | 5 | 3 | 0 | 6 | 2 | 3 | 1 | 1 | 1 | 101 |

Table 3
Age (yr) and sex (M = male, F = female) of
fur seals collected in the Western Pacific Ocean.
(X designates unknown age)

| Year and month | | Sex | Age | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|----------------|---|-----|---------|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|-------|---|-----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | X | |
| | | | Joban | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1959 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | F | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 2 | 4 | 4 | 4 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | F | 1 | 5 | 11 | 7 | 7 | 5 | 9 | 5 | 2 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 4 | 4 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | F | 1 | 9 | 13 | 12 | 8 | 5 | 7 | 11 | 8 | 4 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 105 |
| 1971 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | F | 3 | 0 | 13 | 5 | 17 | 12 | 10 | 11 | 11 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | M | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | F | 0 | 2 | 2 | 0 | 1 | 6 | 0 | 2 | 1 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| March | F | 0 | 1 | 4 | 5 | 5 | 7 | 2 | 3 | 3 | 3 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | M | 0 | 4 | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | F | 2 | 2 | 5 | 6 | 15 | 12 | 5 | 8 | 3 | 2 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| March | M | 0 | 6 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | F | 0 | 0 | 6 | 7 | 5 | 12 | 5 | 5 | 5 | 1 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| 1977 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | M | 0 | 9 | 11 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| | F | 2 | 4 | 8 | 5 | 12 | 9 | 11 | 11 | 9 | 13 | 0 | 8 | 5 | 8 | 3 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 120 |
| March | F | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | | Sanriku | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1958 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

| Year and month | | Sex | Age | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|----------------|---|-----|------------------------|----|----|----|----|----|----|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|-----|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | X | |
| | | | Sanriku (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1958 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 2 | 2 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | |
| | F | 0 | 3 | 7 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 21 | |
| June | M | 20 | 35 | 31 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 90 | |
| | F | 9 | 51 | 72 | 54 | 26 | 14 | 5 | 1 | 3 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 273 | |
| 1959 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | M | 20 | 24 | 29 | 25 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 129 | |
| | F | 6 | 15 | 29 | 33 | 28 | 14 | 12 | 9 | 4 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 171 | |
| May | M | 35 | 82 | 69 | 43 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 234 | |
| | F | 11 | 38 | 58 | 72 | 44 | 38 | 22 | 15 | 7 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 353 | |
| June | M | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |
| | F | 5 | 11 | 16 | 21 | 10 | 12 | 2 | 3 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 96 | |
| 1960 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | M | 4 | 23 | 16 | 5 | 9 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | |
| | F | 0 | 8 | 10 | 20 | 15 | 19 | 9 | 6 | 5 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 109 | |
| May | M | 5 | 33 | 22 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 73 | |
| | F | 2 | 17 | 38 | 27 | 28 | 23 | 24 | 15 | 5 | 2 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 201 | |
| June | M | 0 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| | F | 2 | 10 | 8 | 9 | 8 | 6 | 6 | 6 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 65 | |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 1 | 15 | 44 | 15 | 3 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 83 | |
| | F | 0 | 13 | 17 | 25 | 26 | 16 | 10 | 5 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 127 | |
| June | M | 2 | 12 | 27 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 47 | |
| | F | 0 | 5 | 9 | 8 | 3 | 5 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 37 | |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | M | 5 | 15 | 16 | 12 | 7 | 5 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | |
| | F | 2 | 8 | 4 | 12 | 13 | 10 | 7 | 10 | 2 | 6 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | |
| May | M | 1 | 6 | 11 | 7 | 7 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | |
| | F | 0 | 7 | 6 | 4 | 3 | 4 | 2 | 5 | 5 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | M | 8 | 7 | 7 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | |
| | F | 1 | 4 | 8 | 5 | 7 | 2 | 3 | 11 | 4 | 7 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | |
| May | M | 5 | 9 | 9 | 3 | 4 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | |
| | F | 2 | 10 | 5 | 4 | 4 | 4 | 4 | 6 | 7 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | |

| Year and | | Age | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----|------------------------|---|----|----|---|---|----|---|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|-------|--|
| month | Sex | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | X | Total | |
| | | Sanriku (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | M | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | F | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | F | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| 1971 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 8 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | |
| | F | 4 | 7 | 8 | 8 | 9 | 9 | 9 | 8 | 6 | 6 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | |
| Dec. | F | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | M | 0 | 6 | 11 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | |
| | F | 2 | 3 | 8 | 7 | 4 | 5 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 2 | 3 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | |
| | F | 0 | 4 | 2 | 2 | 8 | 7 | 1 | 1 | 3 | 5 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 1 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| | F | 0 | 5 | 4 | 5 | 4 | 7 | 6 | 2 | 0 | 1 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 69 | |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| | F | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Feb. | F | 1 | 1 | 2 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 3 | 1 | 4 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | |
| March | M | 0 | 2 | 0 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| | F | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 16 | |
| April | M | 0 | 6 | 9 | 8 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | |
| | F | 0 | 2 | 3 | 7 | 6 | 8 | 10 | 8 | 10 | 11 | 0 | 3 | 5 | 11 | 4 | 2 | 8 | 3 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 106 | |
| May | M | 0 | 6 | 12 | 10 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | |
| | F | 0 | 3 | 3 | 3 | 8 | 7 | 6 | 5 | 4 | 10 | 0 | 6 | 11 | 11 | 9 | 6 | 6 | 6 | 4 | 3 | 2 | 1 | 1 | 1 | 3 | 0 | 119 | |
| 1977 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| | F | 0 | 1 | 1 | 3 | 3 | 4 | 2 | 5 | 5 | 10 | 0 | 3 | 6 | 3 | 7 | 4 | 2 | 2 | 5 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 70 | |

| Year and month | Sex | Age | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------|-----|------|----|----|----|----|----|----|----|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | X |
| | | Doto | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 0 | 24 | 30 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 59 |
| | F | 1 | 7 | 21 | 14 | 10 | 3 | 4 | 1 | 2 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 72 |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | M | 1 | 7 | 4 | 8 | 5 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| | F | 0 | 1 | 3 | 3 | 5 | 6 | 3 | 6 | 3 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | F | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 4 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 3 | 3 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | F | 0 | 0 | 4 | 5 | 6 | 6 | 14 | 9 | 3 | 5 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 1969 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | M | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | M | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | F | 0 | 0 | 0 | 4 | 1 | 9 | 0 | 2 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| May | M | 0 | 6 | 10 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | F | 3 | 2 | 8 | 10 | 10 | 20 | 5 | 11 | 9 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| June | M | 0 | 4 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | F | 2 | 1 | 3 | 4 | 12 | 9 | 8 | 5 | 9 | 4 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 3 | 11 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| | F | 0 | 2 | 7 | 5 | 8 | 4 | 1 | 1 | 7 | 2 | 0 | 1 | 0 | 2 | 1 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 46 |
| July | M | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | F | 0 | 1 | 3 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | M | 0 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | F | 0 | 0 | 2 | 2 | 2 | 0 | 1 | 2 | 1 | 1 | 0 | 5 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |

Table 4
Age (yr) and sex (M = male, F = female) of
fur seals collected in the Western Bering Sea

| Year and | | Age | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----|-----|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Sex | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 26 | 27 | Total |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1962 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 0 | 1 | 1 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 8 | 9 | 2 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 1965 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 0 | 0 | 1 | 10 | 4 | 3 | 8 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| | F | 0 | 0 | 0 | 0 | 4 | 8 | 11 | 17 | 19 | 6 | 6 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 |
| July | M | 0 | 1 | 0 | 3 | 1 | 4 | 3 | 2 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | F | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 2 | 1 | 3 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 0 | 0 | 11 | 8 | 16 | 14 | 11 | 14 | 9 | 13 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| June | M | 0 | 0 | 3 | 2 | 0 | 1 | 0 | 2 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | F | 0 | 0 | 0 | 0 | 2 | 3 | 6 | 12 | 10 | 9 | 10 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| July | M | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | F | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 0 | 1 | 1 | 0 | 4 | 3 | 7 | 7 | 12 | 9 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| June | M | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | F | 0 | 0 | 0 | 1 | 1 | 3 | 7 | 12 | 14 | 8 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| July | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | M | 0 | 0 | 3 | 6 | 4 | 6 | 8 | 5 | 4 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| July | M | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | F | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 4 | 2 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |

| Year and | | Age | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----|-----|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Sex | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 26 | 27 | Total |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | 0 | 0 | 0 | 4 | 8 | 4 | 6 | 1 | 4 | 7 | 3 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| June | M | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | F | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 3 | 4 | 13 | 10 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | M | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | F | 0 | 1 | 2 | 4 | 4 | 1 | 3 | 4 | 7 | 6 | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| Sept. | F | 0 | 0 | 2 | 3 | 3 | 8 | 9 | 10 | 8 | 2 | 8 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| Oct. | M | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | F | 1 | 1 | 2 | 3 | 7 | 7 | 17 | 10 | 8 | 11 | 13 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| 1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sept. | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Oct. | M | 1 | 1 | 8 | 9 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| | F | 3 | 0 | 17 | 33 | 32 | 24 | 25 | 19 | 15 | 15 | 10 | 0 | 10 | 16 | 6 | 11 | 9 | 8 | 6 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 269 |
| Nov. | M | 4 | 2 | 8 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| | F | 1 | 0 | 1 | 18 | 11 | 10 | 2 | 10 | 1 | 0 | 2 | 0 | 4 | 2 | 4 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 74 |

Table 5

Age specific pregnancy rates of female fur seals
 (n = number of females examined, p = number pregnant,
 and % = percentage pregnant)

| Age | Sea of Japan | | | | | | | | |
|---------|--------------|----|-------|-------|---|-------|-------|----|-------|
| | 1959 | | | 1960 | | | | | |
| | March | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % |
| 3 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 4 | 1 | 1 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 5 | 1 | 0 | 0.0 | 2 | 2 | 100.0 | 1 | 1 | 100.0 |
| 6 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 7 | 4 | 4 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 8 | 2 | 2 | 100.0 | 0 | 0 | - | 2 | 2 | 100.0 |
| 9 | 1 | 1 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 10+ | 1 | 1 | 100.0 | 3 | 0 | 0.0 | 16 | 13 | 81.3 |
| Unknown | 2 | 1 | 50.0 | | | | | | |
| Total | 14 | 11 | 78.6 | 6 | 2 | 33.3 | 21 | 18 | 85.7 |

| Age | 1961 | | | | | | | | |
|---------|-------|----|-------|-------|----|-------|-----|---|-------|
| | March | | | April | | | May | | |
| | n | p | % | n | p | % | n | p | % |
| 4 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 5 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 6 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 1 | 1 | 100.0 |
| 7 | 1 | 1 | 100.0 | 4 | 3 | 75.0 | 1 | 0 | 0.0 |
| 8 | 7 | 6 | 85.7 | 4 | 4 | 100.0 | 0 | 0 | - |
| 9 | 1 | 1 | 100.0 | 5 | 5 | 100.0 | 0 | 0 | - |
| 10 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 1 | 1 | 100.0 |
| 10+ | 19 | 13 | 68.4 | 36 | 25 | 69.4 | 4 | 2 | 50.0 |
| Unknown | 4 | 4 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 38 | 31 | 81.6 | 56 | 44 | 78.6 | 7 | 4 | 57.1 |

Sea of Japan
1962

| Age | March | | | April | | | May | | |
|-------|-------|----|-------|-------|-----|-------|-----|----|-------|
| | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 5 | 0 | 0.0 | 0 | 0 | - |
| 4 | 1 | 1 | 100.0 | 2 | 1 | 50.0 | 0 | 0 | - |
| 5 | 3 | 3 | 100.0 | 5 | 5 | 100.0 | 1 | 1 | 100.0 |
| 6 | 5 | 5 | 100.0 | 6 | 5 | 83.3 | 1 | 1 | 100.0 |
| 7 | 2 | 2 | 100.0 | 9 | 8 | 88.9 | 0 | 0 | - |
| 8 | 3 | 3 | 100.0 | 13 | 10 | 76.9 | 0 | 0 | - |
| 9 | 7 | 6 | 85.7 | 12 | 11 | 91.7 | 3 | 2 | 66.7 |
| 10 | 2 | 2 | 100.0 | 4 | 4 | 100.0 | 0 | 0 | - |
| 10+ | 32 | 27 | 84.4 | 99 | 72 | 72.7 | 16 | 13 | 81.3 |
| Total | 57 | 49 | 85.9 | 155 | 116 | 74.8 | 21 | 17 | 81.0 |

1963

| Age | March | | | April | | | May | | |
|-------|-------|---|-------|-------|----|-------|-----|----|-------|
| | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 7 | 0 | 0.0 | 0 | 0 | - |
| 4 | 0 | 0 | - | 6 | 2 | 33.3 | 0 | 0 | - |
| 5 | 1 | 1 | 100.0 | 6 | 6 | 100.0 | 1 | 1 | 100.0 |
| 6 | 0 | 0 | - | 6 | 4 | 66.7 | 3 | 3 | 100.0 |
| 7 | 1 | 1 | 100.0 | 12 | 12 | 100.0 | 4 | 4 | 100.0 |
| 8 | 1 | 1 | 100.0 | 17 | 15 | 88.2 | 8 | 7 | 87.5 |
| 9 | 1 | 1 | 100.0 | 9 | 4 | 44.4 | 2 | 1 | 50.0 |
| 10 | 1 | 0 | 0.0 | 3 | 3 | 100.0 | 2 | 2 | 100.0 |
| 10+ | 5 | 1 | 20.0 | 43 | 30 | 69.8 | 32 | 28 | 87.5 |
| Total | 10 | 5 | 50.0 | 109 | 76 | 69.7 | 52 | 46 | 88.5 |

1964

| Age | February | | | March | | | April | | | May | | |
|-----|----------|---|-------|-------|---|-------|-------|---|-------|-----|---|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 1 | 0 | 0.0 | 2 | 0 | 0.0 | 4 | 0 | 0.0 | 3 | 0 | 0.0 |
| 4 | 0 | 0 | - | 1 | 1 | 100.0 | 2 | 1 | 50.0 | 1 | 0 | 0.0 |
| 5 | 0 | 0 | - | 4 | 2 | 50.0 | 5 | 5 | 100.0 | 2 | 2 | 100.0 |
| 6 | 1 | 1 | 100.0 | 6 | 6 | 100.0 | 4 | 4 | 100.0 | 7 | 7 | 100.0 |

Sea of Japan
1964
(continued)

| Age | <u>February</u> | | | <u>March</u> | | | <u>April</u> | | | <u>May</u> | | |
|-------|-----------------|---|-------|--------------|----|-------|--------------|----|-------|------------|----|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 7 | 0 | 0 | - | 5 | 4 | 80.0 | 3 | 2 | 66.7 | 2 | 2 | 100.0 |
| 8 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 0 | 0 | - |
| 9 | 0 | 0 | - | 2 | 1 | 50.0 | 3 | 1 | 33.3 | 1 | 1 | 100.0 |
| 10 | 0 | 0 | - | 1 | 1 | 100.0 | 3 | 3 | 100.0 | 0 | 0 | - |
| 10+ | 5 | 5 | 100.0 | 37 | 28 | 75.7 | 39 | 30 | 76.9 | 9 | 9 | 100.0 |
| Total | 8 | 7 | 87.5 | 60 | 45 | 75.0 | 66 | 49 | 74.2 | 25 | 21 | 84.0 |

1965

| Age | <u>March</u> | | | <u>April</u> | | | <u>May</u> | | |
|-------|--------------|----|-------|--------------|-------|------|------------|----|-------|
| | n | p | % | n | p | % | n | p | % |
| 3 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 4 | 0 | 0 | - | 3 | 2 | 66.7 | 0 | 0 | - |
| 5 | 1 | 1 | 100.0 | 3 | 2 | 66.7 | 0 | 0 | - |
| 6 | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - |
| 7 | 3 | 3 | 100.0 | 10 | 7 | 70.0 | 0 | 0 | - |
| 8 | 2 | 2 | 100.0 | 7 | 3 | 42.9 | 2 | 2 | 100.0 |
| 9 | 1 | 0 | 0.0 | 6 | 5 | 83.3 | 2 | 2 | 100.0 |
| 10 | 1 | 1 | 100.0 | 9 | 8 | 88.9 | 1 | 1 | 100.0 |
| 10+ | 22 | 18 | 81.8 | 107 | 72 | 67.3 | 17 | 9 | 52.9 |
| Total | 31 | 25 | 80.6 | 147 | 100.0 | 68.0 | 22 | 14 | 63.6 |

1966

| Age | <u>January</u> | | | <u>February</u> | | | <u>March</u> | | |
|-------|----------------|---|-------|-----------------|----|-------|--------------|---|-------|
| | n | p | % | n | p | % | n | p | % |
| 8 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 10 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 10+ | 2 | 2 | 100.0 | 29 | 18 | 62.0 | 1 | 1 | 100.0 |
| Total | 2 | 2 | 100.0 | 31 | 20 | 64.5 | 1 | 1 | 100.0 |

| Age | Sea of Japan | | | | | | | | | | | |
|---------|--------------|---|-------|-------------|----|-------|-------------|---|-------|-------------|----|-------|
| | <u>1967</u> | | | <u>1968</u> | | | <u>1973</u> | | | <u>1976</u> | | |
| | February | | | March | | | April | | | March | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 4 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 5 | 0 | 0 | - | 2 | 2 | 100.0 | 0 | 0 | - | 1 | 0 | 0.0 |
| 6 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 7 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 2 | 0 | 0.0 | 0 | 0 | - |
| 8 | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |
| 9 | 0 | 0 | - | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 10 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 |
| 10+ | 8 | 4 | 50.0 | 18 | 10 | 55.6 | 7 | 1 | 14.3 | 0 | 0 | - |
| 11 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 12 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 13 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 5 | 2 | 40.0 |
| 14 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 3 | 2 | 66.7 |
| 15 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 6 | 4 | 66.7 |
| 16 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 5 | 1 | 20.0 |
| 17 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| 18 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 |
| 22 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| Unknown | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 6 | 4 | 66.7 |
| Total | 10 | 6 | 60.0 | 27 | 18 | 66.7 | 12 | 3 | 25.0 | 33 | 18 | 54.5 |
| 10+ | 8 | 4 | 50.0 | 18 | 10 | 55.6 | 7 | 1 | 14.3 | 31 | 17 | 54.8 |

| Age | Sea of Okhotsk | | | | | | | | | | | |
|---------|----------------|----|------|---------|-----|------|-------------|---|-------|------|----|-------|
| | <u>1958</u> | | | | | | <u>1964</u> | | | | | |
| | September | | | October | | | June | | | July | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 13 | 0 | 0.0 | 9 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 4 | 40 | 2 | 5.0 | 33 | 6 | 18.2 | 0 | 0 | - | 2 | 1 | 50.0 |
| 5 | 28 | 5 | 17.9 | 32 | 12 | 37.5 | 0 | 0 | - | 1 | 1 | 100.0 |
| 6 | 28 | 8 | 28.6 | 21 | 6 | 28.6 | 0 | 0 | - | 3 | 3 | 100.0 |
| 7 | 15 | 2 | 13.3 | 12 | 7 | 58.3 | 1 | 1 | 100.0 | 4 | 4 | 100.0 |
| 8 | 8 | 0 | 0.0 | 7 | 5 | 71.4 | 0 | 0 | - | 4 | 4 | 100.0 |
| 9 | 3 | 1 | 33.3 | 10 | 9 | 90.0 | 0 | 0 | - | 2 | 2 | 100.0 |
| 10 | 2 | 0 | 0.0 | 4 | 3 | 75.0 | 0 | 0 | - | 3 | 3 | 100.0 |
| 10+ | 41 | 9 | 21.9 | 78 | 47 | 60.3 | 0 | 0 | - | 8 | 8 | 100.0 |
| Unknown | 23 | 5 | 21.7 | 16 | 9 | 56.3 | 0 | 0 | - | 0 | 0 | - |
| Total | 201 | 32 | 15.9 | 222 | 104 | 46.8 | 1 | 1 | 100.0 | 27 | 26 | 96.3 |

| Age | <u>Sea of Okhotsk</u> | | | | | | | | |
|-------|-----------------------|----|-------|----------------|---|-------|---------------|----|-------|
| | <u>1975</u> | | | | | | <u>1977</u> | | |
| | <u>July</u> | | | <u>October</u> | | | <u>August</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 4 | 0 | 0.0 | 11 | 0 | 0.0 |
| 4 | 3 | 1 | 33.3 | 2 | 0 | 0.0 | 8 | 5 | 62.5 |
| 5 | 7 | 5 | 71.4 | 0 | 0 | - | 13 | 12 | 92.3 |
| 6 | 6 | 4 | 66.7 | 1 | 0 | 0.0 | 10 | 10 | 100.0 |
| 7 | 8 | 6 | 75.0 | 2 | 0 | 0.0 | 4 | 2 | 50.0 |
| 8 | 5 | 4 | 80.0 | 1 | 0 | 0.0 | 6 | 5 | 83.3 |
| 9 | 4 | 3 | 75.0 | 1 | 1 | 100.0 | 2 | 2 | 100.0 |
| 10 | 14 | 11 | 78.6 | 1 | 0 | 0.0 | 2 | 2 | 100.0 |
| 11 | 4 | 3 | 75.0 | 0 | 0 | - | 2 | 2 | 100.0 |
| 12 | 12 | 10 | 83.3 | 1 | 1 | 100.0 | 3 | 3 | 100.0 |
| 13 | 14 | 10 | 71.4 | 1 | 0 | 0.0 | 5 | 4 | 80.0 |
| 14 | 11 | 8 | 72.7 | 1 | 0 | 0.0 | 6 | 6 | 100.0 |
| 15 | 11 | 8 | 72.7 | 2 | 1 | 50.0 | 5 | 4 | 80.0 |
| 16 | 6 | 4 | 66.7 | 1 | 1 | 100.0 | 3 | 2 | 66.7 |
| 17 | 5 | 3 | 60.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 18 | 2 | 2 | 100.0 | 1 | 0 | 0.0 | 6 | 4 | 66.7 |
| 19 | 2 | 1 | 50.0 | 1 | 0 | 0.0 | 2 | 1 | 50.0 |
| 20 | 4 | 3 | 75.0 | 0 | 0 | - | 3 | 1 | 33.3 |
| 21 | 2 | 2 | 100.0 | 0 | 0 | - | 1 | 0 | 0.0 |
| 22 | 2 | 0 | 0.0 | 2 | 1 | 50.0 | 1 | 0 | 0.0 |
| 23 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 24 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| Total | 124 | 88 | 71.0 | 24 | 6 | 25.0 | 94 | 65 | 69.1 |
| 10+ | 75 | 54 | 72.0 | 12 | 5 | 41.7 | 38 | 27 | 71.0 |

| Age | <u>Western Pacific Ocean</u> | | | | | | | | | | | |
|-------|------------------------------|---|-------|--------------|----|-------|--------------|----|-------|--------------|----|------|
| | <u>1959</u> | | | <u>1963</u> | | | <u>1964</u> | | | <u>1971</u> | | |
| | <u>March</u> | | | <u>March</u> | | | <u>March</u> | | | <u>March</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 11 | 0 | 0.0 | 13 | 0 | 0.0 | 13 | 0 | 0.0 |
| 4 | 2 | 2 | 100.0 | 7 | 1 | 14.3 | 12 | 7 | 58.3 | 5 | 3 | 60.0 |
| 5 | 0 | 0 | - | 7 | 5 | 71.4 | 8 | 8 | 100.0 | 17 | 14 | 82.3 |
| 6 | 0 | 0 | - | 5 | 4 | 80.0 | 5 | 5 | 100.0 | 12 | 10 | 83.3 |
| 7 | 0 | 0 | - | 9 | 8 | 88.9 | 7 | 5 | 71.4 | 10 | 9 | 90.0 |
| 8 | 0 | 0 | - | 5 | 4 | 80.0 | 11 | 10 | 90.9 | 11 | 10 | 90.9 |
| 9 | 0 | 0 | - | 2 | 2 | 100.0 | 8 | 8 | 100.0 | 10 | 8 | 80.0 |
| 10 | 0 | 0 | - | 3 | 3 | 100.0 | 4 | 4 | 100.0 | 11 | 9 | 81.8 |
| 10+ | 1 | 1 | 100.0 | 7 | 5 | 71.4 | 27 | 21 | 77.8 | 5 | 1 | 20.0 |
| Total | 5 | 3 | 60.0 | 56 | 32 | 57.1 | 95 | 68 | 71.6 | 94 | 64 | 68.9 |

Western Pacific OceanJoban19731975

| Age | <u>February</u> | | | <u>March</u> | | | <u>February</u> | | | <u>March</u> | | |
|-------|-----------------|----|-------|--------------|----|-------|-----------------|----|-------|--------------|----|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 4 | 0 | 0.0 | 5 | 0 | 0.0 | 6 | 0 | 0.0 |
| 4 | 0 | 0 | - | 5 | 1 | 20.0 | 6 | 3 | 50.0 | 7 | 1 | 14.3 |
| 5 | 1 | 1 | 100.0 | 5 | 5 | 100.0 | 15 | 8 | 53.3 | 5 | 4 | 80.0 |
| 6 | 6 | 3 | 50.0 | 7 | 5 | 71.4 | 12 | 8 | 66.7 | 12 | 5 | 41.7 |
| 7 | 0 | 0 | - | 2 | 1 | 50.0 | 5 | 4 | 80.0 | 5 | 2 | 40.0 |
| 8 | 2 | 2 | 100.0 | 3 | 1 | 33.3 | 8 | 5 | 62.5 | 5 | 3 | 60.0 |
| 9 | 1 | 1 | 100.0 | 3 | 3 | 100.0 | 3 | 1 | 33.3 | 5 | 5 | 100.0 |
| 10 | 3 | 3 | 100.0 | 3 | 3 | 100.0 | 2 | 2 | 100.0 | 1 | 1 | 100.0 |
| 10+ | 9 | 5 | 55.5 | 12 | 10 | 83.3 | 20 | 12 | 60.0 | 39 | 32 | 85.1 |
| Total | 24 | 15 | 62.5 | 44 | 29 | 65.9 | 76 | 43 | 56.6 | 85 | 53 | 62.3 |

Joban
1977Sanriku
1958

| Age | <u>February-March*</u> | | | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | |
|---------|------------------------|----|-------|--------------|---|-----|------------|---|-------|-------------|----|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 9 | 0 | 0.0 | 0 | 0 | - | 7 | 0 | 0.0 | 72 | 0 | 0.0 |
| 4 | 5 | 1 | 20.0 | 0 | 0 | - | 5 | 2 | 40.0 | 54 | 19 | 35.2 |
| 5 | 13 | 7 | 53.8 | 0 | 0 | - | 1 | 1 | 100.0 | 26 | 19 | 73.1 |
| 6 | 9 | 8 | 88.9 | 0 | 0 | - | 0 | 0 | - | 14 | 14 | 100.0 |
| 7 | 11 | 10 | 90.9 | 0 | 0 | - | 0 | 0 | - | 5 | 5 | 100.0 |
| 8 | 11 | 11 | 100.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 9 | 9 | 9 | 100.0 | 0 | 0 | - | 0 | 0 | - | 3 | 2 | 66.7 |
| 10 | 13 | 13 | 100.0 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |
| 10+ | 0 | 0 | - | 1 | 0 | 0.0 | 1 | 0 | 0.0 | 4 | 2 | 50.0 |
| 11 | 8 | 8 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 12 | 5 | 5 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 13 | 8 | 8 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 14 | 3 | 3 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 15 | 5 | 5 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 16 | 4 | 4 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 21 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 23 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Unknown | 0 | 0 | - | 0 | 0 | - | 4 | 1 | 25.0 | 32 | 7 | 21.8 |
| Total | 116 | 95 | 81.9 | 1 | 0 | 0.0 | 18 | 4 | 22.2 | 213 | 71 | 33.3 |
| 10+ | 36 | 36 | 100.0 | 1 | 0 | 0.0 | 1 | 0 | 0.0 | 4 | 2 | 50.0 |

* Sampling ended on 1 March.

Western Pacific OceanSanriku
1959

| Age | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | |
|--------------|--------------|-----------|-------------|------------|------------|-------------|-------------|-----------|-------------|
| | n | p | % | n | p | % | n | p | % |
| 3 | 29 | 2 | 6.9 | 58 | 4 | 6.9 | 16 | 1 | 6.2 |
| 4 | 33 | 18 | 54.5 | 72 | 34 | 47.2 | 21 | 19 | 90.5 |
| 5 | 28 | 21 | 75.0 | 44 | 33 | 75.0 | 10 | 9 | 90.0 |
| 6 | 14 | 14 | 100.0 | 38 | 35 | 92.1 | 12 | 12 | 100.0 |
| 7 | 12 | 10 | 83.3 | 22 | 20 | 90.9 | 2 | 1 | 50.0 |
| 8 | 9 | 5 | 55.5 | 15 | 13 | 86.6 | 3 | 3 | 100.0 |
| 9 | 4 | 4 | 100.0 | 7 | 6 | 85.7 | 4 | 1 | 25.0 |
| 10+ | 17 | 17 | 100.0 | 14 | 9 | 64.3 | 2 | 2 | 100.0 |
| Unknown | 4 | 4 | 100.0 | 34 | 23 | 67.4 | 10 | 2 | 20.0 |
| Total | 150 | 95 | 63.3 | 304 | 177 | 58.2 | 80 | 50 | 62.5 |

1960

| Age | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | |
|--------------|--------------|-----------|-------------|------------|------------|-------------|-------------|-----------|-------------|
| | n | p | % | n | p | % | n | p | % |
| 3 | 10 | 0 | 0.0 | 38 | 0 | 0.0 | 8 | 0 | 0.0 |
| 4 | 20 | 7 | 35.0 | 27 | 8 | 29.6 | 9 | 5 | 55.5 |
| 5 | 15 | 12 | 80.0 | 28 | 23 | 82.1 | 8 | 4 | 50.0 |
| 6 | 19 | 19 | 100.0 | 23 | 20 | 86.9 | 6 | 3 | 50.0 |
| 7 | 9 | 9 | 100.0 | 24 | 21 | 87.5 | 6 | 5 | 83.3 |
| 8 | 6 | 5 | 83.3 | 15 | 15 | 100.0 | 6 | 6 | 100.0 |
| 9 | 5 | 5 | 100.0 | 5 | 5 | 100.0 | 1 | 1 | 100.0 |
| 10 | 0 | 0 | - | 2 | 2 | 100.0 | 0 | 0 | - |
| 10+ | 16 | 15 | 93.7 | 17 | 16 | 94.1 | 6 | 5 | 83.3 |
| Unknown | 1 | 1 | 100.0 | 3 | 1 | 33.3 | 3 | 0 | 0.0 |
| Total | 101 | 73 | 72.3 | 182 | 111 | 65.4 | 53 | 29 | 54.7 |

19611963

| Age | <u>May</u> | | | <u>June</u> | | | <u>April</u> | | | <u>May</u> | | |
|-----|------------|----|------|-------------|---|-------|--------------|---|------|------------|---|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 17 | 0 | 0.0 | 9 | 1 | 11.1 | 4 | 0 | 0.0 | 6 | 0 | 0.0 |
| 4 | 25 | 12 | 48.0 | 8 | 2 | 25.0 | 12 | 3 | 25.0 | 4 | 0 | 0.0 |
| 5 | 26 | 23 | 88.5 | 3 | 3 | 100.0 | 13 | 9 | 69.2 | 3 | 3 | 100.0 |

Western Pacific OceanSanriku
(continued)

| Age | <u>1961</u> | | | | | | <u>1963</u> | | | | | |
|---------|-------------|----|------|-------------|----|-------|--------------|----|-------|------------|----|-------|
| | <u>May</u> | | | <u>June</u> | | | <u>April</u> | | | <u>May</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 6 | 16 | 14 | 87.5 | 5 | 4 | 80.0 | 10 | 10 | 100.0 | 4 | 3 | 75.0 |
| 7 | 10 | 9 | 90.0 | 2 | 1 | 50.0 | 11 | 11 | 100.0 | 2 | 2 | 100.0 |
| 8 | 5 | 4 | 90.0 | 0 | 0 | - | 10 | 9 | 90.0 | 5 | 4 | 80.0 |
| 9 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 | 5 | 5 | 100.0 |
| 10 | 0 | 0 | - | 0 | 0 | - | 6 | 5 | 83.3 | 0 | 0 | - |
| 10+ | 12 | 9 | 75.0 | 4 | 4 | 100.0 | 21 | 16 | 76.2 | 10 | 10 | 100.0 |
| Unknown | 3 | 1 | 33.3 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 114 | 72 | 63.1 | 32 | 15 | 46.8 | 89 | 65 | 73.0 | 39 | 27 | 69.2 |

| Age | <u>1964</u> | | | | | | <u>1968</u> | | | | | |
|-------|--------------|----|-------|------------|----|-------|-----------------|----|-------|--|--|--|
| | <u>April</u> | | | <u>May</u> | | | <u>February</u> | | | | | |
| | n | p | % | n | p | % | n | p | % | | | |
| 3 | 8 | 0 | 0.0 | 5 | 0 | 0.0 | 0 | 0 | - | | | |
| 4 | 5 | 2 | 40.0 | 4 | 2 | 50.0 | 0 | 0 | - | | | |
| 5 | 7 | 4 | 57.1 | 4 | 3 | 75.0 | 1 | 1 | 100.0 | | | |
| 6 | 2 | 1 | 50.0 | 4 | 3 | 75.0 | 1 | 1 | 100.0 | | | |
| 7 | 3 | 2 | 66.7 | 4 | 4 | 100.0 | 0 | 0 | - | | | |
| 8 | 11 | 9 | 81.8 | 6 | 5 | 83.3 | 1 | 1 | 100.0 | | | |
| 9 | 4 | 4 | 100.0 | 7 | 6 | 85.7 | 4 | 4 | 100.0 | | | |
| 10 | 7 | 6 | 85.7 | 3 | 3 | 100.0 | 0 | 0 | - | | | |
| 10+ | 18 | 17 | 94.4 | 5 | 3 | 60.0 | 9 | 6 | 66.7 | | | |
| Total | 65 | 45 | 69.2 | 42 | 29 | 69.1 | 16 | 13 | 81.2 | | | |

| Age | <u>1970</u> | | | | | | <u>1971</u> | | | | | |
|-----|-----------------|---|-------|------------|---|------|-----------------|---|-------|--|--|--|
| | <u>February</u> | | | <u>May</u> | | | <u>December</u> | | | | | |
| | n | p | % | n | p | % | n | p | % | | | |
| 3 | 0 | 0 | - | 8 | 0 | 0.0 | 0 | 0 | - | | | |
| 4 | 0 | 0 | - | 8 | 1 | 12.5 | 1 | 1 | 100.0 | | | |
| 5 | 0 | 0 | - | 9 | 6 | 66.7 | 0 | 0 | - | | | |
| 6 | 0 | 0 | - | 9 | 3 | 33.3 | 2 | 2 | 100.0 | | | |
| 7 | 1 | 1 | 100.0 | 9 | 4 | 44.4 | 0 | 0 | - | | | |

Western Pacific OceanSanriku
(continued)

| Age | <u>1970</u> | | | <u>1971</u> | | | | | |
|-------|-----------------|----|-------|-------------|----|------|-----------------|---|------|
| | <u>February</u> | | | <u>May</u> | | | <u>December</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 8 | 2 | 2 | 100.0 | 8 | 6 | 75.0 | 4 | 3 | 75.0 |
| 9 | 4 | 4 | 100.0 | 6 | 5 | 83.3 | 0 | 0 | - |
| 10 | 2 | 2 | 100.0 | 6 | 4 | 66.7 | 0 | 0 | - |
| 10+ | 12 | 12 | 100.0 | 26 | 19 | 73.1 | 1 | 0 | 0.0 |
| Total | 21 | 21 | 100.0 | 89 | 48 | 53.9 | 8 | 6 | 75.0 |

| Age | <u>1972</u> | | | <u>1973</u> | | | <u>1974</u> | | |
|-------|--------------|----|-------|-------------|----|-------|-------------|----|-------|
| | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 3 | 8 | 0 | 0.0 | 2 | 0 | 0.0 | 4 | 1 | 25.0 |
| 4 | 7 | 1 | 14.3 | 2 | 0 | 0.0 | 5 | 0 | 0.0 |
| 5 | 4 | 3 | 75.0 | 8 | 7 | 87.5 | 4 | 0 | 0.0 |
| 6 | 5 | 4 | 80.0 | 7 | 4 | 57.1 | 7 | 3 | 42.8 |
| 7 | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 6 | 6 | 100.0 |
| 8 | 2 | 1 | 50.0 | 1 | 0 | 0.0 | 2 | 2 | 100.0 |
| 9 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 0 | 0 | - |
| 10 | 1 | 0 | 0.0 | 5 | 4 | 80.0 | 1 | 1 | 100.0 |
| 10+ | 1 | 0 | 0.0 | 14 | 13 | 92.8 | 29 | 16 | 55.2 |
| Total | 32 | 12 | 37.5 | 43 | 32 | 74.4 | 58 | 29 | 50.0 |

1976

| Age | <u>January</u> | | | <u>February</u> | | | <u>March</u> | | | <u>April</u> | | |
|-----|----------------|---|-------|-----------------|---|-------|--------------|---|-------|--------------|----|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 2 | 0 | 0.0 | 1 | 0 | 0.0 | 3 | 1 | 33.3 |
| 4 | 2 | 1 | 50.0 | 2 | 0 | 0.0 | 2 | 0 | 0.0 | 7 | 1 | 14.3 |
| 5 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 6 | 4 | 66.7 |
| 6 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 8 | 8 | 100.0 |
| 7 | 1 | 0 | 0.0 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 10 | 8 | 80.0 |
| 8 | 0 | 0 | - | 2 | 2 | 100.0 | 0 | 0 | - | 8 | 5 | 62.5 |
| 9 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 10 | 8 | 80.0 |
| 10 | 1 | 1 | 100.0 | 0 | 0 | - | 2 | 1 | 50.0 | 11 | 10 | 90.9 |

Western Pacific OceanSanriku1976

(continued)

| Age | <u>January</u> | | | <u>February</u> | | | <u>March</u> | | | <u>April</u> | | |
|---------|----------------|---|-------|-----------------|----|-------|--------------|---|-------|--------------|----|-------|
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 11 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 3 | 2 | 66.7 |
| 12 | 0 | 0 | - | 4 | 2 | 50.0 | 1 | 1 | 100.0 | 5 | 4 | 80.0 |
| 13 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 11 | 7 | 63.6 |
| 14 | 1 | 0 | 0.0 | 2 | 2 | 100.0 | 3 | 1 | 33.3 | 4 | 4 | 100.0 |
| 15 | 0 | 0 | - | 1 | 0 | 0.0 | 1 | 1 | 100.0 | 2 | 2 | 100.0 |
| 16 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 2 | 1 | 50.0 | 8 | 6 | 75.0 |
| 17 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 3 | 3 | 100.0 |
| 18 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 4 | 3 | 75.0 |
| 19 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 20 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 21 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| Unknown | 0 | 0 | - | 3 | 2 | 66.7 | 0 | 0 | - | 0 | 0 | - |
| Total | 11 | 8 | 72.7 | 23 | 13 | 56.5 | 15 | 7 | 46.7 | 104 | 76 | 73.1 |
| 10+ | 6 | 5 | 83.3 | 14 | 8 | 57.1 | 9 | 5 | 55.6 | 41 | 31 | 75.6 |

19761977

| Age | <u>May</u> | | | <u>January</u> | | |
|-----|------------|----|-------|----------------|---|-------|
| | n | p | % | n | p | % |
| 3 | 3 | 0 | 0.0 | 1 | 0 | 0.0 |
| 4 | 3 | 2 | 66.7 | 3 | 2 | 66.7 |
| 5 | 8 | 5 | 62.5 | 3 | 3 | 100.0 |
| 6 | 7 | 4 | 57.1 | 4 | 2 | 50.0 |
| 7 | 6 | 5 | 83.3 | 2 | 2 | 100.0 |
| 8 | 5 | 3 | 60.0 | 5 | 4 | 80.0 |
| 9 | 4 | 4 | 100.0 | 5 | 3 | 60.0 |
| 10 | 10 | 9 | 90.0 | 10 | 9 | 90.0 |
| 11 | 6 | 6 | 100.0 | 3 | 2 | 66.7 |
| 12 | 11 | 11 | 100.0 | 6 | 5 | 83.3 |
| 13 | 11 | 9 | 81.8 | 3 | 3 | 100.0 |
| 14 | 9 | 8 | 88.9 | 7 | 7 | 100.0 |
| 15 | 6 | 6 | 100.0 | 4 | 4 | 100.0 |
| 16 | 6 | 6 | 100.0 | 2 | 2 | 100.0 |
| 17 | 6 | 4 | 66.7 | 2 | 2 | 100.0 |
| 18 | 4 | 2 | 50.0 | 5 | 5 | 100.0 |
| 19 | 3 | 1 | 33.3 | 0 | 0 | - |
| 20 | 2 | 1 | 50.0 | 1 | 0 | 0.0 |

Western Pacific OceanSanriku
(continued)

| Age | <u>1976</u> | | | <u>1977</u> | | |
|-------|-------------|----|-------|----------------|----|-------|
| | <u>May</u> | | | <u>January</u> | | |
| | n | p | % | n | p | % |
| 21 | 1 | 1 | 100.0 | 0 | 0 | - |
| 22 | 1 | 1 | 100.0 | 3 | 3 | 100.0 |
| 23 | 1 | 1 | 100.0 | 0 | 0 | - |
| 24 | 3 | 1 | 33.3 | 0 | 0 | - |
| Total | 116 | 90 | 77.6 | 69 | 58 | 84.1 |
| 10+ | 70 | 58 | 82.9 | 36 | 33 | 91.7 |

| Age | <u>1961</u> | | | <u>1966</u> | | | <u>1967</u> | | | <u>1968</u> | | |
|---------|-------------|----|-------|-----------------|----|-------|----------------|----|-------|----------------|----|-------|
| | <u>June</u> | | | <u>December</u> | | | <u>January</u> | | | <u>January</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 21 | 0 | 0.0 | 3 | 0 | 0.0 | 0 | 0 | - | 4 | 0 | 0.0 |
| 4 | 14 | 5 | 35.7 | 3 | 2 | 66.7 | 1 | 1 | 100.0 | 5 | 1 | 20.0 |
| 5 | 10 | 9 | 90.0 | 5 | 5 | 100.0 | 4 | 3 | 75.0 | 6 | 5 | 83.3 |
| 6 | 3 | 2 | 66.7 | 6 | 6 | 100.0 | 0 | 0 | - | 6 | 5 | 83.3 |
| 7 | 4 | 3 | 75.0 | 3 | 3 | 100.0 | 5 | 4 | 80.0 | 14 | 14 | 100.0 |
| 8 | 1 | 0 | 0.0 | 6 | 6 | 100.0 | 4 | 2 | 50.0 | 9 | 9 | 100.0 |
| 9 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 2 | 2 | 100.0 | 3 | 3 | 100.0 |
| 10 | 1 | 1 | 100.0 | 5 | 5 | 100.0 | 3 | 3 | 100.0 | 5 | 5 | 100.0 |
| 10+ | 6 | 5 | 83.3 | 6 | 5 | 83.3 | 5 | 4 | 80.0 | 25 | 23 | 92.0 |
| Unknown | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Total | 64 | 29 | 45.3 | 40 | 35 | 87.5 | 24 | 19 | 79.2 | 77 | 65 | 84.4 |

| Age | <u>1969</u> | | | <u>1970</u> | | | <u>1972</u> | | |
|-----|-----------------|---|-------|----------------|---|-------|----------------|---|-------|
| | <u>December</u> | | | <u>January</u> | | | <u>January</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 4 | 0 | 0 | - | 0 | 0 | - | 4 | 2 | 50.0 |
| 5 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 6 | 0 | 0 | - | 0 | 0 | - | 9 | 8 | 88.9 |
| 7 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 8 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 2 | 1 | 50.0 |

Western Pacific OceanDoto
(continued)

| Age | <u>1969</u> | | | <u>1970</u> | | | <u>1972</u> | | |
|-------|-----------------|---|-------|----------------|---|------|----------------|----|-------|
| | <u>December</u> | | | <u>January</u> | | | <u>January</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 9 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 10 | 2 | 1 | 50.0 | 3 | 2 | 66.7 | 1 | 1 | 100.0 |
| 10+ | 7 | 6 | 85.7 | 0 | 0 | - | 6 | 4 | 66.7 |
| Total | 11 | 9 | 81.8 | 4 | 3 | 75.0 | 23 | 17 | 73.9 |

| Age | <u>1972</u> | | | <u>1975</u> | | | <u>1975</u> | | | <u>1975</u> | | |
|-------|-------------|----|-------|-------------|----|------|-------------|----|-------|-------------|---|------|
| | <u>May</u> | | | <u>June</u> | | | <u>June</u> | | | <u>July</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 8 | 0 | 0.0 | 3 | 0 | 0.0 | 7 | 0 | 0.0 | 3 | 0 | 0.0 |
| 4 | 10 | 4 | 40.0 | 4 | 0 | 0.0 | 5 | 0 | 0.0 | 2 | 0 | 0.0 |
| 5 | 10 | 4 | 40.0 | 12 | 7 | 58.3 | 8 | 5 | 62.5 | 1 | 0 | 0.0 |
| 6 | 20 | 12 | 60.0 | 9 | 3 | 33.3 | 4 | 1 | 25.0 | 0 | 0 | - |
| 7 | 5 | 3 | 60.0 | 8 | 6 | 75.0 | 1 | 0 | 0.0 | 2 | 1 | 50.0 |
| 8 | 11 | 9 | 81.8 | 5 | 3 | 60.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 9 | 9 | 7 | 77.8 | 9 | 6 | 66.7 | 7 | 5 | 71.4 | 0 | 0 | - |
| 10 | 4 | 4 | 100.0 | 4 | 3 | 75.0 | 2 | 0 | 0.0 | 0 | 0 | - |
| 10+ | 8 | 5 | 62.5 | 11 | 6 | 54.5 | 9 | 6 | 66.7 | 0 | 0 | - |
| 11 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 13 | 0 | 0 | - | 0 | 0 | - | 2 | 0 | 0.0 | 0 | 0 | - |
| 14 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 15 | 0 | 0 | - | 0 | 0 | - | 3 | 2 | 66.7 | 0 | 0 | - |
| 16 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 20 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 85 | 48 | 56.5 | 65 | 34 | 52.3 | 44 | 18 | 40.9 | 8 | 1 | 12.5 |
| 10+ | 8 | 5 | 62.5 | 11 | 6 | 54.5 | 9 | 6 | 66.7 | 0 | 0 | - |

Doto
1976Western Bering Sea
1961 1962

| Age | <u>December</u> | | | <u>July</u> | | | <u>June</u> | | |
|-----|-----------------|---|------|-------------|---|---|-------------|---|---|
| | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 4 | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |

| Age | <u>Doto</u> <u>1976</u> | | | <u>Western Bering Sea</u> | | | | | |
|-------|----------------------------|----|-------|---------------------------|---|-------|-------------|----|-------|
| | | | | <u>1961</u> | | | <u>1962</u> | | |
| | <u>December</u> | | | <u>July</u> | | | <u>June</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 5 | 2 | 1 | 50.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 6 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |
| 7 | 1 | 1 | 100.0 | 0 | 0 | - | 8 | 6 | 75.0 |
| 8 | 2 | 2 | 100.0 | 0 | 0 | - | 9 | 9 | 100.0 |
| 9 | 1 | 1 | 100.0 | 0 | 0 | - | 2 | 2 | 100.0 |
| 10 | 1 | 0 | 0.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 10+ | 0 | 0 | - | 3 | 3 | 100.0 | 18 | 14 | 77.8 |
| 11 | 5 | 5 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 12 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 13 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 14 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 15 | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |
| 19 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 20 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 23 | 16 | 69.6 | 3 | 3 | 100.0 | 41 | 35 | 85.4 |
| 10+ | 12 | 10 | 83.3 | 3 | 3 | 100.0 | 18 | 14 | 77.8 |

| Age | <u>Western Bering Sea</u> | | | | | | | | |
|-------|---------------------------|-----|-------|-------------|----|-------|-------------|----|-------|
| | <u>1965</u> | | | | | | <u>1966</u> | | |
| | <u>June</u> | | | <u>July</u> | | | <u>May</u> | | |
| | n | p | % | n | p | % | n | p | % |
| 4 | 2 | 1 | 50.0 | 2 | 0 | 0.0 | 0 | 0 | - |
| 5 | 8 | 6 | 75.0 | 2 | 0 | 0.0 | 1 | 1 | 100.0 |
| 6 | 11 | 9 | 81.8 | 2 | 0 | 0.0 | 1 | 1 | 100.0 |
| 7 | 17 | 15 | 88.2 | 4 | 3 | 75.0 | 0 | 0 | - |
| 8 | 19 | 19 | 100.0 | 2 | 2 | 100.0 | 0 | 0 | - |
| 9 | 6 | 6 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 10 | 6 | 6 | 100.0 | 3 | 2 | 66.7 | 0 | 0 | - |
| 10+ | 59 | 45 | 76.3 | 19 | 7 | 36.8 | 0 | 0 | - |
| Total | 128 | 107 | 83.6 | 35 | 14 | 40.0 | 2 | 2 | 100.0 |
| | | | | | | | 111 | 93 | 83.8 |

Western Bering Sea

| Age | <u>1966</u> | | | | | | <u>1967</u> | | | | | |
|-------|-------------|----|-------|------------|---|-------|-------------|----|------|-------------|----|-------|
| | <u>July</u> | | | <u>May</u> | | | <u>June</u> | | | <u>July</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 4 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 5 | 2 | 1 | 50.0 | 0 | 0 | - | 3 | 2 | 66.7 | 0 | 0 | - |
| 6 | 1 | 1 | 100.0 | 0 | 0 | - | 7 | 6 | 85.7 | 0 | 0 | - |
| 7 | 0 | 0 | - | 0 | 0 | - | 12 | 11 | 91.7 | 4 | 3 | 75.0 |
| 8 | 1 | 1 | 100.0 | 0 | 0 | - | 14 | 10 | 71.4 | 2 | 1 | 50.0 |
| 9 | 1 | 1 | 100.0 | 0 | 0 | - | 8 | 7 | 87.5 | 2 | 2 | 100.0 |
| 10 | 0 | 0 | - | 0 | 0 | - | 5 | 4 | 80.0 | 3 | 3 | 100.0 |
| 10+ | 9 | 7 | 77.8 | 1 | 1 | 100.0 | 32 | 23 | 71.9 | 7 | 5 | 71.4 |
| Total | 14 | 11 | 78.6 | 1 | 1 | 100.0 | 83 | 63 | 75.9 | 18 | 14 | 77.8 |

| Age | <u>1968</u> | | | | | | <u>1970</u> | | | <u>1974</u> | | |
|-------|-------------|---|-------|-------------|----|-------|-------------|----|-------|---------------|----|-------|
| | <u>June</u> | | | <u>July</u> | | | <u>June</u> | | | <u>August</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 4 | 0 | 0.0 |
| 4 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 4 | 0 | 0.0 |
| 5 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 1 | 1 | 100.0 |
| 6 | 0 | 0 | - | 1 | 1 | 100.0 | 5 | 4 | 80.0 | 3 | 3 | 100.0 |
| 7 | 2 | 2 | 100.0 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 4 | 4 | 100.0 |
| 8 | 1 | 1 | 100.0 | 4 | 3 | 75.0 | 4 | 4 | 100.0 | 7 | 7 | 100.0 |
| 9 | 0 | 0 | - | 2 | 1 | 50.0 | 13 | 11 | 84.6 | 6 | 5 | 83.3 |
| 10 | 1 | 1 | 100.0 | 0 | 0 | - | 10 | 8 | 80.0 | 8 | 7 | 87.5 |
| 10+ | 5 | 5 | 100.0 | 13 | 11 | 84.6 | 27 | 26 | 96.3 | 18 | 17 | 94.4 |
| Total | 9 | 9 | 100.0 | 23 | 19 | 82.6 | 63 | 57 | 90.5 | 55 | 44 | 80.0 |

| Age | <u>1974</u> | | | | | | <u>1978</u> | | | | | |
|-----|------------------|---|-------|----------------|----|-------|----------------|----|------|-----------------|---|-------|
| | <u>September</u> | | | <u>October</u> | | | <u>October</u> | | | <u>November</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 3 | 0 | 0.0 | 33 | 0 | 0.0 | 18 | 0 | 0.0 |
| 4 | 1 | 1 | 100.0 | 7 | 3 | 42.9 | 32 | 11 | 34.4 | 11 | 2 | 18.2 |
| 5 | 8 | 8 | 100.0 | 7 | 6 | 85.7 | 24 | 17 | 70.8 | 10 | 6 | 60.0 |
| 6 | 9 | 8 | 88.9 | 17 | 17 | 100.0 | 25 | 22 | 88.0 | 2 | 2 | 100.0 |

Western Bering Sea
(continued)

| Age | <u>1974</u> | | | | | | <u>1978</u> | | | | | |
|-------|------------------|----|-------|----------------|-----|-------|----------------|-----|-------|-----------------|----|-------|
| | <u>September</u> | | | <u>October</u> | | | <u>October</u> | | | <u>November</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 7 | 10 | 10 | 100.0 | 10 | 10 | 100.0 | 19 | 17 | 89.5 | 10 | 9 | 90.0 |
| 8 | 8 | 6 | 75.0 | 8 | 8 | 100.0 | 15 | 11 | 73.3 | 1 | 0 | 0.0 |
| 9 | 2 | 2 | 100.0 | 11 | 11 | 100.0 | 15 | 14 | 93.3 | 0 | 0 | - |
| 10 | 8 | 8 | 100.0 | 13 | 13 | 100.0 | 10 | 10 | 100.0 | 2 | 2 | 100.0 |
| 10+ | 27 | 24 | 88.9 | 55 | 50 | 90.9 | 0 | 0 | - | 0 | 0 | - |
| 11 | 0 | 0 | - | 0 | 0 | - | 10 | 8 | 80.0 | 4 | 4 | 100.0 |
| 12 | 0 | 0 | - | 0 | 0 | - | 16 | 10 | 62.5 | 2 | 2 | 100.0 |
| 13 | 0 | 0 | - | 0 | 0 | - | 6 | 4 | 66.7 | 4 | 4 | 100.0 |
| 14 | 0 | 0 | - | 0 | 0 | - | 11 | 9 | 81.8 | 1 | 1 | 100.0 |
| 15 | 0 | 0 | - | 0 | 0 | - | 9 | 8 | 88.9 | 1 | 1 | 100.0 |
| 16 | 0 | 0 | - | 0 | 0 | - | 8 | 6 | 75.0 | 1 | 1 | 100.0 |
| 17 | 0 | 0 | - | 0 | 0 | - | 7 | 5 | 71.4 | 2 | 2 | 100.0 |
| 18 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 19 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 20 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 | 2 | 2 | 100.0 |
| 21 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 | 1 | 1 | 100.0 |
| 22 | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - |
| 26 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 27 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 75 | 67 | 89.3 | 131 | 118 | 90.1 | 250 | 161 | 64.4 | 72 | 39 | 54.2 |
| 10+ | 27 | 24 | 88.9 | 55 | 50 | 90.9 | 77 | 59 | 76.6 | 18 | 18 | 100.0 |

Table 6
Reproductive condition (uterine) of female fur seals collected
in the Sea of Japan. An X designates unknown age.
(N = nulliparous, P = primiparous, M = multiparous)

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-------------|---|----------|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|-------|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | | X |
| 1959 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| | Pregnant | P | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 1960 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | P | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| April | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 27 |
| April | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 5 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 39 |
| May | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1962 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | | P | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 3 | 6 | 2 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-------------|---|----------|---|---|---|---|---|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|-------|-----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | | X |
| 1962 (continued) | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Nonpregnant | N | 0 | 2 | 5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| | Pregnant | P | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 4 | 5 | 8 | 10 | 11 | 3 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| May | Nonpregnant | P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| April | Nonpregnant | N | 0 | 2 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | | M | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 5 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| | Pregnant | P | 0 | 0 | 0 | 2 | 5 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | | M | 0 | 0 | 0 | 0 | 1 | 3 | 11 | 13 | 4 | 3 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| May | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 1 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Nonpregnant | N | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| March | Nonpregnant | N | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 1 | 2 | 5 | 4 | 2 | 1 | 1 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-------------|---|----------|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|-------|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | | X |
| 1964 (continued) | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Nonpregnant | N | 1 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 3 | 1 | 3 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| May | Nonpregnant | N | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | | M | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 1965 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| April | Nonpregnant | N | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 1 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| | Pregnant | P | 0 | 0 | 0 | 2 | 2 | 1 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 4 | 8 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| May | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Feb. | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| March | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |

| Year and month | | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-------------|-----------|----------|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|-------|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 22 | | X |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | Pregnant | P | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Nonpregnant | N | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | P | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpregnant | N | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 4 | 1 | 1 | 0 | 1 | 12 |
| | Pregnant | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 2 | 4 | 1 | 0 | 1 | 1 | 4 | 18 |

Table 7
Reproductive condition (uterine) of female fur seals collected
in the Sea of Okhotsk. An X designates unknown age.
(N = nulliparous, P = primiparous, M = multiparous)

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----------|-----------|---|---|---|----|----|----|----|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|-------|----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | X | Total | |
| 1958 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sept. | Nonpreg. | N | 0 | 0 | 5 | 12 | 28 | 10 | 5 | 1 | 3 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 77 |
| | | P | 0 | 0 | 0 | 1 | 9 | 9 | 12 | 8 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 55 |
| | | M | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 4 | 4 | 2 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| | Postpart. | P | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 2 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 28 |
| Oct. | Nonpreg. | N | 0 | 0 | 2 | 9 | 25 | 14 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 59 |
| | | P | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 |
| | | M | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 3 | 1 | 1 | 1 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| | Postpart. | P | 0 | 0 | 0 | 0 | 5 | 7 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 |
| | | M | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 7 | 4 | 9 | 3 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 87 |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| July | Nonpreg. | N | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 0 | 2 | 2 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 1 | 2 | 4 | 3 | 3 | 2 | 2 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 27 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | Postpart. | P | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | M | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 | 4 | 3 | 10 | 0 | 3 | 10 | 10 | 8 | 8 | 4 | 3 | 1 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 80 |
| Oct. | Nonpreg. | N | 1 | 0 | 3 | 4 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 9 |
| | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 6 |

Table 8
Reproductive condition (uterine) of female fur seals collected
in the Western Pacific Ocean. An X designates unknown age.
(N = nulliparous, P = primiparous, M = multiparous)

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|----------|-----------|----------|---|---|----|----|----|---|----|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Condition | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | X | |
| | | Joban | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1959 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpreg. | N | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Preg. | P | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpreg. | N | 1 | 5 | 11 | 5 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| | Preg. | P | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Preg. | | P | 0 | 0 | 0 | 1 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | M | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 4 | 2 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpreg. | N | 1 | 9 | 13 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Preg. | | P | 0 | 0 | 0 | 7 | 7 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | M | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 9 | 7 | 4 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | |
| 1971 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | Nonpreg. | N | 3 | 0 | 13 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | Preg. | M | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | | P | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| M | | 0 | 0 | 0 | 0 | 14 | 10 | 9 | 10 | 8 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Nonpreg. | N | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Preg. | | P | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------|-----------|---|------------------------|----|----|----|----|----|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | X |
| | | | Sanriku (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Nonpreg. | N | 0 | 13 | 17 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 46 |
| | | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | Preg. | P | 0 | 0 | 0 | 12 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| | | M | 0 | 0 | 0 | 0 | 8 | 12 | 9 | 4 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 43 |
| June | Nonpreg. | N | 0 | 5 | 8 | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 21 |
| | | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | Preg. | P | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Nonpreg. | N | 2 | 8 | 4 | 9 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| | Preg. | P | 0 | 0 | 0 | 3 | 9 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| | | M | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 8 | 2 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| May | Nonpreg. | N | 0 | 7 | 6 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | P | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 4 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Nonpreg. | N | 1 | 4 | 8 | 3 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Preg. | P | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 8 | 4 | 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| May | Nonpreg. | N | 2 | 10 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Preg. | P | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | | M | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 4 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Nonpreg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |

| Year and month | | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------|----------|------------------------|----------|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | X |
| | | Sanriku (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Nonpreg. | N | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 1971 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Nonpreg. | N | 4 | 7 | 8 | 7 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| | | M | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 2 | 1 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| | Preg. | P | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 4 | 3 | 4 | 6 | 5 | 4 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | Nonpreg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Preg. | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 3 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Nonpreg. | N | 0 | 4 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 6 | 4 | 1 | 0 | 2 | 4 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 5 | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | | M | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | Preg. | P | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 2 | 0 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | N | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|----------|-----------|---------------------|---|---|---|---|---|----|----|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|-------|
| month | Condition | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | X | | | |
| | | Doto (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | Nonpreg. | N | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | P | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 1 | 6 | 3 | 5 | 3 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | N | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Preg. | P | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 2 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | N | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Preg. | P | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 0 | 5 | 14 | 9 | 3 | 5 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1969 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | Nonpreg. | N | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | M | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Preg. | M | 0 | 0 | 0 | 2 | 1 | 8 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| May | Nonpreg. | N | 3 | 2 | 8 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | | M | 0 | 0 | 0 | 0 | 4 | 8 | 2 | 2 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | Preg. | P | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 4 | 12 | 3 | 9 | 7 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| June | Nonpreg. | N | 2 | 1 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | | M | 0 | 0 | 0 | 0 | 4 | 6 | 2 | 2 | 3 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------|-----------|---|---------------------|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | X |
| 1975 | | | Doto (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 2 | 7 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | | M | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | Preg. | M | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| July | Nonpreg. | N | 0 | 1 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | Nonpreg. | N | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Preg. | P | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 5 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 1977 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Nonpreg. | N | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | P | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 3 | 9 | 0 | 2 | 5 | 3 | 7 | 4 | 2 | 2 | 5 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 55 |

Table 9
Reproductive condition (uterine) of female fur seals collected
in the Western Bering Sea.
(N = nulliparous, P = primiparous, M = multiparous)

| Year and month | Condition | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-----------|---|----------|---|---|---|---|---|---|----|----|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | 26 |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1962 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 9 | 2 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 1965 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | M | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 14 | 19 | 6 | 6 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 |
| July | Nonpreg. | N | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 1966 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Preg. | M | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| June | Nonpreg. | N | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | | P | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 7 | 8 | 8 | 8 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| July | Nonpreg. | P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |

| Year and | | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----------|---|----------|---|---|---|---|---|---|----|---|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Condition | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 26 | 27 | Total |
| 1967 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| June | Nonpreg. | N | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 1 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 9 | 7 | 4 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 |
| July | Nonpreg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| 1968 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Preg. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| July | Nonpreg. | N | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Preg. | P | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 1970 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Nonpreg. | N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Preg. | P | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 11 | 7 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | Nonpreg. | N | 0 | 1 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | M | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Postpart. | M | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 7 | 5 | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| Sept. | Nonpreg. | N | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Postpart. | P | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | | M | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 10 | 6 | 2 | 8 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |

Table 10
Reproductive condition (ovarian) of female fur seals
collected in the Sea of Okhotsk.

| Ovarian condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|----------------------|----------|---|---|---|----|----|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | |
| 1977 - August | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 0 | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | | 2 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Pregnant | 0 | 0 | 5 | 5 | 13 | 10 | 4 | 6 | 2 | 2 | 2 | 3 | 5 | 5 | 5 | 3 | 0 | 6 | 2 | 3 | 1 | 0 | 0 | 0 | | 82 |

Table 11
Reproductive condition (ovarian) of female fur seals
collected in the Western Pacific Ocean.

| Ovarian condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | Total |
|----------------------------------|----------|---|---|---|---|---|---|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
| <u>1976 - December - Doto</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonovulated | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Pregnant | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 5 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 16 |
| <u>1977 - Feb.-March - Joban</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonovulated | 0 | 0 | 7 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 2 | 1 | 2 | 4 | 4 | 0 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 |
| Pregnant | 0 | 0 | 0 | 1 | 7 | 4 | 7 | 11 | 9 | 12 | 7 | 3 | 7 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 80 |
| <u>1977 - January - Sanriku</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonovulated | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 |
| Pregnant | 0 | 0 | 0 | 2 | 3 | 2 | 2 | 4 | 3 | 9 | 1 | 5 | 3 | 7 | 4 | 2 | 2 | 5 | 0 | 0 | 0 | 3 | 0 | 57 |

Table 12
Reproductive condition (ovarian) of female fur seals
collected in the Bering Sea.

| Ovarian condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|------------------------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| <u>1978 - October</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 0 | 17 | 33 | 20 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonovulated | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 0 | 3 | 2 | 2 | 2 | 2 | 1 | 0 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 25 |
| Pregnant | 0 | 0 | 0 | 9 | 17 | 22 | 17 | 11 | 14 | 10 | 8 | 10 | 4 | 9 | 8 | 6 | 5 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 159 |
| <u>1978 - November</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Immature | 0 | 1 | 18 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Mature | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ovulated | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nonpregnant | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Pregnant | 0 | 0 | 0 | 4 | 6 | 2 | 9 | 0 | 0 | 2 | 4 | 2 | 4 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 41 |

Table 13

Monthly mean length and weight of nonpregnant fur seals.
(\bar{X} = mean, n = sample size, s = standard deviation for $n > 10$)

Sea of Japan

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|-----|-----|---------|-------------|-----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1959 | March | 3 | 104.3 | 1 | - | - | - | - | - | - |
| | | 5 | 121.0 | 1 | - | - | - | - | - | - |
| 1960 | March | 4+ | 113.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 10+ | 131.3 | 3 | - | 128-136 | 44.6 | 3 | - | 40-48 |
| | April | 10+ | 127.6 | 3 | - | 124-130 | 41.3 | 3 | - | 36-50 |
| 1961 | March | 8 | 119.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 105.0 | 6 | - | 120-132 | 45.5 | 6 | - | 42-54 |
| | April | 7 | 128.0 | 2 | - | 112-144 | 41.0 | 2 | - | 31-51 |
| | | 10+ | 144.0 | 10 | 2.2 | 123-143 | 59.0 | 10 | 1.2 | 40-51 |
| | May | 7 | 112.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 10+ | 124.5 | 2 | - | 123-126 | 42.5 | 2 | - | 40-45 |
| 1962 | March | 1 | 96.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 3 | 105.5 | 2 | - | 101-110 | 18.5 | 2 | - | 12-25 |
| | | 9 | 122.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10+ | 128.8 | 5 | - | 125-134 | 52.0 | 5 | - | 39-72 |
| | April | 1 | 123.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 2 | 92.0 | 2 | - | - | 17.0 | 2 | - | 15-19 |
| | | 3 | 99.4 | 5 | - | 91-103 | 20.0 | 5 | - | 15-23 |
| | | 4 | 112.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 6 | 127.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 8 | 115.0 | 3 | - | 112-120 | 32.0 | 3 | - | 30-36 |
| | | 9 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 10+ | 127.8 | 27 | 4.0 | 121-137 | 45.6 | 27 | 6.6 | 32-58 |
| | May | 9 | 127.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 10+ | 127.7 | 3 | - | 126-130 | 32.0 | 3 | - | 30-40 |
| 1963 | March | 2 | 96.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 10 | 119.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 128.8 | 4 | - | 120-133 | 55.0 | 4 | - | 50-60 |
| | April | 2 | 82.0 | 2 | - | 79-85 | 16.5 | 1 | - | - |
| | | 3 | 102.9 | 7 | - | 90-109 | 25.6 | 7 | - | 22-30 |
| | | 4 | 110.4 | 5 | - | 106-116 | 28.6 | 5 | - | 26-34 |
| | | 6 | 121.5 | 2 | - | 118-125 | 40.0 | 2 | - | - |
| | | 8 | 127.5 | 2 | - | 127-128 | 43.0 | 2 | - | 36-50 |
| | | 9 | 123.2 | 5 | - | 117-130 | 40.8 | 5 | - | 36-46 |
| | | 10+ | 129.6 | 13 | 5.6 | 122-140 | 47.9 | 13 | 6.2 | 40-60 |
| | May | 8 | 127.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 9 | 120.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10 | 130.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 130.6 | 5 | - | 123-135 | 58.4 | 5 | - | 38-60 |
| 1964 | February | 3 | 105.5 | 1 | - | - | 24.0 | 1 | - | - |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1964 | March | 2 | 91.5 | 1 | - | - | 18.0 | 1 | - | - |
| | | 3 | 103.2 | 2 | - | 102-104 | 20.0 | 2 | - | - |
| | | 5 | 116.5 | 2 | - | 114-119 | 33.0 | 2 | - | 28-39 |
| | | 7 | 121.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 9 | 119.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 131.8 | 9 | - | 126-141 | 46.3 | 9 | - | 38-64 |
| | April | 1 | 88.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 92.5 | 3 | - | 91-95 | 15.0 | 3 | - | 13-16 |
| | | 3 | 98.8 | 4 | - | 97-101 | 16.2 | 4 | - | 13-19 |
| | | 4 | 107.5 | 1 | - | - | 19.0 | 1 | - | - |
| | | 7 | 127.5 | 1 | - | - | 39.0 | 1 | - | - |
| | | 9 | 119.2 | 2 | - | 111-127 | 32.5 | 2 | - | 30-35 |
| | | 10+ | 127.4 | 9 | - | 113-132 | 41.7 | 9 | - | 33-50 |
| | May | 2 | 99.2 | 2 | - | 99-100 | 20.0 | 2 | - | 18-22 |
| | | 3 | 66.5 | 3 | - | 95-100 | 18.7 | 3 | - | 15-22 |
| | | 4 | 115.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 6 | 120.8 | 3 | - | 117-124 | 32.3 | 3 | - | 26-41 |
| | | 10+ | 128.8 | 3 | - | 120-135 | 32.0 | 3 | - | 29-33 |
| 1965 | March | 3 | 105.5 | 1 | - | - | 19.0 | 1 | - | - |
| | | 9 | 119.5 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10+ | 130.9 | 4 | - | 124-138 | 48.5 | 4 | - | 42-57 |
| | April | 4 | 114.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 5 | 124.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 6 | 118.5 | 1 | - | - | 32.0 | 1 | - | - |
| | | 7 | 127.0 | 3 | - | 126-128 | 39.3 | 3 | - | 38-40 |
| | | 8 | 124.1 | 4 | - | 118-129 | 38.0 | 4 | - | 36-44 |
| | | 9 | 135.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 123.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 128.5 | 36 | 5.4 | 116-139 | 43.8 | 36 | 8.5 | 36-72 |
| | May | 10+ | 131.5 | 8 | - | 120-140 | 44.0 | 8 | - | 36-52 |
| 1966 | February | 10+ | 131.5 | 11 | 4.3 | 126-139 | 52.5 | 11 | 16.2 | 41-90 |
| 1968 | March | 8 | 141.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 10+ | 130.7 | 8 | - | 123-138 | 50.1 | 8 | - | 40-60 |
| 1973 | April | 3 | 107.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 7 | 124.0 | 2 | - | 122-126 | 34.0 | 2 | - | 30-38 |
| | | 10+ | 129.5 | 6 | - | 126-134 | 44.3 | 6 | - | 38-54 |
| 1976 | February | 10+ | 135.4 | 5 | - | 126-144 | 53.0 | 5 | - | 43-64 |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1976 | March | 2 | 98.5 | 2 | - | 92-105 | 15.5 | 2 | - | 13-18 |
| | | 5 | 122.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 10+ | 131.3 | 3 | - | 126-136 | 46.6 | 3 | - | 38-58 |
| | | 13 | 132.3 | 3 | - | 127-138 | 44.0 | 3 | - | 38-52 |
| | | 14 | 127.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 15 | 125.5 | 2 | - | 121-130 | 44.0 | 2 | - | 38-50 |
| | | 16 | 128.7 | 4 | - | 127-131 | 49.0 | 4 | - | 38-46 |
| | | 17 | 139.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 18 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |

Sea of Okhotsk

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1958 | Sept. | 2 | 99.8 | 4 | - | 96-104 | - | - | - | - |
| | | 3 | 100.0 | 13 | 7.8 | 82-107 | - | - | - | - |
| | | 4 | 113.7 | 29 | 6.5 | 103-129 | - | - | - | - |
| | | 5 | 116.5 | 10 | 5.8 | 109-126 | - | - | - | - |
| | | 6 | 120.2 | 5 | - | 118-124 | - | - | - | - |
| | | 7 | 125.0 | 2 | - | 123-127 | - | - | - | - |
| | | 8 | 118.5 | - | - | 107-124 | - | - | - | - |
| | | 10+ | 121.2 | 5 | - | 116-126 | - | - | - | - |
| | October | 2 | 100.5 | 2 | - | 96-105 | - | - | - | - |
| | | 3 | 116.4 | 8 | - | 96-111 | - | - | - | - |
| | | 4 | 111.8 | 23 | 6.6 | 102-127 | - | - | - | - |
| | | 5 | 115.0 | 11 | 8.6 | 104-130 | - | - | - | - |
| | | 6 | 117.8 | 5 | - | 114-127 | - | - | - | - |
| | | 7 | 116.0 | 1 | - | - | - | - | - | - |
| | | 10 | 123.0 | - | - | - | - | - | - | - |
| | | 10+ | 126.9 | 10 | 6.2 | 114-132 | - | - | - | - |
| 1964 | July | 2 | 97.0 | 4 | - | 96-97 | 17.0 | 4 | - | 16-17 |
| | | 4 | 114.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 6 | 110.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 11 | 122.5 | 2 | - | 122-123 | 36.5 | 2 | - | 36-37 |
| 1975 | July | 2 | 108.0 | 2 | - | 103-113 | 25.0 | 2 | - | 20-30 |
| | | 3 | 112.0 | 2 | - | 102-122 | 28.5 | 2 | - | 28-29 |
| | | 4 | 117.5 | 2 | - | 113-122 | 30.0 | 2 | - | 30-30 |
| | | 5 | 121.0 | 2 | - | 120-122 | 37.5 | 2 | - | 35-40 |
| | | 6 | 121.0 | 2 | - | 120-122 | 40.0 | 2 | - | 35-45 |
| | | 7 | 124.5 | 2 | - | 123-126 | 36.0 | 2 | - | 36-36 |
| | | 8 | 142.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 10 | 128.7 | 3 | - | 125-132 | 48.3 | 3 | - | 45-50 |
| | | 11 | 131.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 12 | 127.5 | 2 | - | 122-133 | 43.0 | 2 | - | 33-53 |
| | | 13 | 128.2 | 5 | - | 117-136 | 43.4 | 5 | - | 34-50 |
| | | 14 | 129.0 | 3 | - | 124-135 | 47.3 | 3 | - | 40-55 |
| | | 15 | 128.8 | 3 | - | 125-131 | 43.3 | 3 | - | 42-45 |
| | | 16 | 119.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 17 | 137.5 | 2 | - | 133-142 | 52.0 | - | - | 48-56 |
| | | 19 | 127.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 20 | 128.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 22 | 128.0 | 2 | - | 121-135 | 52.5 | 2 | - | 45-60 |
| | October | 0 | 79.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 2 | 97.7 | 3 | - | 96-100 | 24.0 | 3 | - | 22-26 |
| | | 3 | 110.0 | 4 | - | 100-123 | 27.5 | 4 | - | 20-32 |
| | | 4 | 121.0 | 2 | - | 120-122 | 35.5 | 2 | - | 35-36 |
| | | 8 | 112.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 10 | 123.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 130.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 18 | 132.0 | 1 | - | - | 53.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1977 | August | 2 | 109.1 | 7 | - | 105-113 | 21.3 | 7 | - | 17-28 |
| | | 3 | 114.6 | 11 | 3.7 | 108-119 | 23.6 | 11 | 2.3 | 19-26 |
| | | 4 | 116.7 | 3 | - | 116-117 | 26.7 | 3 | - | 26-28 |
| | | 5 | 126.5 | 2 | - | 125-128 | 34.5 | 2 | - | 33-36 |
| | | 7 | 128.0 | 2 | - | - | 33.5 | 2 | - | 32-35 |
| | | 8 | 135.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 13 | 133.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 15 | 138.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 126.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 18 | 135.0 | 2 | - | 133-137 | 37.5 | 2 | - | 37-38 |
| | | 19 | 135.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 20 | 140.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 21 | 142.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 22 | 135.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 24 | 138.0 | 1 | - | - | 40.0 | 1 | - | - |

Western Pacific Ocean

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|------|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1958 | April | 1 | 87.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 10 | 113.0 | 1 | - | - | - | - | - | - |
| | May | 2 | 92.7 | 3 | - | 86-104 | 12.5 | 2 | - | 11-14 |
| | | 3 | 103.0 | 7 | - | 95-113 | 16.3 | 5 | - | 10-20 |
| | | 4 | 107.0 | 2 | - | 104-110 | 24.5 | 2 | - | 24-25 |
| | | 10 | 127.0 | 1 | - | - | 48.0 | 1 | - | - |
| | June | 1 | 85.4 | 10 | 3.4 | 80-90 | 11.5 | 4 | - | 9-13 |
| | | 2 | 96.3 | 56 | 6.1 | 83-111 | 15.2 | 27 | 3.6 | 11-25 |
| | | 3 | 103.3 | 76 | 4.8 | 91-114 | 20.1 | 38 | 3.5 | 13-28 |
| | | 4 | 109.5 | 36 | 4.7 | 98-118 | 21.7 | 27 | 3.3 | 15-28 |
| | | 5 | 116.4 | 7 | - | 104-126 | 33.5 | 2 | - | 33-34 |
| | | 6 | 120.5 | 2 | - | 114-127 | 30.0 | 1 | - | - |
| | | 9 | 111.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10 | 119.0 | 2 | - | 114-124 | 40.0 | 1 | - | - |
| 1959 | March | 3 | 101.0 | 2 | - | 98-104 | - | - | - | - |
| | April | 1 | 79.2 | 11 | 5.7 | 71-88 | - | - | - | - |
| | | 2 | 90.8 | 15 | 3.8 | 83-96 | - | - | - | - |
| | | 3 | 127.3 | 19 | 8.0 | 88-117 | - | - | - | - |
| | | 4 | 109.2 | 14 | 6.1 | 98-118 | - | - | - | - |
| | | 5 | 113.4 | 8 | - | 107-123 | - | - | - | - |
| | | 6 | 132.6 | 1 | - | - | - | - | - | - |
| | | 7 | 123.5 | 1 | - | - | - | - | - | - |
| | | 10 | 110.1 | 1 | - | - | - | - | - | - |
| | | 10+ | 132.3 | 1 | - | - | - | - | - | - |
| | May | 1 | 82.5 | 9 | - | 70-103 | - | - | - | - |
| | | 2 | 91.8 | 38 | 3.9 | 84-100 | - | - | - | - |
| | | 3 | 104.5 | 53 | 5.8 | 90-116 | - | - | - | - |
| | | 4 | 110.1 | 35 | 10.1 | 97-140 | - | - | - | - |
| | | 5 | 111.9 | 7 | - | 108-117 | - | - | - | - |
| | | 6 | 113.8 | 4 | - | 111-120 | - | - | - | - |
| | | 7 | 116.3 | 2 | - | 113-120 | - | - | - | - |
| | | 8 | 128.6 | 1 | - | - | - | - | - | - |
| | | 9 | 118.1 | 2 | - | - | - | - | - | - |
| | | 10 | 126.0 | 1 | - | - | - | - | - | - |
| | | 10+ | 128.6 | 14 | 5.5 | 120-138 | - | - | - | - |
| | June | 2 | 94.1 | 9 | - | 85-102 | - | - | - | - |
| | | 3 | 107.4 | 12 | 3.1 | 103-113 | - | - | - | - |
| | | 4 | 110.3 | 13 | 4.6 | 103-118 | - | - | - | - |
| | | 5 | 113.5 | 5 | - | 100-121 | - | - | - | - |
| | | 6 | 115.7 | 1 | - | - | - | - | - | - |
| | | 9 | 131.4 | 1 | - | - | - | - | - | - |
| | | 10 | 126.0 | 1 | - | - | - | - | - | - |
| 1960 | April | 2 | 93.9 | 8 | - | 89-100 | 15.4 | 7 | - | 12-17 |
| | | 3 | 104.7 | 10 | 3.4 | 99-109 | 21.9 | 9 | - | 20-24 |
| | | 4 | 109.8 | 13 | 5.0 | 101-117 | 23.5 | 13 | 2.5 | 21-29 |
| | | 5 | 120.5 | 2 | - | 117-120 | 28.5 | 2 | - | 28-29 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1960 | April | 8 | 125.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 9 | 113.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 10+ | 134.0 | 1 | - | - | 44.0 | 1 | - | - |
| | May | 1 | 82.7 | 3 | - | 80-85 | 8.8 | 3 | - | 6-12 |
| | | 2 | 94.8 | 18 | 5.4 | 85-104 | 14.2 | 18 | 3.7 | 9-22 |
| | | 3 | 103.5 | 35 | 5.3 | 93-116 | 18.8 | 35 | 3.8 | 10-26 |
| | | 4 | 110.7 | 18 | 5.1 | 102-120 | 23.4 | 18 | 3.1 | 18-29 |
| | | 5 | 114.5 | 5 | - | 106-127 | 26.6 | 5 | - | 23-30 |
| | | 6 | 119.0 | 3 | - | 109-128 | 27.7 | 3 | - | 18-33 |
| | | 7 | 124.7 | 3 | - | 120-129 | 30.7 | 3 | - | 29-33 |
| | | 10 | 88.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 10+ | 126.0 | 1 | - | - | 32.0 | 1 | - | - |
| | June | 1 | 83.0 | 2 | - | 82-84 | 9.0 | 2 | - | 8-10 |
| | | 2 | 91.8 | 10 | 4.1 | 85-97 | 14.0 | 10 | 3.4 | 10-20 |
| | | 3 | 100.9 | 9 | - | 91-109 | 20.0 | 9 | - | 16-24 |
| | | 4 | 109.8 | 4 | - | 106-115 | 25.0 | 4 | - | 24-28 |
| | | 5 | 119.8 | 4 | - | 110-125 | 31.0 | 4 | - | 30-32 |
| | | 6 | 116.8 | 3 | - | 105-124 | 28.7 | 3 | - | - |
| | | 7 | 128.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 119.0 | 1 | - | - | 32.0 | 1 | - | - |
| 1961 | May | 2 | 92.6 | 14 | 6.1 | 86-106 | 14.6 | 14 | 3.4 | 11-22 |
| | | 3 | 104.2 | 17 | 5.4 | 95-114 | 20.5 | 17 | 3.5 | 16-28 |
| | | 4 | 110.4 | 13 | 6.0 | 99-118 | 24.4 | 13 | 4.1 | 18-31 |
| | | 5 | 120.0 | 3 | - | 114-126 | 53.0 | 3 | - | 31-34 |
| | | 6 | 118.0 | 2 | - | 116-120 | 30.5 | 2 | - | 27-34 |
| | | 7 | 127.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 8 | 115.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 10+ | 128.3 | 4 | - | 122-133 | 40.3 | 4 | - | 37-42 |
| | June | 1 | 79.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 96.0 | 13 | 6.1 | 86-103 | 16.5 | 13 | 4.3 | 10-22 |
| | | 3 | 103.7 | 26 | 6.3 | 95-111 | 20.5 | 26 | 1.5 | 18-24 |
| | | 4 | 111.3 | 15 | 6.5 | 99-121 | 25.2 | 15 | 3.6 | 20-32 |
| | | 5 | 105.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 6 | 115.0 | 2 | - | 110-120 | 27.5 | 2 | - | 26-29 |
| | | 7 | 117.0 | 2 | - | 117-117 | 29.5 | 2 | - | 26-33 |
| | | 8 | 122.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10+ | 128.0 | 1 | - | - | 44.0 | 1 | - | - |
| 1963 | March | 1 | 75.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 94.5 | 5 | - | 89-99 | 17.6 | 5 | - | 17-19 |
| | | 3 | 99.3 | 6 | - | 90-105 | 13.7 | 6 | - | 12-18 |
| | | 4 | 106.2 | 6 | - | 93-116 | 26.5 | 6 | - | 16-37 |
| | | 5 | 113.3 | 2 | - | 110-116 | - | 2 | - | 27-31 |
| | | 6 | 122.5 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 118.5 | 1 | - | - | 24.0 | 1 | - | - |
| | | 8 | 115.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 10+ | 129.0 | 2 | - | 123-134 | 44.0 | 2 | - | 44-44 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1963 | April | 1 | 72.5 | 2 | - | 71-73 | 10.0 | 1 | - | - |
| | | 2 | 88.9 | 8 | - | 78-99 | 13.3 | 8 | - | 8-21 |
| | | 3 | 97.1 | 4 | - | 92-100 | 15.0 | 4 | - | 9-22 |
| | | 4 | 105.9 | 9 | - | 98-120 | 18.9 | 9 | - | 10-25 |
| | | 5 | 108.9 | 4 | - | 106-112 | 20.8 | 4 | - | 19-27 |
| | | 8 | 108.5 | 1 | - | - | 29.0 | 1 | - | - |
| | | 10 | 123.5 | 1 | - | - | 10.0 | 1 | - | - |
| | | 10+ | 128.3 | 5 | - | 115-138 | 39.2 | 5 | - | 32-46 |
| | May | 2 | 91.6 | 7 | - | 83-100 | 12.9 | 7 | - | 9-16 |
| | | 3 | 99.9 | 11 | 5.8 | 93-110 | 21.1 | 11 | 2.0 | 18-24 |
| | | 4 | 112.0 | 3 | - | 104-120 | 25.3 | 3 | - | 22-30 |
| | | 6 | 114.5 | 1 | - | - | 18.0 | 1 | - | - |
| | | 8 | 119.5 | 1 | - | - | 29.0 | 1 | - | - |
| 1964 | March | 1 | 75.5 | 1 | - | - | 11.0 | 1 | - | - |
| | | 2 | 91.4 | 9 | - | 85-95 | 16.0 | 9 | - | 13-19 |
| | | 3 | 102.1 | 13 | 3.6 | 96-107 | 20.4 | 13 | 2.5 | 18-26 |
| | | 4 | 107.6 | 5 | - | 102-120 | 24.6 | 5 | - | 20-30 |
| | | 7 | 119.0 | 2 | - | 119-119 | 30.0 | 2 | - | 29-31 |
| | | 8 | 116.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 10+ | 127.6 | 7 | - | 122-131 | 41.4 | 7 | - | 32-46 |
| | April | 1 | 87.5 | 1 | - | - | 9.0 | 1 | - | - |
| | | 2 | 93.1 | 4 | - | 87-95 | 15.0 | 4 | - | 13-18 |
| | | 3 | 101.7 | 8 | - | 95-106 | 19.4 | 8 | - | 15-23 |
| | | 4 | 109.0 | 3 | - | 104-112 | 22.5 | 3 | - | 17-26 |
| | | 5 | 112.0 | 3 | - | 103-118 | 25.0 | 3 | - | 22-27 |
| | | 6 | 106.5 | 1 | - | - | 21.0 | 1 | - | - |
| | | 7 | 108.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 8 | 122.8 | 2 | - | 118-127 | 32.5 | 2 | - | 26-39 |
| | | 10 | 121.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 11 | 112.5 | 1 | - | - | 29.0 | 1 | - | - |
| | May | 1 | 79.5 | 2 | - | 78-81 | 11.0 | 2 | - | 11-11 |
| | | 2 | 92.7 | 10 | 6.8 | 85-105 | 15.5 | 10 | 3.4 | 11-21 |
| | | 3 | 105.5 | 5 | - | 100-109 | 21.0 | 5 | - | 17-25 |
| | | 4 | 103.2 | 2 | - | 98-108 | 23.0 | 2 | - | 21-25 |
| | | 5 | 113.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 6 | 124.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 8 | 118.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 9 | 116.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 10+ | 119.8 | 2 | - | 124-115 | 37.0 | 2 | - | 34-42 |
| | December | 2 | 103.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 101.3 | 3 | - | 97-107 | 21.2 | 3 | - | 19-22 |
| | | 4 | 103.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 10+ | 130.0 | 1 | - | - | 50.0 | 1 | - | - |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|--------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1967 | January | 5 | 118.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 121.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 8 | 124.5 | 2 | - | 122-127 | 43.5 | 2 | - | 42-45 |
| | | 10+ | 135.0 | 1 | - | - | 41.0 | 1 | - | - |
| 1968 | January | 3 | 106.4 | 5 | - | 97-116 | 29.4 | 5 | - | 25-32 |
| | | 4 | 115.3 | 3 | - | 109-120 | 35.0 | 3 | - | 30-40 |
| | | 5 | 123.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 6 | 114.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10+ | 122.5 | 2 | - | 121-124 | 49.0 | 2 | - | 48-50 |
| | | February 10+ | 135.0 | 9 | - | 131-137 | 45.3 | 3 | - | 42-50 |
| 1971 | March | 1 | 88.4 | 4 | - | 56-116 | 16.3 | 4 | - | 12-25 |
| | | 3 | 107.0 | 12 | 5.3 | 97-113 | 23.8 | 12 | 2.6 | 20-28 |
| | | 4 | 106.8 | 2 | - | 101-112 | 24.3 | 2 | - | 22-26 |
| | | 5 | 121.2 | 3 | - | 118-126 | 31.7 | 3 | - | 30-34 |
| | | 6 | 118.5 | 2 | - | 113-123 | 26.5 | 2 | - | 25-28 |
| | | 7 | 125.8 | 2 | - | 123-128 | 39.0 | 2 | - | 35-43 |
| | | 8 | 128.5 | 1 | - | - | 37.0 | 1 | - | - |
| | | 9 | 127.5 | 3 | - | 127-128 | 39.3 | 3 | - | 39-40 |
| | | 10 | 131.3 | 2 | - | 128-134 | 40.0 | 2 | - | 35-45 |
| | | 10+ | 122.3 | 5 | - | 118-127 | 38.9 | 5 | - | 37-42 |
| | May | 1 | 86.0 | 4 | - | 75-96 | 15.3 | 4 | - | 12-18 |
| | | 2 | 98.0 | 7 | - | 89-105 | 20.4 | 7 | - | 18-22 |
| | | 3 | 106.0 | 8 | - | 100-113 | 24.0 | 8 | - | 19-33 |
| | | 4 | 115.3 | 7 | - | 107-131 | 27.9 | 7 | - | 25-35 |
| | | 5 | 118.0 | 3 | - | 114-120 | 31.7 | 3 | - | 28-37 |
| | | 6 | 114.5 | 6 | - | 104-121 | 31.2 | 6 | - | 26-38 |
| | | 7 | 112.6 | 5 | - | 103-120 | 31.8 | 5 | - | 26-40 |
| | | 8 | 121.7 | 3 | - | 118-127 | 33.3 | 3 | - | 26-42 |
| | | 9 | 118.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10 | 121.5 | 2 | - | 116-127 | 37.0 | 2 | - | 34-40 |
| 1972 | January | 10+ | 122.0 | 7 | - | 116-128 | 38.4 | 7 | - | 30-45 |
| | | 4 | 113.5 | 2 | - | 109-118 | 29.0 | 2 | - | 28-30 |
| | | 6 | 122.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 8 | 132.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 127.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 13 | 128.0 | 1 | - | - | 44.0 | 1 | - | - |
| | April | 1 | 92.5 | 2 | - | 92-93 | 16.5 | 2 | - | 15-18 |
| | | 2 | 102.7 | 3 | - | 98-105 | 19.7 | 3 | - | 17-23 |
| | | 3 | 109.1 | 7 | - | 100-114 | 21.1 | 7 | - | 18-24 |
| | | 4 | 114.8 | 6 | - | 107-121 | 29.0 | 6 | - | 23-32 |
| | | 5 | 133.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 6 | 124.5 | 1 | - | - | 30.5 | 1 | - | - |
| | | 7 | 124.5 | 1 | - | - | 37.5 | 1 | - | - |
| | | 8 | 126.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10 | 134.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 10+ | 139.0 | 1 | - | - | 49.0 | 1 | - | - |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|------|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1972 | May | 1 | 92.0 | 3 | - | 88-94 | 16.0 | 3 | - | 14-18 |
| | | 2 | 105.5 | 2 | - | 101-110 | 21.0 | 2 | - | 19-23 |
| | | 3 | 109.5 | 8 | - | 101-116 | 21.9 | 8 | - | 19-26 |
| | | 4 | 109.3 | 6 | - | 100-118 | 24.8 | 6 | - | 18-30 |
| | | 5 | 122.5 | 6 | - | 115-127 | 30.5 | 6 | - | 26-39 |
| | | 6 | 128.1 | 8 | - | 120-141 | 33.6 | 8 | - | 30-42 |
| | | 7 | 124.5 | 2 | - | 124-125 | 31.0 | 2 | - | 30-32 |
| | | 8 | 131.0 | 2 | - | 123-139 | 43.5 | 2 | - | 40-47 |
| | | 9 | 132.0 | 2 | - | 129-135 | 39.0 | 2 | - | 36-42 |
| | | 10+ | 128.0 | 1 | - | - | 38.5 | 1 | - | - |
| | | 12 | 126.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 14 | 137.0 | 1 | - | - | 36.0 | 1 | - | - |
| | June | 1 | 98.0 | 2 | - | 95-101 | 16.7 | 2 | - | 15-18 |
| | | 2 | 105.0 | 1 | - | - | 19.5 | 1 | - | - |
| | | 3 | 108.3 | 3 | - | 105-114 | 23.0 | 3 | - | 21-27 |
| | | 4 | 113.5 | 4 | - | 112-117 | 27.7 | 4 | - | 27-28 |
| | | 5 | 121.4 | 5 | - | 115-125 | 32.0 | 5 | - | 30-34 |
| | | 6 | 125.3 | 6 | - | 121-133 | 33.5 | 6 | - | 32-39 |
| | | 7 | 123.5 | 2 | - | 120-127 | 35.5 | 2 | - | 32-39 |
| | | 8 | 126.5 | 2 | - | 125-128 | 33.5 | 2 | - | 33-34 |
| | | 9 | 126.3 | 3 | - | 122-132 | 40.7 | 3 | - | 38-45 |
| | | 10 | 123.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 131.4 | 4 | - | 130-133 | 41.3 | 4 | - | 39-44 |
| | | 11 | 129.0 | 1 | - | - | 37.0 | 1 | - | - |
| 1974 | June | 2 | 92.8 | 6 | - | 78-97 | 19.3 | 6 | - | 10-24 |
| | | 3 | 100.3 | 3 | - | 98-104 | 20.0 | 3 | - | 19-21 |
| | | 4 | 107.0 | 5 | - | 101-111 | 21.6 | 5 | - | 19-24 |
| | | 5 | 112.7 | 4 | - | 110-115 | 25.2 | 4 | - | 25-26 |
| | | 6 | 109.7 | 4 | - | 101-124 | 27.2 | 4 | - | 22-36 |
| | | 10+ | 124.3 | 10 | 10.9 | 108-140 | 40.5 | 10 | 8.2 | 31-55 |
| 1975 | February | 1 | 87.0 | 2 | - | 78-96 | 16.5 | 2 | - | 12-21 |
| | | 2 | 95.0 | 2 | - | 90-100 | 19.5 | 2 | - | 17-22 |
| | | 3 | 100.2 | 5 | - | 95-106 | 20.2 | 5 | - | 17-26 |
| | | 4 | 110.8 | 4 | - | 100-121 | 27.5 | 4 | - | 20-39 |
| | | 5 | 114.3 | 6 | - | 108-120 | 28.5 | 6 | - | 25-34 |
| | | 6 | 116.5 | 3 | - | 111-120 | 29.0 | 3 | - | 27-31 |
| | | 7 | 116.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 8 | 120.7 | 3 | - | 110-128 | 34.0 | 3 | - | 26-40 |
| | | 9 | 122.0 | 2 | - | 120-124 | 35.5 | 2 | - | 33-38 |
| | March | 10+ | 129.5 | 8 | - | 126-134 | 35.5 | 8 | - | 37-56 |
| | | 3 | 102.7 | 6 | - | 94-110 | 20.7 | 6 | - | 15-25 |
| | | 4 | 107.6 | 6 | - | 91-116 | 23.8 | 6 | - | 16-28 |
| | | 5 | 115.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 6 | 120.7 | 7 | - | 114-133 | 33.7 | 7 | - | 28-47 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1975 | March | 7 | 123.3 | 3 | - | 120-126 | 31.7 | 3 | - | 30-33 |
| | | 8 | 126.0 | 2 | - | 124-128 | 36.5 | 2 | - | 35-38 |
| | | 10+ | 130.4 | 7 | - | 127-134 | 43.0 | 7 | - | 37-50 |
| | April | 2 | 94.5 | 2 | - | 93-96 | 20.0 | 2 | - | 20-20 |
| | | 3 | 107.9 | 7 | - | 99-115 | 23.9 | 7 | - | 20-26 |
| | | 4 | 113.4 | 5 | - | 111-119 | 30.0 | 5 | - | 25-39 |
| | | 5 | 117.7 | 3 | - | 109-125 | 31.0 | 3 | - | 36-38 |
| | | 6 | 122.3 | 3 | - | 118-129 | 36.7 | 3 | - | 30-40 |
| | | 7 | 120.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 9 | 127.0 | 2 | - | 122-132 | 44.0 | 2 | - | 40-48 |
| | | 10 | 124.0 | 2 | - | 124-124 | 33.0 | 2 | - | 30-36 |
| | | 13 | 132.0 | 2 | - | 131-133 | 45.0 | 2 | - | 44-46 |
| | | 15 | 131.0 | 1 | - | - | 48.0 | 1 | - | - |
| | June | 2 | 88.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 105.5 | 2 | - | 102-109 | 21.5 | 2 | - | 21-22 |
| | July | 3 | 112.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 4 | 116.0 | 1 | - | - | 26.0 | 1 | - | - |
| 1976 | January | 4 | 118.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 7 | 128.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 14 | 129.0 | 1 | - | - | 46.0 | 1 | - | - |
| | February | 1 | 90.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 102.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 108.0 | 2 | - | 106-110 | 22.0 | 2 | - | 20-24 |
| | | 4 | 111.0 | 2 | - | 106-116 | 26.0 | 2 | - | 22-30 |
| | | 10+ | 131.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 12 | 135.5 | 2 | - | 133-138 | 50.0 | 2 | - | 50-50 |
| | March | 15 | 131.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 2 | 97.5 | 1 | - | - | 18.0 | 1 | - | - |
| | | 3 | 111.5 | 1 | - | - | 24.0 | 1 | - | - |
| | | 4 | 110.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 10 | 120.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 14 | 124.5 | 2 | - | 120-129 | 33.0 | 2 | - | 32-34 |
| | | 16 | 115.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 20 | 126.0 | 1 | - | - | 41.0 | - | - | - |
| | April | 2 | 93.0 | 2 | - | 89-97 | 16.0 | 2 | - | 14-18 |
| | | 3 | 99.5 | 2 | - | 99-100 | 18.5 | 2 | - | 18-19 |
| | | 4 | 106.3 | 6 | - | 103-110 | 24.2 | 6 | - | 20-38 |
| | | 5 | 120.0 | 2 | - | 115-125 | 27.0 | 2 | - | 25-29 |
| | | 7 | 116.5 | 2 | - | 114-119 | 33.0 | 2 | - | 28-38 |
| | | 8 | 121.0 | 3 | - | 115-123 | 33.5 | 3 | - | 31-36 |
| | | 9 | 116.5 | 2 | - | 116-117 | 29.5 | 2 | - | 29-30 |
| | | 10 | 127.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 11 | 127.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 12 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1976 | April | 13 | 134.5 | 4 | - | 120-154 | 38.2 | 4 | - | 30-44 |
| | | 16 | 128.5 | 2 | - | 120-137 | 45.0 | 2 | - | 38-52 |
| | | 18 | 123.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 21 | 133.0 | 1 | - | - | 45.0 | 1 | - | - |
| | May | 2 | 99.7 | 3 | - | 98-103 | 17.0 | 3 | - | 16-18 |
| | | 3 | 109.3 | 3 | - | 102-119 | 23.0 | 3 | - | 20-27 |
| | | 4 | 110.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 5 | 117.3 | 3 | - | 113-126 | 26.3 | 3 | - | 25-27 |
| | | 6 | 117.0 | 3 | - | 106-129 | 28.0 | 3 | - | 25-32 |
| | | 7 | 126.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 8 | 125.0 | 2 | - | 118-132 | 34.0 | 2 | - | 33-35 |
| | | 10 | 128.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 13 | 129.5 | 2 | - | 129-130 | 38.5 | 2 | - | 35-42 |
| | | 14 | 131.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 17 | 130.0 | 2 | - | 126-134 | 40.0 | 2 | - | 39-41 |
| | | 18 | 138.5 | 2 | - | 138-139 | 49.0 | 2 | - | 49-49 |
| | | 19 | 133.5 | 2 | - | 129-138 | 44.0 | 2 | - | 43-45 |
| | | 20 | 122.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 24 | 132.0 | 2 | - | 129-135 | 49.0 | 2 | - | 49-49 |
| | December | 3 | 99.0 | 2 | - | 92-106 | 21.0 | 2 | - | 18-24 |
| | | 4 | 113.0 | 2 | - | 108-118 | 26.0 | 2 | - | 22-30 |
| | | 5 | 120.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 10 | 115.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 15 | 113.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 18 | 115.0 | 1 | - | - | 36.0 | 1 | - | - |
| 1977 | January | 2 | 103.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 116.5 | 2 | - | 109-124 | 26.0 | 2 | - | 18-34 |
| | | 4 | 113.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 6 | 117.5 | 2 | - | 107-128 | 31.5 | 2 | - | 28-35 |
| | | 9 | 121.5 | 2 | - | 121-122 | 41.0 | 2 | - | 40-42 |
| | | 10 | 122.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 11 | 124.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 12 | 128.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 20 | 129.0 | 1 | - | - | 50.0 | 1 | - | - |
| | February | 1 | 95.0 | 2 | - | 89-97 | 17.0 | 2 | - | 16-18 |
| | | 2 | 96.7 | 4 | - | 90-106 | 17.2 | 4 | - | 15-19 |
| | | 3 | 101.4 | 8 | - | 90-112 | 21.3 | 8 | - | 20-24 |
| | | 4 | 109.7 | 4 | - | 100-116 | 24.5 | 4 | - | 20-30 |
| | | 5 | 112.0 | 7 | - | 106-120 | 28.3 | 7 | - | 24-38 |
| | | 6 | 117.6 | 5 | - | 110-121 | 29.8 | 5 | - | 24-32 |
| | | 7 | 119.2 | 4 | - | 102-129 | 32.0 | 4 | - | 28-38 |
| | | 10 | 132.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 11 | 133.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 12 | 139.0 | 2 | - | 138-140 | 45.0 | 2 | - | 45-45 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1977 | February | 13 | 138.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 14 | 120.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 15 | 132.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 23 | 138.0 | 1 | - | - | 51.0 | 1 | - | - |
| | March | 1 | 108.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 3 | 108.0 | 1 | - | - | 22.0 | 1 | - | - |
| 1979 | March | 1 | 78.0 | 1 | - | - | 11.0 | 1 | - | - |
| | | 2 | 101.5 | 2 | - | 98-105 | 15.0 | 2 | - | 15-15 |
| | | 3 | 104.5 | 6 | - | 99-109 | 19.8 | 6 | - | 17-22 |
| | | 4 | 116.7 | 3 | - | 106-125 | 25.0 | 3 | - | 20-28 |
| | | 5 | 124.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 6 | 129.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 7 | 126.7 | 3 | - | 119-134 | 32.7 | 3 | - | 30-35 |
| | | 8 | 125.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 12 | 136.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 13 | 141.6 | 7 | - | 103-104 | 35.7 | 7 | - | 17-47 |
| | | 14 | 140.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 16 | 133.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 19 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 22 | 133.0 | 1 | - | - | 41.0 | 1 | - | - |

Bering Sea

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1964 | June | 7 | 124.0 | 2 | - | 121-127 | 34.0 | 2 | - | 30-38 |
| | | 10+ | 122.3 | 4 | - | 112-132 | 35.0 | 4 | - | 31-40 |
| 1965 | June | 4 | 99.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 5 | 118.8 | 2 | - | 115-122 | 33.5 | 2 | - | 32-35 |
| | | 6 | 115.5 | 2 | - | 113-118 | 32.0 | 2 | - | 30-34 |
| | | 7 | 121.3 | 2 | - | 120-122 | 38.0 | 2 | - | 36-40 |
| | | 10+ | 127.0 | 14 | 5.6 | 116-135 | 42.6 | 14 | 4.9 | 36-52 |
| | July | 4 | 110.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 5 | 116.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 6 | 110.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 7 | 119.5 | 1 | - | - | 31.0 | 1 | - | - |
| | | 9 | 122.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 10 | 128.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 10+ | 126.3 | 12 | 5.3 | 119-136 | 41.3 | 12 | 3.8 | 36-48 |
| | | 4 | 115.0 | 1 | - | - | 29.0 | 1 | - | - |
| 1966 | June | 5 | 109.5 | 1 | - | - | 27.0 | 1 | - | - |
| | | 6 | 128.5 | 1 | - | - | 33.0 | 1 | - | - |
| | | 7 | 124.5 | 3 | - | 121-127 | 35.3 | 3 | - | 33-37 |
| | | 8 | 120.3 | 2 | - | 118-122 | 34.0 | 2 | - | 34-34 |
| | | 9 | 126.5 | 1 | - | - | 43.0 | 1 | - | - |
| | | 10 | 122.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 126.3 | 8 | - | 115-134 | 42.9 | 8 | - | 35-50 |
| | July | 5 | 111.5 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10+ | 136.3 | 2 | - | 135-137 | 49.0 | 2 | - | 47-51 |
| | | 3 | 108.0 | 1 | - | - | 29.0 | 1 | - | - |
| 1967 | June | 4 | 126.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 5 | 119.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 113.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 7 | 105.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 8 | 123.6 | 4 | - | 121-127 | 43.3 | 4 | - | 36-48 |
| | | 9 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 120.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 10+ | 128.4 | 9 | - | 113-139 | 42.4 | 9 | - | 34-54 |
| | July | 7 | 121.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 8 | 119.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 124.0 | 2 | - | 120-128 | 42.0 | 2 | - | 42-42 |
| 1968 | July | 8 | 141.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 9 | 125.5 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10+ | 114.5 | 2 | - | 112-116 | 37.0 | 2 | - | 36-38 |
| 1970 | June | 6 | 111.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 9 | 118.8 | 2 | - | 111-126 | 38.0 | 2 | - | 36-40 |
| | | 10 | 127.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 10+ | 124.0 | 1 | - | - | 44.0 | 1 | - | - |

Bering Sea
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1974 | August | 1 | 95.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 2 | 99.5 | 2 | - | 93-106 | 21.0 | 2 | - | 18-24 |
| | | 3 | 108.8 | 4 | - | 105-113 | 24.8 | 4 | - | 20-30 |
| | | 4 | 111.5 | 4 | - | 110-114 | 29.0 | 4 | - | 26-34 |
| | | 9 | 114.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10 | 127.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 10+ | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | Sept. | 2 | 103.5 | 2 | - | 102-105 | 22.0 | 2 | - | 20-24 |
| | | 3 | 109.7 | 3 | - | 104-115 | 26.7 | 3 | - | 25-29 |
| | | 4 | 112.5 | 2 | - | 110-115 | 27.5 | 2 | - | 25-30 |
| | | 6 | 115.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 119.5 | 2 | - | 119-120 | 40.0 | 2 | - | 39-41 |
| | October | 10+ | 131.0 | 3 | - | 125-137 | 44.3 | 3 | - | 40-52 |
| | | 0 | 69.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 1 | 92.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 2 | 102.5 | 2 | - | 100-105 | 22.2 | 2 | - | 22-22 |
| | | 3 | 103.3 | 3 | - | 101-107 | 28.0 | 3 | - | 24-31 |
| | | 4 | 116.5 | 4 | - | 112-119 | 30.5 | 4 | - | 24-35 |
| | | 10+ | 127.2 | 5 | - | 120-134 | 42.4 | 5 | - | 30-53 |
| 1978 | October | 0 | 84.0 | 3 | - | 78-93 | 14.0 | 3 | - | 11-16 |
| | | 2 | 102.9 | 17 | 5.7 | 94-114 | 18.4 | 17 | 2.9 | 14-24 |
| | | 3 | 111.1 | 19 | 4.7 | 101-118 | 22.4 | 19 | 8.5 | 19-27 |
| | | 4 | 119.3 | 6 | - | 114-124 | 27.8 | 6 | - | 27-30 |
| | | 5 | 123.7 | 6 | - | 122-126 | 28.5 | 6 | - | 24-33 |
| | | 6 | 126.0 | 4 | - | 120-131 | 35.8 | 4 | - | 29-42 |
| | | 7 | 134.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 8 | 127.3 | 3 | - | 123-130 | 34.2 | 3 | - | 30-37 |
| | | 9 | 130.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 11 | 122.0 | 2 | - | 120-124 | 31.0 | 2 | - | 29-33 |
| | | 12 | 132.2 | 6 | - | 125-140 | 38.5 | 6 | - | 32-45 |
| | | 13 | 132.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 14 | 131.0 | 2 | - | 129-133 | 38.5 | 2 | - | 37-40 |
| | | 15 | 130.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 16 | 139.0 | 2 | - | 130-142 | 44.5 | 2 | - | 43-46 |
| | | 17 | 131.7 | 3 | - | 127-135 | 36.0 | 3 | - | 35-37 |
| | | 22 | 135.0 | 1 | - | - | 46.0 | 1 | - | - |
| | November | 0 | 78.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 99.0 | 1 | - | - | 17.0 | 1 | - | - |
| | | 3 | 112.2 | 5 | - | 106-121 | 23.1 | 5 | - | 19-26 |
| | | 4 | 121.3 | 4 | - | 116-126 | 28.4 | 4 | - | 25-32 |
| | | 5 | 132.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 7 | 116.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 8 | 136.0 | 1 | - | - | 44.0 | 1 | - | - |

Table 14

Monthly mean length and weight of pregnant fur seals.
 lx- = mean, n = sample size, s = standard deviation for n > 10)

Sea of Japan

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-------|-------------|-------|-----|---------|-------------|----|------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1959 | March | 4 | 121.2 | 1 | - | - | - | - | - | - |
| | | 6 | 128.6 | 1 | - | - | - | - | - | - |
| | | 7 | 131.1 | 4 | - | 128-133 | - | - | - | - |
| | | 8 | 137.4 | 2 | - | 135-139 | - | - | - | - |
| | | 9 | 128.5 | 1 | - | - | - | - | - | - |
| | | 10 | 143.6 | 1 | - | - | - | - | - | - |
| 1960 | March | 5 | 119.3 | 3 | - | 114-123 | 35.3 | 3 | - | 30-42 |
| | | April | 5 | 121.0 | 1 | - | 42.0 | 1 | - | - |
| | April | 7 | 123.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 8 | 126.5 | 2 | - | 126-127 | 39.0 | 2 | - | 38-40 |
| | | 9 | 122.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10+ | 127.5 | 13 | 5.0 | 117-133 | 41.8 | 13 | 11.5 | 30-56 |
| 1961 | March | 4 | 113.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 5 | 120.0 | 2 | - | 118-122 | 37.0 | 2 | - | 34-40 |
| | | 6 | 114.0 | 2 | - | 113-115 | 38.0 | 2 | - | 36-40 |
| | | 7 | 128.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 8 | 119.1 | 6 | - | 107-128 | 40.0 | 6 | - | 36-46 |
| | | 9 | 121.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10 | 123.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 129.7 | 12 | 5.7 | 121-140 | 47.1 | 12 | 6.4 | 40-60 |
| | April | 5 | 106.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 6 | 124.3 | 3 | - | 121-129 | 39.0 | 3 | - | 33-45 |
| | | 7 | 127.3 | 3 | - | 127-128 | 41.6 | 3 | - | 39-44 |
| | | 8 | 120.0 | 4 | - | 111-130 | 40.7 | 4 | - | 36-46 |
| | | 9 | 123.2 | 5 | - | 120-126 | 45.4 | 5 | - | 42-50 |
| | | 10 | 119.0 | 2 | - | 114-124 | 40.5 | 2 | - | 39-42 |
| | | 10+ | 128.4 | 26 | 6.7 | 114-140 | 45.7 | 26 | 6.2 | 34-58 |
| | May | 6 | 125.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 10 | 123.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 10+ | 128.0 | 2 | - | 123-133 | 52.0 | 2 | - | 51-53 |
| 1962 | March | 4 | 115.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 5 | 116.3 | 3 | - | 109-122 | 31.7 | 3 | - | 22-38 |
| | | 6 | 126.4 | 5 | - | 120-137 | 35.2 | 5 | - | 23-46 |
| | | 7 | 119.5 | 2 | - | 119-120 | 40.0 | 2 | - | 38-42 |
| | | 8 | 120.7 | 3 | - | 118-125 | 24.3 | 3 | - | 21-30 |
| | | 9 | 129.6 | 6 | - | 127-132 | 36.7 | 6 | - | 33-42 |
| | | 10 | 125.5 | 2 | - | 122-129 | 41.5 | 2 | - | 40-43 |
| | | 10+ | 128.8 | 27 | 5.6 | 118-140 | 43.7 | 27 | 8.7 | 24-58 |
| | April | 4 | 116.0 | 3 | - | 112-120 | 34.3 | 3 | - | 23-42 |
| | | 5 | 116.0 | 5 | - | 108-120 | 36.0 | 5 | - | 29-40 |
| | | 6 | 120.5 | 8 | - | 112-132 | 40.9 | 8 | - | 35-52 |
| | | 7 | 126.0 | 10 | 6.2 | 118-136 | 41.6 | 10 | 3.8 | 38-49 |
| | | 8 | 124.5 | 11 | 5.0 | 117-132 | 43.2 | 11 | 5.6 | 35-42 |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1962 | April | 9 | 130.3 | 3 | - | 123-143 | 46.7 | 3 | - | 40-58 |
| | | 10 | 126.6 | 73 | 6.7 | 113-145 | 46.7 | 73 | 10.2 | 21-70 |
| | | 10+ | 111.0 | 2 | - | 107-115 | 26.0 | 2 | - | 21-30 |
| | May | 5 | 108.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 6 | 107.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 9 | 122.0 | 2 | - | 117-127 | 34.0 | 2 | - | 21-47 |
| | | 10+ | 125.3 | 13 | 2.8 | 121-130 | 44.8 | 13 | 9.8 | 29-60 |
| 1963 | March | 5 | 119.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 7 | 103.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 8 | 110.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 9 | 114.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 133.0 | 1 | - | - | 68.0 | 1 | - | - |
| | April | 4 | 125.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 5 | 117.8 | 6 | - | 109-129 | 42.7 | 6 | - | 36-48 |
| | | 6 | 121.8 | 4 | - | 113-132 | 44.0 | 4 | - | 36-52 |
| | | 7 | 121.5 | 12 | 8.3 | 107-133 | 44.7 | 12 | 7.0 | 30-52 |
| | | 8 | 127.1 | 15 | 7.2 | 116-140 | 50.0 | 15 | 7.7 | 42-68 |
| | | 9 | 125.8 | 4 | - | 123-131 | 46.0 | 4 | - | 38-50 |
| | | 10 | 129.7 | 3 | - | 124-135 | 53.3 | 3 | - | 52-54 |
| | | 10+ | 128.7 | 30 | 5.4 | 120-142 | 51.4 | 30 | 5.0 | 40-60 |
| | May | 5 | 122.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 6 | 117.3 | 3 | - | 114-120 | 38.0 | 3 | - | 30-44 |
| | | 7 | 126.8 | 4 | - | 123-132 | 42.5 | 4 | - | 40-46 |
| | | 8 | 123.6 | 7 | - | 116-130 | 50.6 | 7 | - | 40-60 |
| | | 9 | 124.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10 | 129.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 10+ | 127.6 | 27 | 4.3 | 120-137 | 51.6 | 27 | 6.1 | 40-64 |
| 1964 | February | 6 | 131.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 8 | 125.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 161.2 | 5 | - | 139-177 | 51.6 | 5 | - | 44-58 |
| | March | 4 | 120.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 5 | 119.5 | 2 | - | 114-125 | 37.0 | 2 | - | 36-38 |
| | | 6 | 123.3 | 6 | - | 114-130 | 40.0 | 6 | - | 32-48 |
| | | 7 | 127.1 | 4 | - | 117-135 | 43.0 | 4 | - | 38-50 |
| | | 8 | 134.7 | 2 | - | 134-135 | 51.0 | 2 | - | 50-52 |
| | | 9 | 126.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10 | 131.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 130.0 | 27 | 5.0 | 118-138 | 49.3 | 27 | 5.0 | 40-60 |
| | April | 4 | 111.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 5 | 116.3 | 5 | - | 103-127 | 34.6 | 5 | - | 24-44 |
| | | 6 | 125.4 | 4 | - | 117-135 | 40.0 | 4 | - | 33-50 |
| | | 7 | 127.0 | 2 | - | 126-128 | 39.0 | 2 | - | 36-40 |
| | | 8 | 127.3 | 3 | - | 124-129 | 38.7 | 3 | - | 38-40 |
| | | 9 | 127.0 | 1 | - | - | 50.0 | 1 | - | - |

Sea of Japan
(continued)

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|----------|----------|------------|-------|-----|---------|------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1964 | April | 10 | 122.3 | 3 | - | 110-132 | 43.0 | 3 | - | 40-45 |
| | | 10+ | 131.0 | 31 | 5.1 | 120-141 | 45.6 | 31 | 5.3 | 38-60 |
| | May | 5 | 118.0 | 2 | - | 112-124 | 37.5 | 2 | - | 36-39 |
| | | 6 | 126.4 | 4 | - | 123-129 | 40.0 | 4 | - | 38-43 |
| | | 7 | 123.0 | 2 | - | 120-126 | 42.5 | 2 | - | 41-44 |
| | | 9 | 129.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 132.8 | 6 | - | 122-144 | 44.8 | 6 | - | 37-62 |
| 1965 | March | 5 | 123.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 7 | 120.5 | 3 | - | 114-125 | 37.3 | 3 | - | 35-40 |
| | | 8 | 124.8 | 2 | - | 122-127 | 40.0 | 2 | - | 34-46 |
| | | 10 | 121.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 131.8 | 18 | 6.1 | 120-142 | 50.5 | 18 | 3.6 | 45-58 |
| | April | 4 | 122.5 | 2 | - | 116-129 | 38.5 | 2 | - | 27-50 |
| | | 5 | 118.0 | 2 | - | 114-122 | 38.0 | 2 | - | 36-40 |
| | | 6 | 127.5 | 1 | - | - | 44.0 | 1 | - | - |
| | | 7 | 127.1 | 7 | - | 121-134 | 42.3 | 7 | - | 36-54 |
| | | 8 | 131.7 | 3 | - | 130-134 | 44.0 | 3 | - | 42-46 |
| | | 9 | 124.9 | 5 | - | 114-135 | 54.2 | 5 | - | 40-46 |
| | | 10 | 131.1 | 7 | - | 127-136 | 48.1 | 7 | - | 40-58 |
| | | 10+ | 130.8 | 72 | 6.4 | 115-145 | 49.0 | 72 | 5.6 | 36-63 |
| | May | 8 | 131.0 | 2 | - | 126-136 | 45.0 | 2 | - | 42-48 |
| | | 9 | 127.3 | 2 | - | 122-132 | 42.0 | 2 | - | 40-44 |
| | | 10 | 128.5 | 1 | - | - | 44.0 | 1 | - | - |
| | | 10+ | 133.1 | 9 | - | 125-145 | 51.6 | 9 | - | 42-60 |
| | January | 10+ | 136.8 | 2 | - | 131-142 | 50.0 | 2 | - | 44-56 |
| | | February | 8 | 122.5 | 1 | - | 39.0 | 1 | - | - |
| | March | 10 | 130.5 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10+ | 131.8 | 18 | 4.8 | 121-138 | 49.4 | 18 | 7.6 | 41-68 |
| | | 10+ | 135.0 | 1 | - | - | 47.0 | 1 | - | - |
| 1967 | February | 7 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 136.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 128.0 | 3 | - | 124-131 | 50.0 | 3 | - | - |
| 1968 | March | 5 | 115.5 | 2 | - | 115-116 | 33.0 | 2 | - | 30-36 |
| | | 6 | 128.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 8 | 139.0 | 1 | - | - | 51.0 | 1 | - | - |
| | | 9 | 128.5 | 2 | - | 121-136 | 45.5 | 2 | - | 39-52 |
| | | 10 | 120.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 132.4 | 10 | 6.2 | 123-141 | 48.9 | 10 | 7.5 | 40-62 |
| 1973 | April | 9 | 132.5 | 1 | - | - | 49.0 | 1 | - | - |
| | | 10 | 121.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 132.0 | 1 | - | - | 47.0 | 1 | - | - |
| 1976 | March | 10 | 138.0 | 1 | - | - | 56.0 | 1 | - | - |
| | | 10+ | 127.8 | 4 | - | 123-133 | 45.3 | 4 | - | 42-50 |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1976 | March | 11 | 130.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 12 | 132.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 13 | 128.5 | 2 | - | 127-130 | 51.0 | 2 | - | 50-52 |
| | | 14 | 132.0 | 2 | - | 131-132 | 52.0 | 2 | - | 46-58 |
| | | 15 | 126.5 | 4 | - | 113-135 | 44.0 | 4 | - | 35-54 |
| | | 16 | 128.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 18 | 138.0 | 1 | - | - | 56.0 | 1 | - | - |
| | | 22 | 131.0 | 1 | - | - | 54.0 | 1 | - | - |

Sea of Okhotsk

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1964 | June | 7 | 125.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 10+ | 125.0 | 1 | - | - | 47.0 | 1 | - | - |
| | July | 4 | 112.0 | 2 | - | 112-112 | 44.5 | 2 | - | 44-44 |
| | | 5 | 119.5 | 2 | - | 119-119 | 39.0 | 2 | - | 39-39 |
| | | 6 | 120.5 | 4 | - | 120-121 | 45.0 | 4 | - | 45-45 |
| | | 7 | 125.8 | 4 | - | 124-127 | 50.5 | 4 | - | 50-51 |
| | | 8 | 120.0 | 2 | - | 120-120 | 47.0 | 2 | - | 47-47 |
| | | 10 | 126.0 | 4 | - | 121-131 | 50.5 | 4 | - | 45-56 |
| | | 10+ | 131.8 | 6 | - | 120-142 | 59.0 | 6 | - | 53-71 |
| | | 11 | 126.5 | 2 | - | 126-126 | 60.0 | 2 | - | 60-60 |

Western Pacific Ocean

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|----|-----|---------|------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1958 | May | 3 | 113.0 | 2 | - | 113-113 | - | - | - | - |
| | | 4 | 113.0 | 2 | - | 108-118 | 22.8 | 1 | - | - |
| | | 5 | 115.4 | 2 | - | 114-117 | 34.0 | 1 | - | - |
| | June | 3 | 97.0 | 1 | - | - | - | - | - | - |
| | | 4 | 113.7 | 20 | 4.7 | 107-124 | 31.9 | 13 | 4.4 | 28-42 |
| | | 5 | 118.9 | 20 | 8.5 | 108-139 | 35.0 | 10 | 4.8 | 28-42 |
| | | 6 | 121.5 | 15 | 5.4 | 111-129 | 36.6 | 11 | 3.0 | 31-40 |
| | | 7 | 127.2 | 5 | - | 122-136 | 41.0 | 2 | - | 41-41 |
| | | 8 | 124.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 9 | 125.5 | 2 | - | 124-127 | 40.5 | 2 | - | 40-41 |
| | | 10 | 123.0 | 2 | - | 120-127 | 40.5 | 2 | - | 40-41 |
| | | 10+ | 133.5 | 2 | - | 130-137 | - | - | - | - |
| 1959 | March | 4 | 107.5 | 2 | - | 102-113 | - | - | - | - |
| | | 10+ | 135.0 | 1 | - | - | - | - | - | - |
| | April | 3 | 108.1 | 2 | - | 98-118 | - | - | - | - |
| | | 4 | 116.7 | 16 | 5.1 | 110-127 | - | - | - | - |
| | | 5 | 117.2 | 21 | 4.1 | 111-126 | - | - | - | - |
| | | 6 | 119.0 | 13 | 5.3 | 112-129 | - | - | - | - |
| | | 7 | 122.9 | 6 | - | 111-128 | - | - | - | - |
| | | 8 | 125.2 | 4 | - | 121-132 | - | - | - | - |
| | | 9 | 125.4 | 2 | - | 124-127 | - | - | - | - |
| | | 10 | 127.4 | 9 | - | 114-137 | - | - | - | - |
| | | 10+ | 126.1 | 10 | 7.9 | 120-143 | - | - | - | - |
| | May | 4 | 114.8 | 35 | 5.2 | 102-124 | - | - | - | - |
| | | 5 | 117.8 | 36 | 5.6 | 105-129 | - | - | - | - |
| | | 6 | 122.1 | 32 | 6.3 | 108-134 | - | - | - | - |
| | | 7 | 123.9 | 16 | 5.4 | 115-133 | - | - | - | - |
| | | 8 | 127.4 | 10 | 5.2 | 120-135 | - | - | - | - |
| | | 9 | 125.1 | 7 | - | 123-127 | - | - | - | - |
| | | 10 | 124.3 | 10 | 6.5 | 115-134 | - | - | - | - |
| | | 10+ | 127.0 | 16 | 4.2 | 119-134 | - | - | - | - |
| | June | 3 | 117.1 | 2 | - | 112-120 | - | - | - | - |
| | | 4 | 117.6 | 13 | 4.8 | 109-125 | - | - | - | - |
| | | 5 | 116.7 | 9 | - | 110-122 | - | - | - | - |
| | | 6 | 123.0 | 13 | 4.1 | 107-131 | - | - | - | - |
| | | 7 | 130.5 | 2 | - | 129-132 | - | - | - | - |
| | | 8 | 122.4 | 3 | - | 116-129 | - | - | - | - |
| | | 10 | 128.1 | 2 | - | 126-130 | - | - | - | - |
| 1960 | April | 4 | 114.0 | 7 | - | 106-120 | 28.3 | 7 | - | 23-30 |
| | | 5 | 117.5 | 11 | 4.7 | 112-126 | 31.6 | 11 | 5.0 | 25-40 |
| | | 6 | 122.7 | 19 | 5.3 | 114-133 | 36.1 | 17 | 4.0 | 32-46 |
| | | 7 | 122.7 | 10 | 1.5 | 114-133 | 39.9 | 9 | - | 28-46 |
| | | 8 | 125.5 | 6 | - | 117-139 | 35.7 | 6 | - | 28-40 |
| | | 9 | 125.3 | 4 | - | 121-129 | 39.3 | 4 | - | 34-43 |
| | | 10+ | 125.9 | 15 | 2.2 | 118-141 | 39.0 | 15 | 5.4 | 30-48 |

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|-------|-------|-------|-------------|-------|---------|---------|-------------|---------|-------|-------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range | |
| 1960 | May | 4 | 116.1 | 8 | - | 108-126 | 37.1 | 8 | - | 26-30 | |
| | | 5 | 115.8 | 23 | 5.0 | 106-125 | 34.0 | 23 | 4.2 | 22-38 | |
| | | 6 | 122.5 | 20 | 6.0 | 110-132 | 36.2 | 20 | 3.8 | 30-44 | |
| | | 7 | 129.4 | 20 | 4.7 | 115-132 | 38.8 | 20 | 4.1 | 29-44 | |
| | | 8 | 122.5 | 15 | 4.8 | 114-130 | 35.9 | 15 | 7.2 | 20-44 | |
| | | 9 | 128.8 | 5 | - | 123-135 | 43.0 | 5 | - | 38-46 | |
| | | 10 | 121.5 | 2 | - | 115-128 | 34.0 | 2 | - | 32-36 | |
| | | 10+ | 120.5 | 16 | 5.0 | 118-135 | 40.1 | 16 | 8.2 | 20-48 | |
| | | June | 4 | 114.0 | 5 | - | 109-122 | 33.2 | 5 | - | 28-40 |
| | | | 5 | 116.9 | 4 | - | 112-126 | 32.0 | 4 | - | 22-40 |
| | 6 | | 125.8 | 3 | - | 121-129 | 40.0 | 3 | - | - | |
| | 7 | | 124.5 | 5 | - | 119-133 | 38.4 | 5 | - | 30-44 | |
| | 8 | | 123.7 | 6 | - | 119-133 | 40.7 | 6 | - | 32-50 | |
| | 9 | | 131.0 | 1 | - | - | 40.0 | 1 | - | - | |
| | 10+ | | 128.0 | 5 | - | 124-136 | 44.8 | 5 | - | 38-54 | |
| | 1961 | | May | 4 | 114.2 | 12 | - | 110-121 | 31.5 | 12 | - |
| | | 5 | | 120.0 | 23 | - | 112-127 | 35.0 | 23 | - | 30-41 |
| | | 6 | | 122.5 | 14 | - | 112-137 | 37.5 | 14 | - | 34-46 |
| 7 | | 122.0 | | 9 | - | 115-129 | 36.6 | 9 | - | 34-40 | |
| 8 | | 126.5 | | 4 | - | 123-129 | 39.5 | 4 | - | 38-41 | |
| 10+ | | 126.2 | | 9 | - | 118-134 | 41.3 | 9 | - | 37-50 | |
| June | | 3 | 118.0 | 1 | - | - | 44.0 | 1 | - | - | |
| | | 4 | 116.2 | 7 | - | 115-120 | 33.4 | 7 | - | 28-38 | |
| | | 5 | 119.9 | 12 | - | 107-125 | 36.9 | 12 | - | 30-40 | |
| | | 6 | 124.2 | 6 | - | 120-130 | 43.8 | 6 | - | 38-58 | |
| 1963 | March | 7 | 127.0 | 4 | - | 120-130 | 40.8 | 4 | - | 38-45 | |
| | | 9 | 123.0 | 2 | - | 120-126 | 41.5 | 2 | - | 41-42 | |
| | | 10 | 130.0 | 1 | - | - | 43.0 | 1 | - | - | |
| | | 10+ | 123.5 | 9 | - | 115-132 | 43.4 | 9 | - | 36-50 | |
| | | 4 | 116.0 | 1 | - | - | 34.0 | 1 | - | - | |
| | | 5 | 113.3 | 5 | - | 109-119 | 29.6 | 5 | - | 26-31 | |
| | | 6 | 114.4 | 4 | - | 111-120 | 32.5 | 4 | - | 29-38 | |
| | | 7 | 117.4 | 8 | - | 105-127 | 34.6 | 8 | - | 30-40 | |
| | | 8 | 121.1 | 4 | - | 118-125 | 36.3 | 4 | - | 34-39 | |
| | | 9 | 119.3 | 2 | - | 118-120 | 40.0 | 2 | - | 32-48 | |
| 10 | | 128.8 | 3 | - | 122-132 | 38.3 | 3 | - | 34-41 | | |
| 10+ | | 124.0 | 3 | - | 116-136 | 39.0 | 3 | - | 37-50 | | |
| April | 11 | 130.5 | 1 | - | - | 45.0 | 1 | - | - | | |
| | 12 | 127.5 | 1 | - | - | 37.0 | 1 | - | - | | |
| | 4 | 113.2 | 3 | - | 106-122 | 23.7 | 3 | - | 20-27 | | |
| | 5 | 115.8 | 9 | - | 104-121 | 28.4 | 9 | - | 20-34 | | |
| | 6 | 118.0 | 10 | 4.5 | 113-126 | 30.0 | 10 | 5.8 | 21-38 | | |
| | 7 | 121.6 | 7 | - | 112-132 | 30.7 | 7 | - | 25-37 | | |
| | 8 | 124.9 | 9 | - | 118-129 | 35.4 | 9 | - | 32-47 | | |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1963 | April | 9 | 129.3 | 2 | - | 128-130 | 37.0 | 2 | - | 34-40 |
| | | 10 | 126.7 | 5 | - | 122-131 | 33.2 | 5 | - | 21-41 |
| | | 10+ | 130.5 | 13 | 5.2 | 119-136 | 43.9 | 13 | 6.3 | 35-54 |
| | | 11 | 128.2 | 3 | - | 121-132 | 37.7 | 3 | - | 36-39 |
| | May | 4 | 111.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 5 | 119.7 | 3 | - | 116-123 | 34.7 | 3 | - | 30-38 |
| | | 6 | 121.2 | 3 | - | 115-125 | 28.3 | 3 | - | 25-30 |
| | | 7 | 122.3 | 2 | - | 119-125 | 36.0 | 2 | - | 32-40 |
| | | 8 | 122.3 | 4 | - | 118-128 | 34.0 | 4 | - | 26-40 |
| | | 9 | 122.0 | 5 | - | 120-125 | 31.4 | 5 | - | 25-37 |
| | | 10+ | 130.5 | 5 | - | 126-137 | 40.8 | 5 | - | 34-50 |
| | | 11 | 130.0 | 3 | - | 127-135 | 31.3 | 3 | - | 30-33 |
| | | 12 | 125.3 | 2 | - | 122-128 | 33.0 | 2 | - | 30-36 |
| 1964 | March | 4 | 108.9 | 7 | - | 102-114 | 28.0 | 7 | - | 26-31 |
| | | 5 | 117.6 | 8 | - | 112-122 | 32.0 | 8 | - | 27-35 |
| | | 6 | 116.8 | 5 | - | 113-120 | 31.6 | 5 | - | 30-33 |
| | | 7 | 118.9 | 5 | - | 115-121 | 36.6 | 5 | - | 31-40 |
| | | 8 | 118.9 | 10 | 4.5 | 111-124 | 35.8 | 10 | 4.5 | 32-45 |
| | | 9 | 121.7 | 8 | - | 113-127 | 36.9 | 8 | - | 29-41 |
| | | 10 | 120.9 | 4 | - | 116-127 | 35.5 | 4 | - | 31-38 |
| | | 10+ | 124.8 | 15 | 4.3 | 115-130 | 39.8 | 15 | 3.9 | 33-46 |
| | | 11 | 121.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 12 | 120.0 | 2 | - | 117-122 | 35.3 | 2 | - | 32-38 |
| | | 14 | 120.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 15 | 119.5 | 1 | - | - | 40.0 | 1 | - | - |
| | April | 4 | 115.2 | 2 | - | 113-117 | 30.0 | 1 | - | - |
| | | 5 | 119.6 | 4 | - | 110-135 | 37.9 | 4 | - | 34-41 |
| | | 6 | 124.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 7 | 113.5 | 2 | - | 111-116 | 31.0 | 2 | - | 30-32 |
| | | 8 | 120.7 | 9 | - | 115-124 | 35.2 | 9 | - | 26-41 |
| | | 9 | 122.8 | 4 | - | 117-129 | 40.8 | 4 | - | 39-42 |
| | | 10 | 122.1 | 6 | - | 118-125 | 40.3 | 6 | - | 36-46 |
| | | 10+ | 125.2 | 14 | 6.7 | 117-139 | 42.1 | 14 | 7.6 | 30-55 |
| | | 11 | 131.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 12 | 125.5 | 2 | - | 124-127 | 40.5 | 2 | - | 36-45 |
| | May | 4 | 112.0 | 2 | - | 110-114 | 30.5 | 2 | - | 28-33 |
| | | 5 | 120.5 | 3 | - | 114-129 | 35.3 | 3 | - | 29-43 |
| | | 6 | 118.0 | 3 | - | 111-120 | 32.0 | 3 | - | 29-37 |
| | | 7 | 119.2 | 4 | - | 113-126 | 37.5 | 4 | - | 30-46 |
| | | 8 | 119.0 | 5 | - | 112-127 | 36.6 | 5 | - | 32-42 |
| | | 9 | 121.7 | 6 | - | 116-134 | 37.5 | 6 | - | 37-42 |
| | | 10 | 125.5 | 3 | - | 123-130 | 42.3 | 3 | - | 41-44 |
| | | 10+ | 123.3 | 3 | - | 122-124 | 43.3 | 3 | - | 40-45 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|------|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1966 | December | 4 | 113.0 | 2 | - | 108-118 | 28.5 | 2 | - | 28-28 |
| | | 5 | 116.8 | 5 | - | 113-120 | 32.8 | 5 | - | 31-35 |
| | | 6 | 123.9 | 6 | - | 116-132 | 35.3 | 6 | - | 30-42 |
| | | 7 | 121.7 | 3 | - | 114-128 | 37.0 | 3 | - | 30-41 |
| | | 8 | 125.5 | 6 | - | 118-130 | 40.5 | 6 | - | 32-52 |
| | | 9 | 122.0 | 3 | - | 120-126 | 37.7 | 3 | - | 32-41 |
| | | 10 | 130.0 | 5 | - | 125-135 | 41.8 | 5 | - | 39-45 |
| | | 10+ | 124.2 | 5 | - | 121-127 | 41.6 | 5 | - | 38-39 |
| 1967 | January | 4 | 113.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 5 | 117.0 | 3 | - | 113-120 | 31.7 | 3 | - | 31-32 |
| | | 7 | 122.3 | 4 | - | 118-129 | 36.0 | 4 | - | 30-40 |
| | | 8 | 133.5 | 2 | - | 132-135 | 45.5 | 2 | - | 45-46 |
| | | 9 | 126.0 | 2 | - | 125-127 | 43.5 | 2 | - | 42-45 |
| | | 10 | 128.7 | 3 | - | 125-134 | 43.3 | 3 | - | 42-45 |
| | | 10+ | 132.3 | 4 | - | 127-136 | 49.3 | 4 | - | 45-57 |
| 1968 | January | 4 | 110.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 5 | 114.0 | 5 | - | 112-117 | 38.2 | 5 | - | 35-43 |
| | | 6 | 119.2 | 6 | - | 117-121 | 42.0 | 6 | - | 38-50 |
| | | 7 | 121.4 | 13 | 13.4 | 110-153 | 42.6 | 13 | 7.8 | 30-55 |
| | | 8 | 122.6 | 8 | - | 116-132 | 48.8 | 8 | - | 38-55 |
| | | 9 | 122.0 | 3 | - | 121-124 | 42.3 | 3 | - | 40-48 |
| | | 10 | 123.3 | 6 | - | 117-132 | 44.2 | 6 | - | 38-55 |
| | | 10+ | 125.8 | 23 | 5.6 | 115-136 | 48.8 | 23 | 5.3 | 40-60 |
| | February | 5 | 105.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 115.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 8 | 127.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 9 | 126.5 | 4 | - | 122-129 | 42.0 | 4 | - | 40-45 |
| | | 10+ | 124.0 | 6 | - | 117-134 | 39.7 | 6 | - | 35-46 |
| 1969 | December | 8 | 126.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 9 | 126.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 10 | 125.0 | 2 | - | 124-126 | 40.5 | 2 | - | 38-43 |
| | | 10+ | 130.8 | 6 | - | 124-136 | 52.3 | 6 | - | 50-57 |
| 1970 | January | 8 | 128.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 10 | 124.5 | 2 | - | 123-126 | 41.5 | 2 | - | 40-43 |
| | February | 7 | 119.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 8 | 126.5 | 2 | - | 123-130 | 35.5 | 2 | - | 24-37 |
| | | 9 | 126.3 | 4 | - | 120-130 | 37.3 | 4 | - | 34-41 |
| | | 10 | 120.5 | 2 | - | 118-123 | 38.5 | 2 | - | 37-40 |
| | | 10+ | 131.6 | 11 | 8.9 | 123-150 | 44.2 | 11 | 6.0 | 38-56 |
| | | 11 | 113.0 | 1 | - | - | 38.0 | 1 | - | - |
| 1971 | March | 4 | 119.2 | 3 | - | 115-121 | 31.3 | 3 | - | 30-32 |
| | | 5 | 122.9 | 14 | 5.2 | 115-132 | 33.8 | 14 | 3.4 | 28-39 |
| | | 6 | 122.7 | 10 | 5.3 | 112-127 | 37.6 | 10 | 3.1 | 33-42 |
| | | 7 | 124.4 | 8 | - | 118-133 | 37.8 | 8 | - | 32-42 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|------|---------|----------|-------------|-------|-----|---------|-------------|------|-----|-------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range | |
| 1971 | March | 8 | 128.1 | 10 | 4.1 | 120-132 | 39.7 | 10 | 5.3 | 33-48 | |
| | | 9 | 129.6 | 8 | - | 122-141 | 46.8 | 8 | - | 38-53 | |
| | | 10 | 124.8 | 9 | - | 118-131 | 42.5 | 9 | - | 39-47 | |
| | | 10+ | 135.5 | 1 | - | - | 50.0 | 1 | - | - | |
| | May | 4 | 123.0 | 1 | - | - | 36.0 | 1 | - | - | |
| | | 5 | 116.3 | 6 | - | 107-127 | 37.8 | 6 | - | 32-48 | |
| | | 6 | 117.7 | 3 | - | 113-123 | 39.0 | 3 | - | 35-44 | |
| | | 7 | 122.5 | 4 | - | 110-130 | 39.8 | 4 | - | 34-46 | |
| | | 8 | 118.2 | 6 | - | 102-131 | 42.2 | 6 | - | 34-54 | |
| | | 9 | 116.0 | 5 | - | 111-121 | 37.6 | 5 | - | 32-44 | |
| | | 10 | 117.3 | 4 | - | 112-127 | 44.3 | 4 | - | 36-50 | |
| | | 10+ | 122.6 | 18 | 4.5 | 115-131 | 42.5 | 18 | 7.1 | 30-55 | |
| | | 12 | 125.5 | 1 | - | - | 45.0 | 1 | - | - | |
| | | December | 4 | 124.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | | 6 | 122.8 | 2 | - | 116-129 | 36.0 | 2 | - | 32-40 |
| | | | 8 | 128.0 | 3 | - | 127-129 | 42.3 | 3 | - | 40-46 |
| | | | | | | | | | | | |
| 1972 | January | 4 | 119.0 | 2 | - | 111-127 | 31.5 | 2 | - | 39-34 | |
| | | 5 | 120.5 | 1 | - | - | 34.0 | 1 | - | - | |
| | | 6 | 124.8 | 8 | - | 117-136 | 37.7 | 8 | - | 30-47 | |
| | | 8 | 121.0 | 1 | - | - | 45.0 | 1 | - | - | |
| | | 10 | 122.0 | 1 | - | - | 37.0 | 1 | - | - | |
| | | 10+ | 130.0 | 2 | - | 126-134 | 47.5 | 2 | - | 47-48 | |
| | | 11 | 131.5 | 2 | - | 128-135 | 45.5 | 2 | - | 42-49 | |
| | April | 4 | 119.0 | 1 | - | - | 33.0 | 1 | - | - | |
| | | 5 | 122.3 | 3 | - | 121-124 | 37.0 | 3 | - | 34-40 | |
| | | 6 | 125.7 | 4 | - | 118-141 | 41.7 | 4 | - | 34-50 | |
| | | 7 | 113.0 | 1 | - | - | 35.0 | 1 | - | - | |
| | | 8 | 125.0 | 1 | - | - | 52.8 | 1 | - | - | |
| | | 9 | 126.5 | 2 | - | 125-128 | 44.5 | 2 | - | 39-50 | |
| | | May | 4 | 119.4 | 4 | - | 114-125 | 35.2 | 4 | - | 32-38 |
| | 5 | | 126.2 | 4 | - | 118-137 | 35.6 | 4 | - | 30-44 | |
| | 6 | | 130.1 | 12 | 5.7 | 120-138 | 41.4 | 12 | 3.0 | 38-47 | |
| | 7 | | 113.5 | 3 | - | 131-135 | 44.2 | 3 | - | 38-48 | |
| | 8 | | 132.4 | 9 | - | 121-145 | 43.1 | 9 | - | 32-52 | |
| | 9 | | 134.3 | 7 | - | 129-140 | 46.4 | 7 | - | 40-50 | |
| | 10 | | 134.5 | 4 | - | 132-142 | 44.6 | 4 | - | 40-51 | |
| | 10+ | | 139.2 | 3 | - | 137-142 | 48.3 | 3 | - | 43-52 | |
| | 13 | | 129.0 | 2 | - | 122-136 | 46.0 | 2 | - | 45-47 | |
| | June | | 5 | 122.6 | 7 | - | 116-130 | 41.0 | 7 | - | 35-46 |
| | | | 6 | 129.3 | 3 | - | 112-133 | 46.3 | 3 | - | 43-50 |
| | | | 7 | 127.8 | 6 | - | 123-136 | 46.8 | 6 | - | 39-52 |
| | | | 8 | 131.7 | 3 | - | 126-138 | 48.3 | 3 | - | 47-50 |
| | | 9 | 130.1 | 6 | - | 124-140 | 51.1 | 6 | - | 48-58 | |
| | | 10 | 132.2 | 3 | - | 127-136 | 53.7 | 3 | - | 53-54 | |
| | | 10+ | 129.8 | 4 | - | 127-133 | 49.3 | 4 | - | 48-52 | |
| | | 12 | 133.0 | 2 | - | 132-134 | 52.0 | 2 | - | 49-55 | |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|--------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1974 | June | 3 | 104.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 6 | 124.0 | 3 | - | 117-132 | 45.7 | 3 | - | 42-50 |
| | | 7 | 126.7 | 6 | - | 123-131 | 44.0 | 6 | - | 38-52 |
| | | 8 | 124.0 | 2 | - | 120-128 | 45.0 | 2 | - | 40-50 |
| | | 10 | 125.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 10+ | 128.2 | 20 | 5.2 | 120-139 | 48.4 | 20 | 5.8 | 39-60 |
| 1975 | February | 3 | 115.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 4 | 110.7 | 3 | - | 103-115 | 28.0 | 3 | - | 26-31 |
| | | 5 | 119.1 | 7 | - | 110-126 | 32.9 | 7 | - | 30-36 |
| | | 6 | 115.8 | 9 | - | 99-122 | 31.1 | 9 | - | 23-35 |
| | | 7 | 117.4 | 4 | - | 113-123 | 33.8 | 4 | - | 31-37 |
| | | 8 | 122.4 | 5 | - | 116-124 | 38.2 | 5 | - | 34-40 |
| | | 9 | 124.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10 | 115.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10+ | 129.5 | 13 | 5.3 | 123-140 | 42.6 | 13 | 6.3 | 35-55 |
| | March | 4 | 119.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 5 | 115.7 | 3 | - | 111-119 | 31.8 | 3 | - | 31-32 |
| | | 6 | 119.6 | 5 | - | 117-122 | 34.2 | 5 | - | 29-40 |
| | | 7 | 127.7 | 3 | - | 117-127 | 33.3 | 3 | - | 31-35 |
| | | 8 | 127.3 | 3 | - | 122-133 | 35.0 | 3 | - | 31-37 |
| | | 9 | 125.0 | 5 | - | 121-132 | 38.2 | 5 | - | 36-43 |
| | | 10 | 129.5 | 2 | - | 129-130 | 42.0 | 2 | - | 39-45 |
| | | 10+ | 127.5 | 31 | 5.4 | 117-139 | 42.5 | 31 | 3.4 | 35-49 |
| | June | 5 | 121.0 | 5 | - | 110-131 | 42.8 | 5 | - | 40-46 |
| | | 6 | 127.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 8 | 133.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 9 | 123.0 | 5 | - | 120-130 | 50.8 | 5 | - | 46-58 |
| | | 11 | 128.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 14 | 128.0 | 1 | - | - | 60.0 | 1 | - | - |
| | | 15 | 133.0 | 1 | - | 132-134 | 62.0 | 2 | - | 60-64 |
| | | 16 | 125.0 | 1 | - | - | 60.0 | 1 | - | - |
| | | 20 | 124.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | July 7 | 133.0 | 1 | - | - | 44.0 | 1 | - | - |
| 1976 | January | 4 | 111.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 6 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 125.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 11 | 129.0 | 2 | - | 124-134 | 42.0 | 2 | - | 42-42 |
| | | 16 | 126.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 17 | 135.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 18 | 141.0 | 1 | - | - | 56.0 | 1 | - | - |
| | February | 5 | 118.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 7 | 131.5 | 2 | - | 130-133 | 39.0 | 2 | - | 38-40 |
| | | 8 | 132.0 | 2 | - | 132-132 | 45.0 | 2 | - | 43-47 |
| | | 10+ | 128.0 | 2 | - | 123-132 | 40.0 | 2 | - | 38-42 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1976 | February | 11 | 126.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 12 | 131.0 | 2 | - | 130-132 | 44.0 | 2 | - | 42-46 |
| | | 14 | 127.5 | 2 | - | 125-130 | 48.5 | 2 | - | 47-52 |
| | | 16 | 131.5 | 2 | - | 125-138 | 53.0 | 2 | - | 48-58 |
| | | 17 | 128.0 | 1 | - | - | 46.0 | 1 | - | - |
| | March | 4 | 110.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 7 | 123.5 | 1 | - | - | 31.0 | 1 | - | - |
| | | 10 | 122.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 12 | 121.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 13 | 118.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 14 | 117.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 15 | 128.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 16 | 125.0 | 1 | - | - | 42.0 | 1 | - | - |
| | April | 3 | 102.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 4 | 108.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 5 | 110.6 | 4 | - | 107-115 | 31.5 | 4 | - | 29-36 |
| | | 6 | 123.7 | 8 | - | 117-126 | 35.2 | 8 | - | 31-43 |
| | | 7 | 122.9 | 8 | - | 114-130 | 35.4 | 8 | - | 31-42 |
| | | 8 | 126.0 | 5 | - | 117-134 | 37.4 | 5 | - | 35-39 |
| | | 9 | 124.0 | 8 | - | 113-132 | 38.4 | 8 | - | 34-43 |
| | | 10 | 124.6 | 10 | 5.8 | 115-132 | 39.0 | 10 | 3.8 | 34-45 |
| | | 11 | 123.0 | 2 | - | 122-124 | 36.5 | 2 | - | 33-40 |
| | | 12 | 126.7 | 4 | - | 119-131 | 42.2 | 4 | - | 40-44 |
| | | 13 | 126.6 | 7 | - | 120-137 | 42.9 | 7 | - | 36-52 |
| | | 14 | 126.5 | 4 | - | 121-130 | 41.5 | 4 | - | 38-46 |
| | | 15 | 127.5 | 2 | - | 125-130 | 40.5 | 2 | - | 39-42 |
| | | 16 | 127.1 | 6 | - | 123-135 | 43.7 | 6 | - | 41-48 |
| | | 17 | 123.3 | 3 | - | 121-125 | 42.7 | 3 | - | 41-44 |
| | | 18 | 128.0 | 3 | - | 127-133 | 42.0 | 3 | - | 37-47 |
| | May | 4 | 116.0 | 2 | - | 114-118 | 34.0 | 2 | - | 32-36 |
| | | 5 | 123.1 | 5 | - | 118-126 | 37.2 | 5 | - | 35-42 |
| | | 6 | 121.6 | 4 | - | 120-125 | 36.5 | 4 | - | 34-39 |
| | | 7 | 126.4 | 5 | - | 119-130 | 40.4 | 5 | - | 37-42 |
| | | 8 | 122.0 | 3 | - | 114-127 | 37.0 | 3 | - | 29-42 |
| | | 9 | 127.2 | 4 | - | 124-129 | 43.7 | 4 | - | 40-48 |
| | | 10 | 128.1 | 9 | - | 120-133 | 43.8 | 9 | - | 40-51 |
| | | 11 | 131.5 | 6 | - | 127-141 | 46.5 | 6 | - | 40-53 |
| | | 12 | 131.7 | 11 | 6.6 | 122-142 | 44.2 | 11 | 4.7 | 38-52 |
| | | 13 | 126.3 | 9 | - | 116-132 | 45.3 | 9 | - | 39-53 |
| | | 14 | 127.2 | 8 | - | 121-137 | 46.7 | 8 | - | 41-56 |
| | | 15 | 131.5 | 6 | - | 125-138 | 46.5 | 6 | - | 41-50 |
| | | 16 | 130.2 | 6 | - | 126-136 | 47.2 | 6 | - | 41-55 |
| | | 17 | 131.5 | 4 | - | 123-137 | 46.2 | 4 | - | 41-50 |
| | | 18 | 128.7 | 2 | - | 127-130 | 50.5 | 2 | - | 47-54 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1976 | May | 19 | 138.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 20 | 127.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 21 | 136.5 | 1 | - | - | 60.0 | 1 | - | - |
| | | 22 | 139.0 | 1 | - | - | 55.0 | 1 | - | - |
| | | 23 | 127.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 24 | 130.0 | 1 | - | - | 48.0 | 1 | - | - |
| | December | 5 | 119.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 7 | 127.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 8 | 125.0 | 2 | - | 121-129 | 38.0 | 2 | - | 32-44 |
| | | 9 | 124.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 11 | 126.4 | 5 | - | 122-130 | 42.0 | 5 | - | 38-44 |
| | | 12 | 127.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 13 | 124.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 14 | 133.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 15 | 126.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 124.0 | 1 | - | - | 44.0 | 1 | - | - |
| 1977 | January | 4 | 120.0 | 2 | - | 118-122 | 31.5 | 2 | - | 30-33 |
| | | 5 | 118.0 | 3 | - | 110-125 | 33.0 | 3 | - | 27-37 |
| | | 6 | 118.5 | 2 | - | 117-120 | 34.0 | 2 | - | 34-34 |
| | | 7 | 123.0 | 2 | - | 120-126 | 38.0 | 2 | - | 37-39 |
| | | 8 | 119.3 | 3 | - | 114-124 | 33.0 | 3 | - | 31-36 |
| | | 9 | 126.0 | 3 | - | 121-132 | 36.3 | 3 | - | 34-38 |
| | | 10 | 123.6 | 9 | - | 116-132 | 39.1 | 9 | - | 30-45 |
| | | 11 | 122.5 | 2 | - | 121-124 | 37.5 | 2 | - | 35-40 |
| | | 12 | 124.6 | 5 | - | 119-136 | 40.0 | 5 | - | 34-44 |
| | | 13 | 126.0 | 3 | - | 124-130 | 43.0 | 3 | - | 42-45 |
| | | 14 | 130.4 | 7 | - | 125-136 | 39.8 | 7 | - | 34-44 |
| | | 15 | 125.5 | 4 | - | 113-131 | 44.5 | 4 | - | 43-51 |
| | | 16 | 129.0 | 2 | - | 123-135 | 45.0 | 2 | - | 38-52 |
| | | 17 | 144.5 | 2 | - | 131-158 | 51.5 | 2 | - | 46-57 |
| | | 18 | 126.6 | 5 | - | 116-133 | 43.5 | 5 | - | 35-48 |
| | | 22 | 131.0 | 3 | - | 130-132 | 50.3 | 3 | - | 48-53 |
| | February | 4 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 5 | 119.0 | 5 | - | 113-124 | 32.0 | 5 | - | 30-34 |
| | | 6 | 126.0 | 4 | - | 123-128 | 36.7 | 4 | - | 33-40 |
| | | 7 | 122.8 | 7 | - | 120-126 | 34.7 | 7 | - | 30-39 |
| | | 8 | 125.8 | 11 | 5.3 | 116-132 | 38.6 | 11 | 3.7 | 31-42 |
| | | 9 | 122.6 | 7 | - | 114-132 | 35.4 | 7 | - | 30-39 |
| | | 10 | 125.9 | 11 | 6.0 | 120-138 | 38.9 | 11 | 6.0 | 32-50 |
| | | 11 | 125.7 | 7 | - | 121-134 | 38.0 | 7 | - | 36-42 |
| | | 12 | 131.0 | 2 | - | 130-132 | 41.0 | 2 | - | 40-42 |
| | | 13 | 126.0 | 7 | - | 120-138 | 39.7 | 7 | - | 33-45 |
| | | 14 | 124.5 | 2 | - | 122-127 | 42.0 | 2 | - | 40-44 |
| | | 15 | 131.2 | 4 | - | 126-143 | 44.0 | 4 | - | 40-49 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1977 | February | 16 | 133.5 | 4 | - | - | 45.2 | 4 | - | - |
| | | 21 | 137.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 23 | 129.0 | 1 | - | - | 46.0 | 1 | - | - |
| | March | 5 | 118.0 | 1 | - | - | 32.0 | 1 | - | - |
| 1979 | March | 4 | 116.4 | 10 | 3.4 | 112-122 | 28.7 | 10 | 2.1 | 26-32 |
| | | 5 | 124.3 | 8 | - | 118-136 | 31.1 | 8 | - | 29-35 |
| | | 6 | 127.4 | 7 | - | 122-134 | 32.5 | 7 | - | 29-38 |
| | | 7 | 127.8 | 6 | - | 121-132 | 35.2 | 6 | - | 30-41 |
| | | 8 | 125.6 | 9 | - | 119-132 | 34.3 | 9 | - | 28-40 |
| | | 9 | 130.6 | 7 | - | 124-136 | 36.6 | 7 | - | 30-41 |
| | | 10 | 129.0 | 5 | - | 120-137 | 38.9 | 5 | - | 34-46 |
| | | 11 | 130.3 | 3 | - | 126-133 | 40.7 | 3 | - | 38-42 |
| | | 12 | 134.0 | 3 | - | 124-140 | 40.7 | 3 | - | 38-45 |
| | | 13 | 133.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 14 | 135.3 | 4 | - | 133-140 | 41.5 | 4 | - | 37-46 |
| | | 15 | 133.5 | 2 | - | 133-134 | 41.5 | 2 | - | 41-42 |
| | | 16 | 135.5 | 2 | - | 135-136 | 42.0 | 2 | - | 41-43 |
| | | 17 | 136.0 | 1 | - | - | 41.0 | 1 | - | - |
| | April | 4 | 123.0 | 1 | - | - | 32.0 | 1 | - | - |

Bering Sea

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1962 | June | 5 | 122.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 6 | 131.0 | 2 | - | 131-131 | 48.0 | 2 | - | 47-49 |
| | | 7 | 125.0 | 6 | - | 111-132 | 43.7 | 6 | - | 39-52 |
| | | 8 | 127.6 | 9 | - | 125-131 | 46.1 | 9 | - | 40-54 |
| | | 9 | 125.5 | 2 | - | 121-130 | 48.5 | 2 | - | 39-58 |
| | | 10 | 125.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 10+ | 131.8 | 14 | 3.7 | 125-138 | 56.6 | 14 | 7.9 | 43-69 |
| 1965 | June | 4 | 115.7 | 2 | - | 113-118 | 34.5 | 2 | - | 30-39 |
| | | 5 | 120.2 | 5 | - | 115-124 | 45.0 | 5 | - | 41-53 |
| | | 6 | 123.8 | 10 | 5.8 | 113-130 | 46.3 | 10 | 6.2 | 37-55 |
| | | 7 | 125.8 | 15 | 5.1 | 116-133 | 48.3 | 15 | 3.4 | 40-54 |
| | | 8 | 124.9 | 19 | 4.7 | 116-133 | 49.6 | 19 | 4.5 | 42-58 |
| | | 9 | 125.2 | 6 | - | 120-133 | 49.3 | 6 | - | 47-52 |
| | | 10 | 125.8 | 6 | - | 119-133 | 50.8 | 6 | - | 48-55 |
| | | 10+ | 128.3 | 44 | 4.3 | 119-138 | 54.6 | 44 | 5.5 | 40-64 |
| | July | 12 | 130.0 | 1 | - | - | 63.0 | 1 | - | - |
| | | 5 | 113.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 6 | 119.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 7 | 120.3 | 3 | - | 112-131 | 47.8 | 3 | - | 44-50 |
| | | 8 | 120.5 | 2 | - | 111-130 | 45.0 | 2 | - | 39-51 |
| | | 10 | 126.0 | 2 | - | 126-126 | 43.5 | 2 | - | 43-44 |
| | | 10+ | 130.9 | 7 | - | 124-137 | 54.7 | 7 | - | 46-62 |
| 1966 | May | 5 | 120.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 6 | 123.5 | 1 | - | - | 45.0 | 1 | - | - |
| | June | 4 | 117.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 5 | 117.0 | 2 | - | 115-118 | 39.5 | 2 | - | 35-44 |
| | | 6 | 119.3 | 5 | - | 117-125 | 42.6 | 5 | - | 34-49 |
| | | 7 | 123.0 | 9 | - | 118-128 | 45.3 | 9 | - | 38-52 |
| | | 8 | 121.1 | 8 | - | 115-129 | 44.1 | 8 | - | 39-52 |
| | | 9 | 125.4 | 8 | - | 117-131 | 47.7 | 8 | - | 44-52 |
| | | 10 | 127.8 | 9 | - | 122-136 | 52.3 | 9 | - | 46-61 |
| | | 10+ | 128.6 | 52 | 5.5 | 111-136 | 53.2 | 52 | 4.6 | 41-62 |
| | July | 5 | 129.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 6 | 128.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 8 | 125.5 | 1 | - | - | 47.0 | 1 | - | - |
| | | 10+ | 128.3 | 9 | - | 117-135 | 53.6 | 9 | - | 37-61 |
| 1968 | June | 4 | 117.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 7 | 120.5 | 2 | - | 118-123 | 48.0 | 2 | - | 48-48 |
| | | 8 | 121.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10 | 133.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 10+ | 130.4 | 5 | - | 126-133 | 51.2 | 5 | - | 40-60 |
| | July | 6 | 110.8 | 1 | - | - | 36.0 | 1 | - | - |
| | | 7 | 126.3 | 2 | - | 121-131 | 43.0 | 2 | - | 42-44 |
| | | 8 | 116.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 10+ | 126.7 | 5 | - | 123-135 | 48.2 | 5 | - | 38-60 |

Bering Sea
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1970 | June | 5 | 120.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 6 | 119.9 | 4 | - | 114-129 | 48.0 | 4 | - | 37-60 |
| | | 7 | 120.2 | 3 | - | 119-121 | 46.0 | 3 | - | 41-53 |
| | | 8 | 123.7 | 4 | - | 119-132 | 42.5 | 4 | - | 42-50 |
| | | 9 | 121.4 | 11 | 3.8 | 117-129 | 45.3 | 11 | 5.3 | 40-56 |
| | | 10 | 123.1 | 9 | - | 115-136 | 47.8 | 9 | - | 38-61 |
| | | 10+ | 125.2 | 26 | 4.6 | 119-137 | 54.3 | 26 | 8.0 | 39-70 |
| 1976 | May | 10+ | 130.0 | 1 | - | - | 50.0 | 1 | - | - |
| | June | 5 | 117.0 | 2 | - | 116-118 | 43.5 | 2 | - | 42-45 |
| | | 6 | 121.3 | 6 | - | 117-126 | 45.3 | 6 | - | 42-48 |
| | | 7 | 121.9 | 11 | 4.1 | 115-128 | 46.9 | 11 | 3.3 | 43-53 |
| | | 8 | 128.3 | 10 | 8.7 | 119-145 | 51.2 | 10 | 7.2 | 42-63 |
| | | 9 | 129.4 | 7 | - | 122-134 | 55.6 | 7 | - | 52-60 |
| | | 10 | 126.1 | 4 | - | 118-132 | 51.0 | 4 | - | 47-57 |
| | | 10+ | 126.1 | 23 | 6.1 | 113-136 | 53.9 | 23 | 4.0 | 45-60 |
| | July | 7 | 124.5 | 2 | - | 120-129 | 47.5 | 2 | - | 45-50 |
| | | 8 | 133.0 | 1 | - | - | 55.0 | 1 | - | - |
| | | 10+ | 133.0 | 2 | - | 125-141 | 51.5 | 2 | - | 50-53 |

Table 15

Monthly mean length and weight of postpartum fur seals.
(\bar{x} = mean, n = sample size, s = standard deviation for $n > 10$)

Sea of Okhotsk

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|-----|-----|---------|-------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Sept. | 3 | 113.0 | 1 | - | - | - | - | - | - |
| | | 4 | 121.1 | 11 | 8.0 | 111-135 | - | - | - | - |
| | | 5 | 120.0 | 18 | 5.9 | 107-128 | - | - | - | - |
| | | 6 | 119.2 | 23 | 6.4 | 109-133 | - | - | - | - |
| | | 7 | 122.5 | 13 | 7.8 | 110-135 | - | - | - | - |
| | | 8 | 128.3 | 4 | - | 118-135 | - | - | - | - |
| | | 9 | 127.0 | 3 | - | 126-138 | - | - | - | - |
| | | 10 | 132.0 | 1 | - | - | - | - | - | - |
| | | 10+ | 129.9 | 36 | 5.4 | 116-139 | - | - | - | - |
| | October | 4 | 118.8 | 10 | 7.9 | 108-131 | - | - | - | - |
| | | 5 | 120.2 | 21 | 4.6 | 114-131 | - | - | - | - |
| | | 6 | 121.8 | 16 | 8.2 | 106-134 | - | - | - | - |
| | | 7 | 125.8 | 11 | 8.0 | 115-138 | - | - | - | - |
| | | 8 | 124.6 | 7 | - | 116-131 | - | - | - | - |
| | | 9 | 122.6 | 9 | - | 112-134 | - | - | - | - |
| | | 10 | 123.3 | 4 | - | 119-126 | - | - | - | - |
| | | 10+ | 130.6 | 68 | 7.8 | 116-153 | - | - | - | - |
| 1964 | July | 4 | 114.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 5 | 110.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 7 | 124.8 | 4 | - | 122-127 | 36.7 | 3 | - | 35-39 |
| | | 8 | 124.5 | 6 | - | 120-129 | 38.7 | 6 | - | 36-41 |
| | | 9 | 123.8 | 4 | - | 123-124 | 39.3 | 4 | - | 37-41 |
| | | 10 | 127.5 | 2 | - | 127-127 | 43.0 | 2 | - | 43-43 |
| | | 10+ | 119.8 | 4 | - | 114-125 | 36.5 | 4 | - | 35-38 |
| | | 14 | 124.0 | 2 | - | 124-124 | 41.0 | 2 | - | 41-41 |
| 1975 | July | 4 | 119.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 5 | 119.0 | 5 | - | 110-127 | 35.0 | 5 | - | 26-42 |
| | | 6 | 120.7 | 3 | - | 117-125 | 36.3 | 3 | - | 30-44 |
| | | 7 | 125.1 | 7 | - | 117-134 | 41.1 | 7 | - | 35-48 |
| | | 8 | 121.5 | 4 | - | 120-124 | 37.0 | 4 | - | 33-42 |
| | | 9 | 127.4 | 5 | - | 124-133 | 37.0 | 5 | - | 35-40 |
| | | 10 | 128.3 | 10 | 4.5 | 122-135 | 44.0 | 10 | 5.1 | 38-53 |
| | | 11 | 129.7 | 3 | - | 127-135 | 51.7 | 3 | - | 47-56 |
| | | 12 | 131.0 | 10 | 7.5 | 117-139 | 45.4 | 10 | 4.8 | 38-52 |
| | | 13 | 128.5 | 8 | - | 121-135 | 46.3 | 8 | - | 40-52 |
| | | 14 | 125.8 | 8 | - | 122-131 | 42.1 | 8 | - | 34-48 |
| | | 15 | 127.8 | 9 | - | 115-139 | 44.3 | 9 | - | 37-55 |
| | | 16 | 123.6 | 5 | - | 120-132 | 41.8 | 5 | - | 35-48 |
| | | 17 | 131.0 | 3 | - | 127-137 | 47.0 | 3 | - | 43-54 |
| | | 18 | 137.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 19 | 129.0 | 1 | - | - | 51.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1975 | July | 20 | 125.3 | 3 | - | 123-130 | 44.7 | 3 | - | 39-50 |
| | | 21 | 124.5 | 2 | - | 122-129 | 42.0 | 2 | - | 42-42 |
| | October | 6 | 123.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 129.0 | 2 | - | 124-134 | 42.0 | 2 | - | 40-44 |
| | | 9 | 127.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 12 | 129.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 14 | 138.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 15 | 135.0 | 2 | - | 131-139 | 52.0 | 2 | - | 45-59 |
| | | 16 | 122.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 17 | 133.0 | 1 | - | - | - | 1 | - | - |
| | | 19 | 131.0 | 1 | - | - | 57.0 | 1 | - | - |
| | | 22 | 128.6 | 2 | - | 127-130 | 53.5 | 2 | - | 52-55 |
| | | 23 | 135.0 | 1 | - | - | 60.0 | 1 | - | - |
| 1977 | August | 4 | 120.2 | 5 | - | 117-123 | 28.2 | 5 | - | 27-30 |
| | | 5 | 129.0 | 11 | 5.6 | 121-138 | 32.4 | 11 | 4.7 | 26-40 |
| | | 6 | 127.7 | 10 | 7.2 | 118-139 | 32.8 | 10 | 3.8 | 27-38 |
| | | 7 | 122.5 | 2 | - | 118-127 | 34.5 | 2 | - | 34-35 |
| | | 8 | 129.0 | 5 | - | 120-137 | 35.8 | 5 | - | 30-46 |
| | | 9 | 134.5 | 2 | - | 132-137 | 39.0 | 2 | - | 37-41 |
| | | 10 | 137.5 | 2 | - | 128-147 | 41.0 | 2 | - | 40-42 |
| | | 11 | 142.5 | 2 | - | 135-150 | 40.0 | 2 | - | 36-44 |
| | | 12 | 133.7 | 3 | - | 130-139 | 40.3 | 3 | - | 35-44 |
| | | 13 | 132.8 | 4 | - | 125-141 | 38.0 | 4 | - | 32-43 |
| | | 14 | 133.7 | 6 | - | 124-147 | 41.5 | 6 | - | 38-47 |
| | | 15 | 132.8 | 4 | - | 129-137 | 40.8 | 4 | - | 36-46 |
| | | 16 | 131.5 | 2 | - | 127-136 | 39.5 | 2 | - | 38-41 |
| | | 18 | 138.5 | 4 | - | 133-141 | 43.5 | 4 | - | 38-50 |
| | | 19 | 132.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 20 | 132.5 | 2 | - | 130-135 | 41.0 | 2 | - | 39-43 |

Western Pacific Ocean

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|---|---|---------|------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1961 | July | 10+ | 132.0 | 3 | - | 126-140 | 40.0 | 3 | - | 32-50 |

Bering Sea

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1961 | July | 10+ | 132.0 | 3 | - | 126-140 | 40.0 | 3 | - | 32-50 |
| 1967 | July | 7 | 120.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 9 | 123.3 | 2 | - | 120-126 | 48.0 | 2 | - | 40-48 |
| | | 10 | 122.7 | 3 | - | 119-125 | 39.0 | 3 | - | 37-40 |
| | | 10+ | 122.0 | 3 | - | 118-128 | 39.3 | 3 | - | 35-45 |
| 1968 | July | 8 | 114.8 | 2 | - | 112-117 | 30.0 | 2 | - | 30-30 |
| | | 9 | 120.5 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10+ | 122.2 | 6 | - | 115-131 | 44.7 | 6 | - | 36-52 |
| 1974 | August | 5 | 113.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 6 | 120.0 | 3 | - | 114-123 | 36.0 | 3 | - | 30-40 |
| | | 7 | 126.7 | 4 | - | 121-133 | 42.0 | 4 | - | 38-47 |
| | | 8 | 124.4 | 7 | - | 119-130 | 40.0 | 7 | - | 35-44 |
| | | 9 | 123.6 | 5 | - | 116-132 | 41.2 | 5 | - | 34-47 |
| | | 10 | 126.5 | 7 | - | 117-136 | 42.3 | 7 | - | 36-48 |
| | | 10+ | 127.1 | 16 | 4.7 | 119-135 | 44.4 | 16 | 3.8 | 37-50 |
| | | 11 | 124.0 | 1 | - | - | 36.0 | 1 | - | - |
| | Sept. | 4 | 112.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 5 | 120.8 | 8 | - | 114-129 | 35.9 | 8 | - | 28-39 |
| | | 6 | 123.2 | 8 | - | 115-132 | 39.1 | 8 | - | 35-45 |
| | | 7 | 121.6 | 10 | 6.2 | 110-128 | 35.5 | 10 | 6.2 | 29-43 |
| | | 8 | 124.7 | 6 | - | 122-128 | 40.5 | 6 | - | 38-42 |
| | | 9 | 120.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 10 | 128.3 | 8 | - | 122-132 | 40.6 | 7 | - | 34-46 |
| | | 10+ | 127.1 | 23 | 4.2 | 120-136 | 42.6 | 23 | 4.5 | 35-52 |
| | | 12 | 122.0 | 1 | - | - | 36.0 | 1 | - | - |
| | October | 4 | 110.7 | 3 | - | 104-116 | 28.3 | 3 | - | 27-30 |
| | | 5 | 117.4 | 7 | - | 113-125 | 31.6 | 7 | - | 28-36 |
| | | 6 | 120.0 | 17 | 6.9 | 104-128 | 34.9 | 17 | 4.0 | 28-42 |
| | | 7 | 123.6 | 8 | - | 115-132 | 39.9 | 8 | - | 32-45 |
| | | 8 | 125.0 | 10 | 1.7 | 122-127 | 37.2 | 10 | 4.4 | 32-45 |
| | | 9 | 126.4 | 11 | 5.0 | 120-135 | 40.5 | 11 | 5.3 | 33-49 |
| | | 10 | 124.8 | 13 | - | 121-130 | 39.6 | 13 | - | 34-44 |
| | | 10+ | 129.4 | 44 | 7.7 | 117-151 | 45.8 | 44 | 5.2 | 36-59 |
| | | 12 | 125.5 | 2 | - | 125-126 | 37.0 | 2 | - | 34-40 |
| | | 13 | 129.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 15 | 129.5 | 2 | - | 129-130 | 46.0 | 2 | - | 45-47 |
| | | 16 | 129.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1978 | October | 3 | 114.0 | 14 | 4.0 | 107-120 | 25.2 | 14 | 5.3 | 18-35 |
| | | 4 | 118.5 | 26 | 6.9 | 103-130 | 27.7 | 26 | 4.9 | 17-36 |
| | | 5 | 122.8 | 18 | 5.9 | 113-134 | 30.6 | 18 | 4.8 | 25-42 |
| | | 6 | 124.0 | 21 | 6.2 | 113-136 | 32.2 | 21 | 4.6 | 24-41 |
| | | 7 | 124.2 | 18 | 5.4 | 115-134 | 31.9 | 18 | 4.8 | 26-43 |
| | | 8 | 125.3 | 12 | 4.8 | 119-134 | 34.0 | 12 | 2.2 | 31-38 |
| | | 9 | 128.6 | 14 | 4.9 | 122-138 | 37.0 | 14 | 3.7 | 31-43 |
| | | 10 | 125.7 | 11 | 7.0 | 112-133 | 34.2 | 11 | 5.3 | 24-40 |

Bering Sea
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1978 | October | 11 | 126.5 | 8 | - | 117-135 | 35.8 | 8 | - | 30-41 |
| | | 12 | 131.0 | 11 | 8.3 | 119-144 | 40.5 | 11 | 6.0 | 32-50 |
| | | 13 | 131.8 | 4 | - | 128-138 | 39.0 | 4 | - | 34-41 |
| | | 14 | 128.8 | 9 | - | 121-134 | 38.6 | 9 | - | 33-44 |
| | | 15 | 127.7 | 7 | - | 119-134 | 39.1 | 7 | - | 34-46 |
| | | 16 | 132.6 | 5 | - | 126-147 | 43.0 | 5 | - | 38-55 |
| | | 17 | 134.4 | 5 | - | 127-139 | 43.8 | 5 | - | 40-49 |
| | | 18 | 135.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 19 | 149.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 20 | 129.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 21 | 140.5 | 2 | - | 139-142 | 47.0 | 2 | - | 36-58 |
| | | 22 | 127.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 26 | 130.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 27 | 127.0 | 1 | - | - | 36.0 | 1 | - | - |
| | November | 3 | 112.6 | 13 | 5.3 | 102-119 | 25.2 | 13 | 2.7 | 21-30 |
| | | 4 | 117.7 | 7 | - | 112-123 | 27.6 | 7 | - | 26-30 |
| | | 5 | 129.9 | 9 | - | 115-132 | 32.2 | 9 | - | 27-38 |
| | | 6 | 120.5 | 2 | - | 113-128 | 32.0 | 2 | - | 29-35 |
| | | 7 | 125.8 | 9 | - | 118-136 | 32.5 | 9 | - | 27-40 |
| | | 10 | 130.0 | 2 | - | 126-134 | 43.0 | 2 | - | 41-45 |
| | | 11 | 129.5 | 4 | - | 122-138 | 36.8 | 4 | - | 32-42 |
| | | 12 | 129.0 | 2 | - | 126-132 | 36.0 | 2 | - | 36-36 |
| | | 13 | 130.3 | 4 | - | 123-141 | 42.8 | 4 | - | 38-55 |
| | | 14 | 123.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 15 | 131.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 16 | 126.0 | 1 | - | - | 35.0 | 1 | - | - |
| | December | 17 | 127.5 | 2 | - | 125-130 | 36.0 | 2 | - | 31-41 |
| | | 20 | 128.7 | 1 | - | 125-133 | 39.7 | 3 | - | 36-45 |
| | | 22 | 131.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 15 | 136.0 | 1 | - | - | 45.0 | 1 | - | - |

Table 16

Monthly mean length and weight of male fur seals.
(\bar{X} = mean, n = sample size, s = standard deviation for n > 10)

Sea of Japan

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|------|---------|-------------|----|------|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1959 | March | 2 | 101.7 | 1 | - | - | - | - | - | - |
| | | 3 | 127.7 | 2 | - | 113-142 | - | - | - | - |
| | | 4 | 126.8 | 3 | - | 125-128 | - | - | - | - |
| | | 5 | 161.0 | 1 | - | - | - | - | - | - |
| | | 6 | 194.0 | 1 | - | - | - | - | - | - |
| | | 7 | 190.4 | 1 | - | - | - | - | - | - |
| | | 9 | 203.9 | 1 | - | - | - | - | - | - |
| 1960 | March | 3 | 119.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 4 | 127.5 | 2 | - | 127-128 | 35.0 | 2 | - | 34-36 |
| | | 6 | 152.0 | 1 | - | - | 70.0 | 1 | - | - |
| | | 9 | 197.0 | 1 | - | - | 142.0 | 1 | - | - |
| | April | 3 | 118.7 | 3 | - | 118-120 | 30.7 | 3 | - | 24-40 |
| | | 4 | 126.6 | 5 | - | 122-133 | 43.2 | 5 | - | 40-48 |
| | | 5 | 142.0 | 6 | - | 130-152 | 61.3 | 6 | - | 54-70 |
| | | 6 | 157.4 | 5 | - | 150-160 | 77.0 | 5 | - | 65-90 |
| | | 7 | 172.5 | 8 | - | 159-182 | 102.3 | 8 | - | 68-130 |
| | | 8 | 159.0 | 7 | - | 163-196 | 125.8 | 7 | - | 86-200 |
| | | 9 | 179.8 | 6 | - | 151-195 | 132.0 | 6 | - | 76-176 |
| | | 10 | 193.0 | 1 | - | - | 190.0 | 1 | - | - |
| | | 10+ | 197.8 | 5 | - | 192-206 | 189.2 | 5 | - | 150-220 |
| 1961 | March | 1 | 74.0 | 1 | - | - | 14.0 | 1 | - | - |
| | | 2 | 105.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 3 | 105.7 | 3 | - | 105-106 | 26.7 | 3 | - | 24-28 |
| | | 4 | 128.0 | 4 | - | 110-141 | 48.0 | 4 | - | 32-60 |
| | | 5 | 144.0 | 2 | - | 126-162 | 65.0 | 2 | - | 50-80 |
| | | 6 | 143.7 | 3 | - | 142-147 | 77.3 | 3 | - | 62-90 |
| | | 7 | 159.0 | 6 | - | 148-173 | 88.3 | 6 | - | 62-100 |
| | | 8 | 167.0 | 1 | - | - | 100.0 | 1 | - | - |
| | | 9 | 188.0 | 1 | - | - | 160.0 | 1 | - | - |
| | | 10+ | 199.0 | 2 | - | 198-200 | 215.0 | 2 | - | 190-240 |
| | April | 1 | 87.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 114.0 | 9 | - | 108-128 | 31.4 | 9 | - | 27-38 |
| | | 4 | 125.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 5 | 139.4 | 10 | 6.8 | 130-150 | 59.4 | 10 | 10.7 | 49-80 |
| | | 6 | 152.0 | 11 | 12.6 | 137-175 | 76.8 | 11 | 14.9 | 55-100 |
| | | 8 | 174.0 | 2 | - | 168-180 | 109.0 | 2 | - | 84-134 |
| | | 10+ | 205.0 | 2 | - | 200-210 | 192.0 | 2 | - | 192-192 |
| | May | 3 | 95.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 4 | 121.7 | 3 | - | 118-127 | 40.0 | 3 | - | - |
| | | 5 | 147.0 | 1 | - | - | 68.0 | 1 | - | - |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|------|---------|-------------|----|------|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1962 | March | 2 | 96.0 | 2 | - | 93-99 | 16.0 | 2 | - | 14-18 |
| | | 3 | 109.4 | 6 | - | 106-120 | 22.2 | 6 | - | 13-30 |
| | | 4 | 122.7 | 3 | - | 117-132 | 29.7 | 3 | - | 21-42 |
| | | 5 | 146.0 | 4 | - | 138-156 | 63.5 | 4 | - | 56-80 |
| | | 6 | 163.0 | 1 | - | - | 82.0 | 1 | - | - |
| | | 7 | 165.0 | 1 | - | - | 98.0 | 1 | - | - |
| | | 8 | 195.0 | 1 | - | - | 215.0 | 1 | - | - |
| | | 10+ | 194.0 | 3 | - | 183-212 | 205.0 | 3 | - | 195-220 |
| | April | 1 | 70.0 | 1 | - | - | 7.6 | 1 | - | - |
| | | 2 | 96.7 | 18 | 6.8 | 77-108 | 19.1 | 18 | 2.2 | 12-22 |
| | | 3 | 109.4 | 72 | 4.8 | 97-120 | 25.1 | 72 | 6.2 | 14-44 |
| | | 4 | 123.7 | 46 | 9.5 | 111-153 | 37.8 | 46 | 6.7 | 25-68 |
| | | 5 | 134.3 | 30 | 10.2 | 117-158 | 50.1 | 30 | 15.9 | 25-89 |
| | | 6 | 150.2 | 23 | 8.5 | 132-164 | 54.4 | 23 | 16.4 | 38-100 |
| | | 7 | 166.2 | 20 | 9.6 | 149-184 | 95.8 | 20 | 19.4 | 62-133 |
| | | 8 | 181.8 | 5 | - | 174-194 | 145.6 | 5 | - | 123-180 |
| | | 9 | 189.0 | 9 | - | 172-201 | 184.4 | 9 | - | 120-240 |
| | | 10 | 191.0 | 3 | - | 175-200 | 200.7 | 3 | - | 150-250 |
| | | 10+ | 190.9 | 11 | 8.5 | 175-201 | 200.7 | 11 | 33.1 | 150-250 |
| | May | 2 | 93.0 | 2 | - | 89-97 | 16.0 | 2 | - | 16-16 |
| | | 3 | 112.9 | 8 | - | 102-122 | 30.9 | 8 | - | 22-44 |
| | | 4 | 120.0 | 11 | 6.3 | 110-129 | 40.1 | 11 | 8.6 | 26-52 |
| | | 5 | 144.4 | 7 | - | 137-162 | 53.1 | 7 | - | 38-93 |
| | | 6 | 150.7 | 7 | - | 132-166 | 72.4 | 7 | - | 50-110 |
| | | 7 | 164.8 | 4 | - | 162-168 | 99.5 | 4 | - | 80-118 |
| | | 8 | 179.2 | 5 | - | 172-193 | 151.4 | 5 | - | 100-230 |
| | | 10+ | 193.3 | 4 | - | 179-202 | 197.5 | 4 | - | 100-240 |
| 1963 | March | 3 | 113.2 | 5 | - | 110-118 | 29.2 | 5 | - | 28-30 |
| | | 4 | 119.0 | 2 | - | 110-138 | 41.0 | 2 | - | 40-42 |
| | | 5 | 142.0 | 1 | - | - | 62.0 | 1 | - | - |
| | | 6 | 150.0 | 1 | - | - | 96.0 | 1 | - | - |
| | | 7 | 176.5 | 2 | - | 168-185 | 122.5 | 2 | - | 105-140 |
| | | 8 | 185.7 | 3 | - | 170-197 | 126.6 | 3 | - | 110-140 |
| | | 10+ | 197.5 | 4 | - | 190-203 | 172.5 | 4 | - | 140-190 |
| | April | 3 | 109.6 | 16 | 5.6 | 100-119 | 30.6 | 16 | 6.4 | 22-44 |
| | | 4 | 124.8 | 11 | 5.6 | 116-133 | 44.9 | 11 | 3.9 | 40-52 |
| | | 5 | 147.0 | 5 | - | 132-158 | 69.8 | 5 | - | 40-82 |
| | | 6 | 154.0 | 5 | - | 145-168 | 86.2 | 5 | - | 70-100 |
| | | 8 | 190.0 | 1 | - | - | 160.0 | 1 | - | - |
| | | 9 | 200.0 | 1 | - | - | 200.0 | 1 | - | - |
| | May | 2 | 96.0 | 2 | - | 92-100 | 19.0 | 2 | - | 18-20 |
| | | 3 | 111.8 | 8 | - | 102-129 | 27.5 | 8 | - | 20-38 |
| | | 4 | 124.9 | 12 | 5.4 | 117-134 | 41.7 | 12 | 4.5 | 36-50 |
| | | 5 | 141.9 | 7 | - | 129-156 | 58.9 | 7 | - | 44-70 |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|----------|-------|----------|-------------|-------|------|---------|-------------|-------|------|---------|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range | |
| 1963 | May | 6 | 157.0 | 5 | - | 144-168 | 88.0 | 5 | - | 64-100 | |
| | | 7 | 182.6 | 5 | - | 175-187 | 140.4 | 5 | - | 120-160 | |
| | | 8 | 189.3 | 3 | - | 171-210 | 175.0 | 3 | - | 120-225 | |
| | | 10+ | 210.0 | 2 | - | 200-220 | 258.5 | 2 | - | 242-275 | |
| 1965 | March | 2 | 86.5 | 1 | - | - | 13.0 | 1 | - | - | |
| | | 3 | 112.7 | 2 | - | 110-115 | 29.0 | 2 | - | 28-30 | |
| | | 4 | 126.5 | 1 | - | - | 38.0 | 1 | - | - | |
| | | 5 | 142.5 | 2 | - | 137-148 | 58.5 | 2 | - | 51-66 | |
| | | 6 | 149.0 | 1 | - | - | 79.0 | 1 | - | - | |
| | | 7 | 165.5 | 1 | - | - | 92.0 | 1 | - | - | |
| | | 8 | 162.5 | 2 | - | 157-168 | 102.0 | 2 | - | 98-106 | |
| | | April | 2 | 96.5 | 2 | - | 94-98 | 18.5 | 2 | - | 17-20 |
| | | 3 | 107.1 | 14 | 5.8 | 97-116 | 24.4 | 14 | 3.7 | 18-30 | |
| | | 4 | 125.8 | 16 | 12.2 | 110-151 | 38.8 | 16 | 7.0 | 26-50 | |
| | | 5 | 140.2 | 14 | 6.8 | 133-155 | 57.7 | 14 | 7.9 | 42-68 | |
| | | 6 | 149.9 | 12 | 9.0 | 137-165 | 70.1 | 12 | 12.8 | 50-90 | |
| | | 7 | 159.0 | 4 | - | 142-167 | 90.2 | 4 | - | 69-112 | |
| | | 8 | 172.3 | 3 | - | 156-192 | 118.0 | 3 | - | 94-164 | |
| | | 9 | 194.5 | 2 | - | 202-186 | 192.0 | 2 | - | 158-226 | |
| | | 10 | 173.0 | 1 | - | - | 124.0 | 1 | - | - | |
| | | 10+ | 193.3 | 3 | - | 182-205 | 189.0 | 3 | - | 138-210 | |
| | | May | 2 | 97.7 | 2 | - | 97-98 | 20.0 | 2 | - | 18-22 |
| | | | 3 | 112.7 | 5 | - | 101-118 | 25.0 | 5 | - | 21-28 |
| | | | 4 | 121.0 | 3 | - | 115-125 | 33.3 | 3 | - | 26-38 |
| | | | 5 | 136.0 | 2 | - | 133-139 | 49.0 | 2 | - | 46-52 |
| | | | 6 | 142.2 | 2 | - | 139-145 | 67.0 | 2 | - | 64-70 |
| | | | 7 | 161.5 | 2 | - | 153-170 | 95.0 | 2 | - | 78-112 |
| | | | 9 | 195.0 | 1 | - | - | 187.0 | 1 | - | - |
| | | | 10+ | 198.2 | 2 | - | 197-199 | 227.5 | 2 | - | 215-240 |
| | 1966 | January | 6 | 164.0 | 1 | - | - | 85.0 | 1 | - | - |
| February | | 3 | 118.7 | 2 | - | 118-119 | 34.0 | 1 | - | 32-36 | |
| | | 4 | 123.3 | 3 | - | 115-125 | 39.6 | 3 | - | 37-41 | |
| | | 5 | 139.5 | 3 | - | 134-143 | 60.0 | 3 | - | 57-62 | |
| | | 6 | 152.3 | 5 | - | 150-158 | 81.2 | 5 | - | 69-89 | |
| | | 7 | 162.4 | 5 | - | 153-177 | 103.0 | 5 | - | 75-156 | |
| | | 10+ | 190.0 | 3 | - | 180-198 | 170.0 | 3 | - | 160-185 | |
| March | | 3 | 120.5 | 1 | - | - | 32.0 | 1 | - | - | |
| | | 5 | 127.0 | 1 | - | - | 40.0 | 1 | - | - | |
| | | 6 | 145.0 | 1 | - | - | 75.0 | 1 | - | - | |
| 1967 | | February | 5 | - | 1 | - | 64.0 | 1 | - | - | |
| 1968 | | March | 3 | 115.0 | 1 | - | - | 33.0 | 1 | - | - |
| | 4 | | 145.0 | 1 | - | - | 50.0 | 1 | - | - | |
| | 6 | | 170.0 | 1 | - | - | 95.0 | 1 | - | - | |
| | 8 | | 166.5 | 2 | - | 157-176 | 100.0 | 2 | - | 95-105 | |
| | 9 | | 179.3 | 3 | - | 175-187 | 151.7 | 3 | - | 125-175 | |

Sea of Japan
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1973 | April | 1 | 83.0 | 1 | - | - | 13.5 | 1 | - | - |
| 1976 | March | 2 | 112.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 3 | 112.0 | 2 | - | 109-115 | 21.0 | 2 | - | 20-22 |
| | | 4 | 131.0 | 3 | - | 126-137 | 44.0 | 3 | - | 38-50 |
| | | 5 | 140.7 | 3 | - | 136-148 | 59.3 | 3 | - | 50-70 |
| | | 6 | 148.5 | 2 | - | 147-150 | 62.0 | 2 | - | 58-66 |
| | | 8 | 167.0 | 1 | - | - | 102.0 | 1 | - | - |

Sea of Okhotsk

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|---|---|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1958 | Sept. | 0 | 73.5 | 2 | - | 73-74 | - | - | - | - |
| | | 2 | 104.7 | 6 | - | 99-113 | - | - | - | - |
| | | 3 | 109.6 | 21 | 6.0 | 96-118 | - | - | - | - |
| | | 4 | 122.7 | 6 | - | 107-129 | - | - | - | - |
| | | 5 | 143.3 | 3 | - | 138-147 | - | - | - | - |
| | | 6 | 152.5 | 2 | - | 145-160 | - | - | - | - |
| | | 7 | 163.5 | 2 | - | 156-171 | - | - | - | - |
| | | 9 | 185.0 | 1 | - | - | - | - | - | - |
| | October | 0 | 81.0 | 2 | - | 73-89 | - | - | - | - |
| | | 2 | 104.5 | 2 | - | 103-106 | - | - | - | - |
| | | 3 | 113.7 | 12 | 9.0 | 103-131 | - | - | - | - |
| | | 4 | 124.9 | 8 | - | 117-132 | - | - | - | - |
| | | 5 | 144.5 | 2 | - | 134-155 | - | - | - | - |
| | | 7 | 154.0 | 1 | - | - | - | - | - | - |
| | | 8 | 171.0 | 1 | - | - | - | - | - | - |
| | | 10+ | 124.0 | 2 | - | 122-126 | - | - | - | - |
| 1964 | June | 3 | 115.0 | 1 | - | - | 25.5 | 1 | - | - |
| | | 4 | 127.0 | 2 | - | 127-127 | 45.0 | 2 | - | 45-45 |
| | | 6 | 154.0 | 1 | - | - | 69.0 | 1 | - | - |
| | | 7 | 179.0 | 1 | - | - | 105.0 | 1 | - | - |
| | | 10 | 203.0 | 2 | - | 203-203 | 230.0 | 2 | - | 230-230 |
| | July | 2 | 100.0 | 4 | - | 94-106 | 21.5 | 4 | - | 17-26 |
| | | 3 | 111.5 | 1 | - | - | 25.5 | 1 | - | - |
| | | 5 | 121.5 | 2 | - | 121-121 | 43.0 | 2 | - | 43-43 |
| | | 6 | 157.5 | 5 | - | 152-161 | 95.7 | 6 | - | 86-105 |
| | | 9 | 179.0 | 2 | - | 179-179 | 115.0 | 2 | - | 115-115 |
| 1975 | July | 2 | 99.5 | 2 | - | 97-112 | 27.5 | 2 | - | 25-30 |
| | | 3 | 116.7 | 3 | - | 103-124 | 34.7 | 3 | - | 27-40 |
| | | 4 | 126.2 | 5 | - | 119-131 | 45.6 | 5 | - | 31-55 |
| | | 5 | 149.0 | 1 | - | - | 72.0 | 1 | - | - |
| | | 3 | 114.7 | 3 | - | 105-126 | 32.3 | 3 | - | 28-36 |
| | October | 4 | 146.0 | 1 | - | - | 56.0 | 1 | - | - |
| | | 5 | 139.0 | 1 | - | - | 64.0 | 1 | - | - |
| 1977 | August | 3 | 117.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 4 | 125.0 | 1 | - | - | 48.0 | 1 | - | - |

Western Pacific Ocean

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | May | 1 | 85.5 | 2 | - | 82-91 | 12.5 | 2 | - | 12-13 |
| | | 2 | 102.0 | 2 | - | 100-104 | 19.0 | 2 | - | 18-20 |
| | | 3 | 120.6 | 5 | - | 105-114 | 25.2 | 5 | - | 23-27 |
| | | 4 | 144.0 | 1 | - | - | 52.0 | 1 | - | - |
| | June | 1 | 91.1 | 20 | 5.0 | 80-98 | 13.0 | 14 | 3.1 | 10-20 |
| | | 2 | 101.2 | 35 | 5.8 | 90-114 | 19.2 | 24 | 2.7 | 14-24 |
| | | 3 | 106.0 | 35 | 6.4 | 95-122 | 24.6 | 25 | 4.4 | 15-32 |
| | | 4 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| 1959 | March | 2 | 102.3 | 3 | - | 92-113 | - | - | - | - |
| | April | 1 | 87.0 | 24 | 5.8 | 77-99 | - | - | - | - |
| | | 2 | 95.8 | 24 | 8.4 | 88-120 | - | - | - | - |
| | | 3 | 110.5 | 30 | 5.4 | 98-120 | - | - | - | - |
| | | 4 | 121.4 | 28 | 6.1 | 109-133 | - | - | - | - |
| | | 5 | 130.8 | 3 | - | 122-139 | - | - | - | - |
| | | 6 | 162.0 | 1 | - | - | - | - | - | - |
| | | 8 | 176.0 | 1 | - | - | - | - | - | - |
| | May | 1 | 88.9 | 36 | 6.1 | 82-108 | - | - | - | - |
| | | 2 | 98.9 | 81 | 4.2 | 90-110 | - | - | - | - |
| | | 3 | 112.2 | 63 | 6.5 | 96-127 | - | - | - | - |
| | | 4 | 130.1 | 42 | 8.8 | 106-144 | - | - | - | - |
| | | 5 | 138.3 | 5 | - | 127-149 | - | - | - | - |
| | | 8 | 124.1 | 1 | - | - | - | - | - | - |
| | June | 1 | 91.3 | 7 | - | 89-94 | - | - | - | - |
| | | 2 | 102.9 | 10 | 5.3 | 92-108 | - | - | - | - |
| | | 3 | 112.4 | 2 | - | 107-118 | - | - | - | - |
| 1960 | April | 1 | 87.4 | 5 | - | 78-101 | 14.0 | 3 | - | 11-17 |
| | | 2 | 99.8 | 22 | 4.3 | 90-106 | 20.2 | 20 | 3.8 | 14-28 |
| | | 3 | 111.7 | 16 | 8.8 | 103-133 | 25.1 | 16 | 3.8 | 20-33 |
| | | 4 | 126.6 | 5 | - | 119-136 | 33.3 | 4 | - | 27-37 |
| | | 5 | 139.1 | 9 | - | 130-151 | 48.8 | 8 | - | 36-63 |
| | | 6 | 161.3 | 3 | - | 157-169 | 76.0 | 3 | - | 68-85 |
| | | 7 | 153.0 | 1 | - | - | 70.0 | 1 | - | - |
| | May | 1 | 94.8 | 4 | - | 84-103 | 15.5 | 4 | - | 8-26 |
| | | 2 | 101.5 | 33 | 3.6 | 93-108 | 18.4 | 32 | 3.6 | 10-25 |
| | | 3 | 113.3 | 22 | 8.5 | 106-122 | 27.3 | 22 | 6.1 | 16-39 |
| | | 4 | 122.3 | 6 | - | 120-126 | 33.3 | 6 | - | 24-37 |
| | | 5 | 133.0 | 3 | - | 129-135 | 45.7 | 3 | - | 40-53 |
| | | 6 | 153.0 | 1 | - | - | 67.0 | 1 | - | - |
| | | 2 | 100.5 | 5 | - | 96-108 | 18.8 | 5 | - | 12-24 |
| | June | 3 | 115.0 | 3 | - | 110-121 | 29.3 | 3 | - | 26-39 |
| | | 4 | 132.0 | 1 | - | - | 40.0 | 1 | - | - |
| 1961 | May | 1 | 94.0 | 1 | - | - | 11.0 | 1 | - | - |
| | | 2 | 100.4 | 15 | 7.2 | 86-110 | 18.6 | 15 | 3.6 | 16-28 |
| | | 3 | 111.1 | 43 | 5.7 | 100-125 | 27.3 | 43 | 3.9 | 21-38 |
| | | 4 | 124.2 | 15 | 6.3 | 114-135 | 38.4 | 15 | 7.5 | 31-56 |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1961 | May | 5 | 139.6 | 3 | - | 137-144 | 51.0 | 3 | - | 49-54 |
| | | 7 | 158.0 | 1 | - | - | 82.0 | 1 | - | - |
| | | 8 | 167.0 | 1 | - | - | 98.0 | 1 | - | - |
| | | 10+ | 203.0 | 1 | - | - | 300.0 | 1 | - | - |
| | June | 1 | 86.0 | 2 | - | 82-90 | 17.5 | 2 | - | 15-20 |
| | | 2 | 99.0 | 34 | 5.7 | 86-110 | 20.4 | 34 | 3.3 | 16-30 |
| | | 3 | 110.5 | 57 | 6.3 | 95-124 | 29.4 | 57 | 5.7 | 20-46 |
| | | 4 | 123.0 | 6 | - | 120-128 | 37.7 | 6 | - | 26-48 |
| | | 5 | 148.0 | 1 | - | - | 71.0 | 1 | - | - |
| | | 6 | 154.0 | 1 | - | - | 84.0 | 1 | - | - |
| 1963 | March | 1 | 84.5 | 2 | - | 79-89 | 16.0 | 2 | - | 14-18 |
| | | 2 | 100.0 | 19 | 7.7 | 90-117 | 17.7 | 19 | 4.5 | 8-24 |
| | | 3 | 112.1 | 4 | - | 101-123 | 26.5 | 4 | - | 20-32 |
| | | 4 | 115.6 | 4 | - | 103-122 | 33.5 | 4 | - | 27-39 |
| | | 5 | 134.2 | 3 | - | 121-158 | 52.7 | 3 | - | 38-70 |
| | | 6 | 156.5 | 1 | - | - | 66.0 | 1 | - | - |
| | | 8 | 160.5 | 1 | - | - | 79.0 | 1 | - | - |
| | April | 1 | 84.3 | 5 | - | 76-89 | 11.8 | 5 | - | 8-16 |
| | | 3 | 109.8 | 17 | 5.8 | 99-120 | 20.9 | 17 | 6.0 | 14-35 |
| | | 4 | 121.5 | 11 | 5.6 | 110-127 | 30.7 | 11 | 8.3 | 15-40 |
| | | 5 | 137.2 | 7 | - | 124-156 | 47.6 | 7 | - | 34-65 |
| | | 6 | 159.3 | 5 | - | 141-160 | 73.0 | 5 | - | 65-89 |
| | | 7 | 169.0 | 6 | - | 146-184 | 94.8 | 6 | - | 54-130 |
| | | 8 | 182.3 | 2 | - | 181-183 | 165.0 | 2 | - | 150-180 |
| | | 9 | 187.0 | 1 | - | - | 155.0 | 1 | - | - |
| | May | 1 | 87.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 100.1 | 6 | - | 92-105 | 15.5 | 6 | - | 13-20 |
| | | 3 | 107.3 | 11 | 5.3 | 101-117 | 23.5 | 11 | 5.0 | 18-33 |
| | | 4 | 120.6 | 7 | - | 114-129 | 24.0 | 7 | - | 24-37 |
| | | 5 | 135.2 | 7 | - | 126-146 | 45.1 | 7 | - | 33-60 |
| | | 7 | 166.0 | 1 | - | - | 110.1 | 1 | - | - |
| | | 8 | 166.0 | 1 | - | - | 85.0 | 1 | - | - |
| 1964 | March | 1 | 82.1 | 4 | - | 77-87 | 13.0 | 4 | - | 10-16 |
| | | 2 | 95.6 | 4 | - | 91-102 | 19.0 | 4 | - | 17-21 |
| | | 3 | 111.7 | 6 | - | 103-117 | 26.8 | 6 | - | 24-31 |
| | | 4 | 118.5 | 3 | - | 115-120 | 36.6 | 3 | - | 31-40 |
| | | 5 | 134.0 | 1 | - | - | 44.0 | 1 | - | - |
| | April | 1 | 82.2 | 8 | - | 75-86 | 12.3 | 8 | - | 10-15 |
| | | 2 | 96.0 | 7 | - | 90-102 | 18.5 | 7 | - | 16-21 |
| | | 3 | 113.6 | 7 | - | 103-120 | 28.1 | 7 | - | 19-35 |
| | | 4 | 119.2 | 3 | - | 114-125 | 34.0 | 3 | - | 25-42 |
| | | 5 | 140.7 | 3 | - | 134-153 | 55.3 | 3 | - | 47-71 |
| | | 6 | 147.0 | 1 | - | - | 63.0 | 1 | - | - |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1964 | May | 1 | 80.0 | 5 | - | 79-82 | 11.6 | 5 | - | 9-13 |
| | | 2 | 98.5 | 9 | - | 91-107 | 19.1 | 9 | - | 15-24 |
| | | 3 | 113.5 | 9 | - | 103-121 | 28.6 | 9 | - | 21-41 |
| | | 4 | 117.0 | 3 | - | 108-127 | 32.3 | 3 | - | 28-39 |
| | | 5 | 144.9 | 4 | - | 131-152 | 54.6 | 4 | - | 47-60 |
| | | 6 | 146.8 | 3 | - | 133-159 | 60.0 | 3 | - | 47-74 |
| | | 8 | 179.0 | 1 | - | - | 135.0 | 1 | - | - |
| | | 11 | 212.0 | 1 | - | - | 235.0 | 1 | - | - |
| 1966 | December | 1 | 95.0 | 1 | - | - | 19.0 | 1 | - | - |
| | | 2 | 107.7 | 7 | - | 100-117 | 30.6 | 7 | - | 22-39 |
| | | 3 | 117.9 | 4 | - | 115-127 | 65.5 | 4 | - | 31-35 |
| | | 4 | 127.8 | 8 | - | 117-139 | 44.5 | 8 | - | 34-55 |
| | | 5 | 135.8 | 5 | - | 122-155 | 53.0 | 5 | - | 45-62 |
| | | 6 | 151.0 | 1 | - | - | 90.0 | 1 | - | - |
| | | 8 | 181.0 | 2 | - | 176-186 | 110.0 | 2 | - | 100-120 |
| | | 9 | 172.0 | 1 | - | - | 150.0 | 1 | - | - |
| | | 2 | 115.3 | 3 | - | 113-118 | 28.3 | 3 | - | 25-30 |
| 1967 | January | 3 | 128.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 4 | 131.0 | 2 | - | 121-141 | 47.0 | 2 | - | 33-61 |
| | | 5 | 130.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 8 | 178.0 | 1 | - | - | 125.0 | 1 | - | - |
| | | 9 | 185.0 | 1 | - | - | 175.0 | 1 | - | - |
| | | 10 | 190.0 | 1 | - | - | 174.0 | 1 | - | - |
| | | 1 | 70.0 | 1 | - | - | 11.0 | 1 | - | - |
| | | 3 | 118.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 10+ | 134.0 | 1 | - | - | 54.0 | 1 | - | - |
| 1970 | January | 3 | 108.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10 | 127.0 | 1 | - | - | 50.0 | 1 | - | - |
| | February | 2 | 95.0 | 1 | - | - | 18.0 | 1 | - | - |
| 1971 | March | 2 | 94.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 109.0 | 2 | - | 109-109 | 24.5 | 2 | - | 23-25 |
| | | 4 | 118.3 | 2 | - | 118-118 | 35.0 | 2 | - | 35-35 |
| | | 5 | 130.0 | 1 | - | - | 48.5 | 1 | - | - |
| | | 1 | 93.5 | 8 | - | 80-105 | 17.5 | 8 | - | 10-22 |
| | May | 2 | 96.4 | 5 | - | 89-105 | 20.8 | 5 | - | 18-24 |
| | | 3 | 110.2 | 5 | - | 103-118 | 32.8 | 5 | - | 24-44 |
| | | 4 | 119.5 | 2 | - | 117-122 | 40.0 | 2 | - | 36-44 |
| 1972 | January | 4 | 108.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 130.0 | 1 | - | - | 47.0 | 1 | - | - |
| | April | 2 | 101.4 | 6 | - | 97-107 | 19.7 | 7 | - | 18-21 |
| | | 3 | 114.2 | 11 | 7.0 | 102-123 | 26.6 | 11 | 3.0 | 24-33 |
| | | 4 | 124.9 | 4 | - | 117-131 | 38.1 | 4 | - | 35-43 |
| | | 5 | 133.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 6 | 139.0 | 1 | - | - | 74.0 | 1 | - | - |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|-------|----------|----------|-------------|-------|---------|---------|-------------|------|-------|-------|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range | |
| 1972 | May | 2 | 102.8 | 6 | - | 98-107 | 19.5 | 6 | - | 18-20 | |
| | | 3 | 113.8 | 10 | 8.9 | 101-127 | 28.2 | 10 | 3.1 | 23-32 | |
| | | 4 | 124.9 | 4 | - | 121-136 | 38.1 | 4 | - | 36-40 | |
| | | 5 | 134.0 | 1 | - | - | 40.0 | 1 | - | - | |
| | June | 2 | 108.2 | 4 | - | 105-111 | 22.5 | 4 | - | 19-25 | |
| | | 3 | 115.4 | 8 | - | 105-124 | 29.2 | 8 | - | 25-35 | |
| 1973 | 4 | 117.5 | 2 | - | 113-122 | 32.5 | 2 | - | 30-35 | | |
| | February | 3 | 110.0 | 1 | - | - | 26.0 | 1 | - | - | |
| | | May | 1 | 89.5 | 2 | - | 86-93 | 15.0 | 2 | - | 13-17 |
| | 2 | | 102.0 | 3 | - | 98-108 | 20.3 | 3 | - | 18-22 | |
| | 3 | | 117.8 | 7 | - | 112-126 | 28.9 | 7 | - | 24-35 | |
| | 4 | | 125.5 | 4 | - | 114-133 | 39.0 | 4 | - | 30-50 | |
| 1974 | June | 5 | 143.0 | 1 | - | - | 57.0 | 1 | - | - | |
| | | 1 | 100.0 | 1 | - | - | 19.0 | 1 | - | - | |
| | | 2 | 87.3 | 4 | - | 51-104 | 19.0 | 4 | - | 15-24 | |
| | 3 | 111.0 | 6 | - | 106-117 | 28.7 | 6 | - | 24-35 | | |
| | 1975 | February | 2 | 99.0 | 4 | - | 98-101 | 20.8 | 4 | - | 20-23 |
| | | | 3 | 111.7 | 7 | - | 105-117 | 29.1 | 7 | - | 23-40 |
| 4 | | | 121.5 | 2 | - | 114-129 | 37.0 | 2 | - | 27-47 | |
| 5 | | | 137.0 | 2 | - | 126-148 | 52.0 | 2 | - | 35-69 | |
| March | | 2 | 98.1 | 6 | - | 93-103 | 23.8 | 6 | - | 17-22 | |
| | | 3 | 111.2 | 4 | - | 104-117 | 26.0 | 4 | - | 23-30 | |
| 1976 | June | 4 | 131.0 | 2 | - | 130-132 | 32.5 | 2 | - | 24-41 | |
| | | 1 | 88.0 | 2 | - | 84-92 | 17.0 | 2 | - | 16-18 | |
| | | 2 | 101.7 | 12 | 7.0 | 90-112 | 22.8 | 12 | 2.3 | 19-26 | |
| | | 3 | 114.3 | 7 | - | 108-122 | 33.1 | 7 | - | 26-40 | |
| | July | 4 | 119.0 | 1 | - | - | 35.0 | 1 | - | - | |
| | | 1 | 85.5 | 2 | - | 82-89 | 18.0 | 2 | - | 18-18 | |
| 1976 | January | 2 | 94.0 | 1 | - | - | 22.0 | 1 | - | - | |
| | | 4 | 121.0 | 1 | - | - | 31.0 | 1 | - | - | |
| | February | 4 | 128.0 | 1 | - | - | 42.0 | 1 | - | - | |
| | | 5 | 140.0 | 1 | - | - | 50.0 | 1 | - | - | |
| | March | 2 | 105.0 | 1 | - | - | 22.0 | 1 | - | - | |
| | | 3 | 112.0 | 6 | - | 108-117 | 25.6 | 6 | - | 22-30 | |
| | | 4 | 128.0 | 3 | - | 124-135 | 39.0 | 3 | - | 35-47 | |
| | | 5 | 138.0 | 2 | - | 128-138 | 48.0 | 2 | - | 46-50 | |
| | | 2 | 106.0 | 2 | - | 103-109 | 24.5 | 2 | - | 21-28 | |
| | | 3 | 114.5 | 2 | - | 112-117 | 30.5 | 2 | - | 30-31 | |
| | April | 4 | 135.5 | 5 | - | 121-146 | 44.1 | 5 | - | 34-50 | |
| | | 5 | 146.9 | 4 | - | 135-165 | 59.0 | 4 | - | 45-77 | |
| 6 | | 144.5 | 1 | - | - | 63.0 | 1 | - | - | | |
| 2 | | 102.4 | 6 | - | 93-115 | 21.2 | 6 | - | 17-29 | | |
| 1977 | 3 | 113.1 | 9 | - | 94-128 | 26.2 | 9 | - | 19-30 | | |
| | 4 | 125.1 | 8 | - | 108-145 | 38.8 | 8 | - | 26-47 | | |

Western Pacific Ocean
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1976 | April | 5 | 139.0 | 5 | - | 124-151 | 50.0 | 5 | - | 34-60 |
| | | 6 | 170.5 | 2 | - | 163-178 | 90.0 | 2 | - | 88-92 |
| | | 12 | 187.0 | 1 | - | - | 152.0 | 1 | - | - |
| | May | 2 | 104.9 | 6 | - | 110-113 | 21.8 | 6 | - | 19-27 |
| | | 3 | 116.9 | 13 | 7.2 | 107-136 | 29.6 | 13 | - | 24-37 |
| | | 4 | 127.3 | 9 | - | 138-162 | 40.2 | 9 | - | 26-43 |
| | | 5 | 149.0 | 4 | - | 145-150 | 64.5 | 4 | - | 53-82 |
| | | 6 | 147.5 | 2 | - | - | 67.0 | 2 | - | 62-72 |
| | | 8 | 124.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 2 | 100.5 | 2 | - | 96-105 | 21.0 | 2 | - | 18-24 |
| | December | 3 | 112.5 | 2 | - | 108-117 | 26.0 | 2 | - | 24-28 |
| | | 4 | 127.0 | 3 | - | 122-130 | 36.7 | 3 | - | 34-40 |
| 1977 | January | 3 | 97.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 4 | 131.6 | 3 | - | 119-153 | 39.3 | 3 | - | 35-47 |
| | | 7 | 164.0 | 1 | - | - | 85.0 | 1 | - | - |
| | February | 2 | 100.0 | 9 | - | 88-107 | 19.4 | 9 | - | 19-26 |
| | | 3 | 107.9 | 11 | 6.3 | 97-116 | 25.8 | 11 | 4.0 | 22-34 |
| | | 4 | 120.0 | 6 | - | 99-136 | 35.0 | 6 | - | 22-50 |
| | | 5 | 133.5 | 2 | - | 129-138 | 42.5 | 2 | - | 41-44 |
| | | 6 | 133.0 | 1 | - | - | 46.0 | 1 | - | - |
| | January | 1 | 81.3 | 3 | - | 79-85 | 19.3 | 3 | - | 18-20 |
| | | 2 | 108.3 | 3 | - | 95-118 | 33.7 | 3 | - | 22-41 |
| | | 3 | 118.5 | 4 | - | 115-122 | 40.3 | 4 | - | 30-50 |
| | | 4 | 128.5 | 2 | - | 126-131 | 52.5 | 2 | - | 50-55 |
| | | 5 | 142.0 | 1 | - | - | 50.0 | 1 | - | - |
| 1978 | February | 4 | 129.0 | 1 | - | - | 42.0 | 1 | - | - |
| | March | 2 | 106.0 | 3 | - | 105-107 | 20.7 | 3 | - | 20-22 |
| | | 3 | 112.6 | 5 | - | 100-120 | 25.8 | 5 | - | 17-30 |
| | | 4 | 131.0 | 7 | - | 125-146 | 37.9 | 7 | - | 33-46 |
| | April | 4 | 112.0 | 1 | - | - | 26.0 | 1 | - | - |

Western Bering Sea

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|------|---------|-------------|----|------|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1961 | July | 3 | 124.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 4 | 132.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 5 | 146.0 | 1 | - | - | 52.0 | 1 | - | - |
| 1962 | June | 1 | 103.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 2 | 101.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 3 | 111.5 | 2 | - | 114-109 | 28.5 | 2 | - | 25-32 |
| | | 4 | 117.5 | 2 | - | 127-108 | 38.0 | 2 | - | 28-48 |
| | | 5 | 128.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 6 | 154.0 | 2 | - | 153-155 | 78.0 | 2 | - | 76-80 |
| 1965 | June | 2 | 101.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 3 | 110.8 | 10 | 6.2 | 104-122 | 30.3 | 10 | 5.7 | 22-44 |
| | | 4 | 126.0 | 4 | - | 125-127 | 42.8 | 4 | - | 40-46 |
| | | 5 | 140.7 | 3 | - | 140-141 | 59.3 | 3 | - | 58-60 |
| | | 6 | 151.1 | 8 | - | 137-160 | 80.9 | 8 | - | 70-92 |
| | | 7 | 170.5 | 1 | - | - | 128.0 | 1 | - | - |
| | | 9 | 185.5 | 1 | - | - | 175.0 | 1 | - | - |
| | | 10+ | 207.5 | 1 | - | - | 254.7 | 1 | - | - |
| | July | 1 | 93.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 111.3 | 3 | - | 108-114 | 30.0 | 3 | - | 27-32 |
| | | 4 | 112.5 | 1 | - | - | 35.0 | 1 | - | - |
| | | 5 | 136.8 | 4 | - | 130-146 | 55.3 | 4 | - | 44-75 |
| | | 6 | 149.0 | 3 | - | 144-153 | 76.3 | 3 | - | 67-84 |
| | | 7 | 169.0 | 2 | - | 169-169 | 94.5 | 2 | - | 84-105 |
| | | 8 | 182.0 | 1 | - | - | 160.0 | 1 | - | - |
| | | 10+ | 192.8 | 2 | - | 183-202 | 206.8 | 2 | - | 165-248 |
| | May | 2 | 103.4 | 11 | 4.1 | 99-111 | 23.0 | 11 | 4.0 | 17-29 |
| | | 3 | 116.7 | 8 | - | 108-126 | 32.3 | 8 | - | 26-40 |
| | | 4 | 128.6 | 15 | 24.8 | 113-196 | 40.9 | 15 | 6.3 | 32-53 |
| | | 5 | 135.6 | 14 | 9.3 | 120-150 | 57.6 | 14 | 13.7 | 45-90 |
| | | 6 | 149.5 | 11 | 10.8 | 133-166 | 78.1 | 11 | 12.6 | 57-95 |
| | | 7 | 147.3 | 15 | 9.2 | 148-172 | 93.3 | 15 | 16.4 | 70-125 |
| | | 8 | 169.4 | 9 | - | 154-190 | 119.3 | 9 | - | 84-145 |
| | | 9 | 180.1 | 13 | 8.6 | 169-196 | 159.5 | 13 | 18.7 | 130-190 |
| | | 10 | 177.7 | 3 | - | 166-195 | 158.3 | 3 | - | 145-180 |
| | | 10+ | 191.6 | 7 | - | 180-211 | 203.6 | 7 | - | 180-260 |
| | | 11 | 180.0 | 1 | - | - | 175.0 | 1 | - | - |
| | June | 2 | 106.0 | 4 | - | 94-120 | 24.8 | 4 | - | 21-30 |
| | | 3 | 58.3 | 2 | - | 105-116 | 22.5 | 2 | - | 21-24 |
| | | 4 | 151.0 | 1 | - | - | 95.0 | 1 | - | - |
| | | 7 | 160.0 | 2 | - | 148-167 | 97.5 | 2 | - | 85-110 |
| | | 8 | 170.3 | 3 | - | 162-176 | 115.7 | 3 | - | 102-125 |
| | | 10 | 191.5 | 1 | - | - | 230.0 | 1 | - | - |
| | July | 3 | 122.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 8 | 183.0 | 1 | - | - | 160.0 | 1 | - | - |

Western Bering Sea
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|-----|---------|-------------|----|------|---------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1967 | May | 1 | 97.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 2 | 115.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 4 | 120.0 | 4 | - | 108-131 | 40.3 | 4 | - | 35-40 |
| | | 5 | 128.7 | 3 | - | 126-132 | 52.7 | 3 | - | 50-56 |
| | | 6 | 158.9 | 7 | - | 144-172 | 96.7 | 7 | - | 62-115 |
| | | 7 | 169.0 | 7 | - | 139-193 | 123.6 | 7 | - | 65-160 |
| | | 8 | 179.1 | 12 | 9.0 | 164-192 | 144.1 | 12 | 20.8 | 105-170 |
| | | 9 | 189.3 | 9 | - | 175-205 | 176.1 | 9 | - | 110-225 |
| | | 10 | 195.5 | 1 | - | - | 200.0 | 1 | - | - |
| | | 10+ | 208.5 | 2 | - | 204-213 | 225.0 | 2 | - | 200-250 |
| | June | 3 | 114.0 | 2 | - | 111-117 | 34.0 | 2 | - | 26-42 |
| | | 5 | 146.5 | 1 | - | - | 75.0 | 1 | - | - |
| | | 6 | 142.5 | 1 | - | - | 75.0 | 1 | - | - |
| | | 8 | 182.8 | 6 | - | 174-195 | 160.8 | 6 | - | 140-190 |
| | | 9 | 195.0 | 3 | - | 190-203 | 198.3 | 3 | - | 155-230 |
| 1968 | June | 10 | 175.0 | 1 | - | - | 150.0 | 1 | - | - |
| | | 2 | 111.7 | 3 | - | 110-122 | 28.3 | 3 | - | 25-31 |
| | | 3 | 117.9 | 6 | - | 109-127 | 37.3 | 6 | - | 30-44 |
| | | 4 | 131.6 | 4 | - | 121-138 | 49.8 | 4 | - | 44-54 |
| | | 5 | 141.3 | 6 | - | 131-158 | 61.8 | 6 | - | 52-72 |
| | | 6 | 150.6 | 8 | - | 141-157 | 79.8 | 8 | - | 54-105 |
| | | 7 | 166.1 | 5 | - | 162-170 | 107.4 | 5 | - | 100-116 |
| | | 8 | 179.1 | 4 | - | 172-187 | 161.8 | 4 | - | 125-220 |
| | | 9 | 186.5 | 4 | - | 176-192 | 182.5 | 4 | - | 150-205 |
| | | 10 | 195.7 | 5 | - | 187-205 | 229.0 | 5 | - | 200-250 |
| | July | 10+ | 204.8 | 4 | - | 193-221 | 246.8 | 4 | - | 142-320 |
| | | 1 | 102.3 | 2 | - | 102-102 | 22.0 | 2 | - | 22-22 |
| | | 3 | 130.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 4 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 5 | 126.0 | 1 | - | - | 46.0 | 1 | - | - |
| | August | 9 | 191.0 | 1 | - | - | 180.0 | 1 | - | - |
| | | 2 | 96.7 | 3 | - | 93-99 | 12.7 | 3 | - | 18-26 |
| | | 4 | 133.5 | 1 | - | - | 50.0 | 1 | - | - |
| | | 5 | 143.5 | 1 | - | - | 52.0 | 1 | - | - |
| | | 6 | 149.8 | 2 | - | 143-156 | 64.0 | 2 | - | 62-66 |
| 1970 | May | 3 | 115.3 | 4 | - | 108-122 | 34.3 | 4 | - | 32-37 |
| | | 4 | 134.6 | 8 | - | 133-135 | 36.4 | 8 | - | 24-45 |
| | | 5 | 143.8 | 4 | - | 138-148 | 59.0 | 4 | - | 50-64 |
| | | 6 | 149.0 | 6 | - | 135-157 | 82.3 | 6 | - | 64-105 |
| | | 7 | 167.0 | 1 | - | - | 110.0 | 1 | - | - |
| | | 8 | 169.8 | 4 | - | 165-175 | 134.3 | 4 | - | 115-151 |
| | | 9 | 190.0 | 7 | - | 174-200 | 183.0 | 7 | - | 160-200 |
| | | 10 | 201.0 | 3 | - | 191-208 | 186.7 | 3 | - | 160-200 |
| | | 10+ | 203.6 | 12 | 6.4 | 193-213 | 226.4 | 12 | 25.9 | 184-265 |
| | June | 3 | 108.0 | 1 | - | - | 30.0 | 1 | - | - |

Western Bering Sea
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{X} | n | s | Range | \bar{X} | n | s | Range |
| 1974 | August | 1 | 90.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 2 | 104.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 110.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 4 | 126.5 | 2 | - | 126-127 | 40.0 | 2 | - | 35-45 |
| | October | 2 | 98.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 3 | 113.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 4 | 122.0 | 1 | - | - | 32.0 | 1 | - | - |
| 1978 | October | 1 | 108.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 2 | 111.8 | 8 | - | 103-122 | 22.9 | 8 | - | 20-27 |
| | | 3 | 124.9 | 9 | - | 114-132 | 33.5 | 9 | - | 26-44 |
| | | 4 | 136.0 | 5 | - | 130-142 | 45.0 | 5 | - | 36-51 |
| | | 5 | 167.0 | 1 | - | - | 71.0 | 1 | - | - |
| | | 6 | 167.0 | 1 | - | - | 78.0 | 1 | - | - |
| | | 7 | 169.0 | 1 | - | - | 96.0 | 1 | - | - |
| | November | 13 | 202.0 | 1 | - | - | 115.0 | 1 | - | - |
| | | 0 | 85.2 | 5 | - | 80-93 | 14.6 | 5 | - | 11-20 |
| | | 1 | 98.5 | 2 | - | 98-99 | 18.0 | 2 | - | 17-18 |
| | | 2 | 115.8 | 8 | - | 112-122 | 26.2 | 8 | - | 23-31 |
| | | 3 | 128.4 | 8 | - | 121-138 | 36.9 | 8 | - | 31-45 |
| | | 4 | 139.5 | 2 | - | 138-141 | 49.5 | 2 | - | 45-54 |

Table 17
Monthly stomach contents of fur seals taken in the Sea of Japan.

| <u>Food Items</u> | <u>1959</u> | | | <u>1960</u> | | | <u>1960</u> | | |
|------------------------------|---------------|------------------|-----|---------------|------------------|-----|---------------|------------------|-----|
| | <u>March</u> | | | <u>March</u> | | | <u>April</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Theragra chalcogramma</u> | 5700 | 100.0 | 12 | 5550 | 85.5 | 8 | 50290 | 89.5 | 52 |
| Squid | | | | | | | | | |
| <u>Berryteuthis magister</u> | trace | - | 1 | 940 | 14.5 | 2 | 5920 | 10.5 | 13 |
| Total | 5700 | 100.0 | | 6490 | 100.0 | | 56210 | 100.0 | |
| Stomachs with food | | 3 | | | 7 | | | 44 | |
| Stomachs with trace | | 9 | | | 1 | | | 12 | |
| Stomachs without food | | 11 | | | 3 | | | 15 | |

| <u>Food Items</u> | <u>March</u> | | | <u>1961</u> | | | <u>1961</u> | | |
|------------------------------|---------------|------------------|-----|---------------|------------------|-----|---------------|------------------|-----|
| | <u>March</u> | | | <u>April</u> | | | <u>May</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Theragra chalcogramma</u> | 20850 | 100.0 | 43 | 55230 | 99.5 | 72 | 4255 | 96.0 | 10 |
| <u>Pleurogrammus azonus</u> | | | | | | | 90 | 2.0 | 1 |
| Unidentified fish | | | | | | | 90 | 2.0 | 1 |
| Squid | | | | | | | | | |
| <u>Berryteuthis magister</u> | trace | - | 4 | 290 | 0.5 | 12 | trace | - | 1 |
| Total | 20850 | 100.0 | | 55520 | 100.0 | | 4435 | 100.0 | |
| Stomachs with food | | 29 | | | 58 | | | 6 | |
| Stomachs with trace | | 14 | | | 13 | | | 6 | |
| Stomachs without food | | 17 | | | 20 | | | 2 | |

| Food Items | 1962 | | | | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | March | | | April | | | May | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Theragra chalcogramma</u> | 44500 | 100.0 | 45 | 320050 | 99.9 | 270 | 49030 | 97.0 | 48 |
| <u>Pleurogrammus azonus</u> | | | | 160 | - | 1 | 1240 | 2.5 | 2 |
| Squid | | | | | | | | | |
| <u>Berryteuthis magister</u> | 40 | - | 8 | 175 | - | 43 | 250 | 0.5 | 7 |
| Total | 44540 | 100.0 | | 320385 | 100.0 | | 50520 | 100.0 | |
| Stomachs with food | | 36 | | | 223 | | | 40 | |
| Stomachs with trace | | 10 | | | 51 | | | 8 | |
| Stomachs without food | | 33 | | | 119 | | | 22 | |

| Food Items | 1963 | | | | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | March | | | April | | | May | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | | | | | | | 150 | 0.2 | 1 |
| <u>Theragra chalcogramma</u> | 30850 | 100.0 | 19 | 28950 | 37.1 | 47 | 80300 | 99.8 | 55 |
| Squid | | | | | | | | | |
| <u>Berryteuthis magister</u> | trace | - | 3 | 49020 | 62.9 | 63 | 50 | - | 4 |
| Total | 30850 | 100.0 | | 77970 | 100.0 | | 80450 | 100.0 | |
| Stomachs with food | | 10 | | | 49 | | | 37 | |
| Stomachs with trace | | 9 | | | 43 | | | 19 | |
| Stomachs without food | | 10 | | | 58 | | | 40 | |

| Food Items | 1964 | | | | | |
|------------------------------|----------|-----------|-----|--------|-----------|-----|
| | February | | | March | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| <u>Theragra chalcogramma</u> | 18230 | 76.8 | 8 | 20960 | 26.9 | 34 |
| Unidentified fish | | | | 5000 | 6.4 | 1 |
| Squid | | | | | | |
| <u>Watasenia scintillans</u> | trace | - | 1 | 1030 | 1.3 | 3 |
| <u>Berryteuthis magister</u> | 5500 | 23.2 | 4 | 50870 | 65.4 | 54 |
| <u>Gonatus fabricii</u> | trace | - | 1 | 50 | - | 1 |
| Total | 23730 | 100.0 | | 77910 | 100.0 | |
| Stomachs with food | | 8 | | | 57 | |
| Stomachs with trace | | 3 | | | 8 | |
| Stomachs without food | | 2 | | | 30 | |
| | | | | | | |
| | | | | | | |
| | April | | | May | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| | | | | | | |
| Fish | | | | | | |
| Salmonidae | | | | 2030 | 33.8 | * |
| <u>Theragra chalcogramma</u> | 15470 | 51.0 | 22 | 2650 | 44.1 | * |
| Unidentified fish | 1650 | 5.5 | 5 | | | |
| Squid | | | | | | |
| <u>Todarodes pacificus</u> | | | | 880 | 14.6 | * |
| <u>Berryteuthis magister</u> | 13180 | 43.5 | 28 | 100 | 1.7 | * |
| <u>Gonatus fabricii</u> | | | | 350 | 5.8 | * |
| Total | 30300 | 100.0 | | 6010 | 100.0 | |
| Stomachs with food | | 30 | | | 10 | |
| Stomachs with trace | | 9 | | | 12 | |
| Stomachs without food | | 38 | | | 9 | |

* Frequency data were not present on the copy available for typing in English (Ed.).

| Food Items | 1965 | | | | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | March | | | April | | | May | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | 40 | 0.1 | 1 | 2940 | 3.2 | 2 | 1100 | 2.3 | 2 |
| <u>Theragra chalcogramma</u> | 10580 | 41.3 | 14 | 39550 | 43.2 | 64 | 45710 | 97.7 | 31 |
| <u>Pleurogrammus azonus</u> | 70 | 0.3 | 1 | | | | | | |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | trace | - | 1 | | | | | | |
| <u>Berryteuthis magister</u> | 14950 | 58.3 | 33 | 49050 | 53.6 | 95 | trace | - | 2 |
| <u>Gonatus fabricii</u> | | | | trace | - | 9 | | | |
| Total | 25640 | 100.0 | | 91540 | 100.0 | | 46810 | 100.0 | |
| Stomachs with food | | 30 | | | 117 | | | 32 | |
| Stomachs with trace | | 7 | | | 13 | | | 0 | |
| Stomachs without food | | 4 | | | 87 | | | 9 | |

| Food Items | 1966 | | | 1967 | | | 1968 | | |
|------------------------------|----------|-----------|-----|----------|-----------|-----|--------|-----------|-----|
| | February | | | February | | | March | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | 450 | 0.7 | 1 | | | | | | |
| <u>Salvelinus sp.</u> | | | | | | | 70 | 0.2 | 3 |
| <u>Theragra chalcogramma</u> | trace | - | 4 | 230 | 2.5 | 1 | 15385 | 42.4 | 11 |
| Squid | | | | | | | | | |
| <u>Todarodes pacificus</u> | | | | | | | 2450 | 6.7 | 2 |
| <u>Berryteuthis magister</u> | 63850 | 99.3 | 46 | 8940 | 97.5 | 8 | 18400 | 50.7 | 31 |
| Total | 64300 | 100.0 | | 9170 | 100.0 | | 36305 | 100.0 | |
| Stomachs with food | | 41 | | | 8 | | | 28 | |

| <u>Food Items</u> | <u>1973</u> | | | <u>1976</u> | | |
|------------------------------|---------------|------------------|-----|---------------|------------------|-----|
| | <u>April</u> | | | <u>March</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | | | | 30 | 0.1 | 1 |
| <u>Theragra chalcogramma</u> | | | | 5800 | 17.2 | 13 |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | trace | - | 8 | 27940 | 82.7 | 33 |
| Total | | | | 33770 | 100.0 | |
| Stomachs with food | | 0 | | | 33 | |
| Stomachs with trace | | 8 | | | 3 | |
| Stomachs without food | | 5 | | | 12 | |

Table 18
Monthly stomach contents of fur seals taken in the Sea of Okhotsk.

| Food Items | 1958 | | | | | | 1964 | | |
|---------------------------------|-----------|-----------|-----|---------|-----------|-----|--------|-----------|-----|
| | September | | | October | | | July | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Clupea harengus pallasii</u> | | | | | | | 200 | 6.4 | 1 |
| <u>Myctophidae</u> | 4185 | 11.8 | 8 | 142 | 0.7 | 3 | | | |
| <u>Cololabis saira</u> | trace | - | 6 | | | | | | |
| <u>Salmonidae</u> | | | | | | | 1650 | 52.9 | 3 |
| <u>Theragra chalcogramma</u> | 1420 | 4.0 | 5 | | | | 590 | 18.9 | 3 |
| <u>Hexagrammidae</u> | 14700 | 41.5 | 23 | 2600 | 13.4 | 2 | | | |
| Unidentified fish | 1265 | 3.6 | 3 | 65 | 0.3 | 1 | 635 | 20.3 | 3 |
| Squid | | | | | | | | | |
| <u>Todarodes pacificus</u> | 13877 | 39.1 | 33 | 16515 | 85.6 | 16 | | | |
| <u>Berryteuthis magister</u> | | | | | | | 45 | 1.5 | 5 |
| <u>Gonatus fabricii</u> | | | | | | | trace | - | 1 |
| Total | 35447 | 100.0 | | 19322 | 100.0 | | 3120 | 100.0 | |
| Stomachs with food | | 55 | | | 20 | | | 9 | |
| Stomachs with trace | | 3 | | | 5 | | | 4 | |
| Stomachs without food | | 169 | | | 241 | | | 27 | |

| Food Items | 1975 | | | | | | 1977 | | |
|------------------------------|--------|-----------|-----|---------|-----------|-----|--------|-----------|-----|
| | July | | | October | | | August | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Clupeidae | 4500 | 12.9 | 6 | 1450 | 17.6 | 2 | 2320 | 14.7 | 4 |
| Salmonidae | 12730 | 36.6 | 18 | | | | 6895 | 43.6 | 11 |
| <u>Cololabis saira</u> | 7870 | 22.7 | 7 | | | | 6580 | 41.7 | 9 |
| <u>Theragra chalcogramma</u> | 4400 | 12.7 | 27 | 2160 | 26.1 | 7 | trace | - | 1 |
| <u>Eleginus gracilis</u> | 150 | 0.4 | 1 | 450 | 5.5 | 3 | | | |
| Gadidae | 3050 | 8.8 | 5 | 1400 | 16.9 | 1 | | | |
| Hexagrammidae | 1950 | 5.7 | 3 | 2720 | 32.9 | 5 | | | |
| Squid | | | | | | | | | |
| <u>Todarodes pacificus</u> | | | | | | | trace | - | 2 |
| <u>Berryteuthis magister</u> | 90 | 0.2 | 6 | 80 | 1.0 | 1 | | | |
| Total | 34740 | 100.0 | | 8260 | 100.0 | | 15795 | 100.0 | |
| Stomachs with food | | 54 | | | 14 | | | 25 | |
| Stomachs with trace | | 13 | | | 1 | | | 2 | |
| Stomachs without food | | 70 | | | 18 | | | 74 | |

Table 19
Monthly stomach contents of fur seals taken in the Western Pacific Ocean.

| Food Items | Joban | | | | | | | | |
|---------------------------------------|--------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | 1959 | | | 1963 | | | 1964 | | |
| | March | | | March | | | March | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | | | | 3880 | 32.1 | 28 | 6500 | 81.1 | 22 |
| <u>Scomber japonicus</u> | | | | 4650 | 38.5 | 8 | | | |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | 19 | 9.8 | 1 | 1500 | 12.4 | 5 | 300 | 3.7 | 20 |
| <u>Todarodes pacificus</u> | trace | - | 1 | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | | | | 2050 | 17.0 | 5 | 1190 | 14.8 | 10 |
| <u>Berryteuthis magister</u> | trace | - | 1 | | | | 30 | 0.4 | 5 |
| Unidentified squid | 174 | 90.2 | 2 | | | | | | |
| Total | 193 | 100.0 | | 12080 | 100.0 | | 8020 | 100.0 | |
| Stomachs with food | | 3 | | | 19 | | | 21 | |
| Stomachs with trace | | 2 | | | 17 | | | 18 | |
| Stomachs without food | | 3 | | | 45 | | | 85 | |

| Food Items | Joban | | | | | | | | |
|---------------------------------------|--------|-----------|-----|----------|-----------|-----|--------|-----------|-----|
| | 1971 | | | February | | | 1973 | | |
| | March | | | | | | March | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Engraulis japonicus</u> | | | | 360 | 5.4 | 2 | 2045 | 41.5 | 4 |
| <u>Myctophidae</u> | 315 | 15.6 | 11 | 2010 | 30.2 | 6 | trace | - | 2 |
| <u>Laemonema longipes</u> | | | | | | | 1450 | 29.5 | 1 |
| <u>Scomber japonicus</u> | 485 | 24.2 | 10 | 680 | 10.2 | 6 | 800 | 16.3 | 3 |
| <u>Icosteus</u> sp. | | | | 2130 | 32.0 | 3 | 480 | 9.7 | 1 |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | 1210 | 60.2 | 21 | 205 | 3.1 | 14 | 50 | 1.0 | 5 |
| <u>Onychoteuthis borealijaponicus</u> | trace | - | 7 | 360 | 5.4 | 7 | 100 | 2.0 | 6 |
| <u>Berryteuthis magister</u> | trace | - | 2 | 60 | 0.9 | 2 | trace | - | 1 |
| <u>Gonatopsis borealis</u> | | | | 850 | 12.8 | 3 | | | |
| <u>Gonatus fabricii</u> | trace | - | 1 | | | | | | |
| Total | 2010 | 100.0 | | 6655 | 100.0 | | 4925 | 100.0 | |
| Stomachs with food | | 17 | | | 11 | | | 10 | |
| Stomachs with trace | | 23 | | | 9 | | | 9 | |
| Stomachs without food | | 64 | | | 8 | | | 26 | |

| Food Items | Joban | | | | | | | | |
|---------------------------------------|----------|-----------|-----|--------|-----------|-----|----------|-----------|-----|
| | 1975 | | | | | | 1977 | | |
| | February | | | March | | | February | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | | | | | | | 2000 | 11.9 | 8 |
| <u>Theragra chalcogramma</u> | trace | - | 1 | | | | 50 | 0.3 | 2 |
| <u>Scomber japonicus</u> | 7470 | 68.1 | 16 | 2320 | 44.8 | 4 | 10680 | 63.7 | 14 |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | 30 | 0.3 | 3 | trace | - | 7 | 3740 | 22.3 | 22 |
| <u>Onychoteuthis borealijaponicus</u> | 1960 | 17.9 | 10 | 2860 | 55.2 | 22 | 300 | 1.8 | 7 |
| <u>Berryteuthis magister</u> | 1500 | 13.7 | 2 | trace | - | 1 | | | |
| Total | 10960 | 100.0 | | 5180 | 100.0 | | 16770 | 100.0 | |
| Stomachs with food | | 23 | | | 15 | | | 26 | |
| Stomachs with trace | | 4 | | | 17 | | | 14 | |
| Stomachs without food | | 68 | | | 65 | | | 107 | |

| <u>Food Items</u> | Sanriku | | | | | |
|---------------------------------------|---------------|------------------|-----|---------------|------------------|-----|
| | 1958 | | | | | |
| | May | | | June | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Myctophidae | 680 | 48.3 | 3 | 12580 | 66.8 | 40 |
| <u>Cololabis saira</u> | | | | 34 | 0.2 | 1 |
| Squid | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 580 | 41.2 | 3 | 5500 | 29.2 | 68 |
| <u>Todarodes pacificus</u> | | | | 410 | 2.2 | 6 |
| <u>Berryteuthis magister</u> | 148 | 10.5 | 8 | 300 | 1.6 | 9 |
| Total | 1408 | 100.0 | | 18824 | 100.0 | |
| Stomachs with food | | 6 | | | 82 | |
| Stomachs with trace | | 11 | | | 27 | |
| Stomachs without food | | 16 | | | 203 | |

| Food Items | Sanriku | | | | | | | | |
|------------------------------|---------|-----------|-----|-------------|-----------|-----|--------|-----------|-----|
| | April | | | 1959 May | | | June | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Engraulis japonicus</u> | | | | 185 | 0.6 | 1 | 10 | - | * |
| Salmonidae | | | | 15 | - | 1 | | | |
| Myctophidae | 4553 | 87.4 | 35 | 15212 | 52.3 | 128 | 1740 | 29.3 | * |
| <u>Cololabis saira</u> | | | | | | | trace | - | * |
| <u>Sphyræna</u> sp. | 35 | 0.6 | 1 | | | | | | |
| <u>Trachurus japonicus</u> | | | | trace | - | 2 | trace | - | * |
| <u>Scomber japonicus</u> | | | | | | | 685 | 11.5 | * |
| Unidentified fish | 128 | 2.4 | 4 | 3265 | 11.3 | 6 | trace | - | * |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | 151 | 2.9 | 50 | 1468 | 5.1 | 94 | 567 | 9.7 | * |
| <u>Todarodes pacificus</u> | 64 | 1.3 | 20 | 2885 | 9.9 | 101 | 1926 | 32.5 | * |
| <u>Berryteuthis magister</u> | 19 | 0.4 | 91 | 5434 | 18.7 | 310 | 918 | 15.6 | * |
| <u>Gonatus fabricii</u> | 28 | 0.6 | 24 | 10 | - | 10 | trace | - | * |
| <u>Chiroteuthis veranyi</u> | trace | - | 36 | 180 | 0.6 | 15 | trace | - | * |
| Unidentified squid | 230 | 4.4 | 17 | 426 | 1.5 | 25 | 77 | 1.4 | * |
| Total | 5208 | 100.0 | | 29080 | 100.0 | | 5923 | 100.0 | |
| Stomachs with food | | 26 | | | 122 | | | 38 | |
| Stomachs with trace | | 149 | | | 285 | | | 37 | |
| Stomachs without food | | 116 | | | 149 | | | 33 | |

* Frequency data were not present on the copy available for typing in English (Ed.).

| Food Items | Sanriku | | | | | | | | |
|---------------------------------------|---------|-------|-----------|--------|-------|-----------|--------|-------|-----------|
| | April | | | 1960 | | | June | | |
| | Volume | | Frequency | Volume | | Frequency | Volume | | Frequency |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| <u>Engraulis japonicus</u> | 998 | 20.8 | 2 | 1523 | 9.4 | 5 | | | |
| <u>Myctophidae</u> | 2882 | 60.0 | 34 | 5165 | 31.9 | 39 | 524 | 6.9 | 8 |
| <u>Scomber japonicus</u> | | | | 740 | 4.5 | 6 | trace | - | 1 |
| Unidentified fish | 82 | 1.8 | 2 | trace | - | 2 | | | |
| Squid | | | | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 368 | 7.6 | 25 | 444 | 2.7 | 16 | trace | - | 4 |
| <u>Todarodes pacificus</u> | 12 | 0.2 | 2 | 3710 | 22.9 | 62 | 5702 | 75.5 | 41 |
| <u>Berryteuthis magister</u> | 142 | 2.9 | 39 | 3791 | 23.4 | 136 | 1186 | 15.8 | 24 |
| <u>Gonatus fabricii</u> | 28 | 0.6 | 7 | trace | - | 3 | | | |
| <u>Chiroteuthis veranyi</u> | | | | trace | - | 4 | | | |
| Unidentified squid | 294 | 6.1 | 18 | 828 | 5.2 | 10 | 134 | 1.8 | 3 |
| Total | 4806 | 100.0 | | 16201 | 100.0 | | 7546 | 100.0 | |
| Stomachs with food | | 28 | | | 75 | | | 46 | |
| Stomachs with trace | | 81 | | | 110 | | | 12 | |
| Stomachs without food | | 61 | | | 86 | | | 16 | |

| <u>Food Items</u> | Sanriku | | | | | |
|---------------------------------------|---------------|------------------|-----|---------------|------------------|-----|
| | 1961 | | | | | |
| | May | | | June | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| <u>Engraulis japonicus</u> | 5070 | 32.8 | 15 | 80 | 2.7 | 2 |
| Myctophidae | 9420 | 61.1 | 41 | 1771 | 58.9 | 13 |
| Unidentified fish | 330 | 2.2 | 3 | | | |
| Squid | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | | | | trace | - | 1 |
| <u>Todarodes pacificus</u> | trace | - | 1 | 396 | 13.2 | 3 |
| <u>Berryteuthis magister</u> | 610 | 3.9 | 52 | 694 | 23.1 | 36 |
| <u>Gonatus fabricii</u> | trace | - | 9 | | | |
| Unidentified squid | | | | 64 | 2.1 | 3 |
| Total | 15430 | 100.0 | | 3005 | 100.0 | |
| Stomachs with food | | 45 | | | 10 | |
| Stomachs with trace | | 57 | | | 24 | |
| Stomachs without food | | 95 | | | 46 | |

| <u>Food Items</u> | 1963 | | | | | |
|---------------------------------------|---------------|------------------|-----|---------------|------------------|-----|
| | April | | | May | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Myctophidae | 15350 | 89.9 | 40 | trace | - | 4 |
| Squid | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 100 | 0.6 | 3 | | | |
| <u>Todarodes pacificus</u> | 1370 | 8.0 | 5 | trace | - | 4 |
| <u>Berryteuthis magister</u> | 250 | 1.5 | 11 | trace | - | 10 |
| Total | 17070 | 100.0 | | - | - | |
| Stomachs with food | | 32 | | | - | |
| Stomachs with trace | | 22 | | | 12 | |
| Stomachs without food | | 110 | | | 68 | |

| Food Items | Sanriku | | | | | | | | |
|---------------------------------------|---------|-----------|-----|--------|-----------|-----|----------|-----------|-----|
| | 1964 | | | | | | 1968 | | |
| | April | | | May | | | February | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | 9780 | 91.2 | 20 | 4280 | 98.4 | 17 | trace | - | 2 |
| <u>Laemonema longipes</u> | | | | | | | 1395 | 96.5 | 5 |
| <u>Scomber japonicus</u> | | | | | | | 50 | 3.5 | 1 |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | trace | - | 3 | | | | trace | - | 4 |
| <u>Onychoteuthis borealijaponicus</u> | 820 | 7.6 | 12 | trace | - | 3 | | | |
| <u>Berryteuthis magister</u> | trace | - | 10 | 70 | 1.6 | 6 | | | |
| <u>Gonatus fabricii</u> | | | | trace | - | 4 | | | |
| <u>Chiroteuthis veranyi</u> | | | | | | | trace | - | 2 |
| Unidentified squid | 130 | 1.2 | 5 | | | | | | |
| Total | 10730 | 100.0 | | 4350 | 100.0 | | 1445 | 100.0 | |
| Stomachs with food | | 20 | | | 12 | | | 5 | |
| Stomachs with trace | | 20 | | | 14 | | | 4 | |
| Stomachs without food | | 59 | | | 62 | | | 8 | |

| Food Items | Sanriku | | | | | | | | |
|---------------------------------------|----------|-----------|-----|--------|-----------|-----|----------|-----------|-----|
| | 1970 | | | 1971 | | | | | |
| | February | | | May | | | December | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | 20 | 2.0 | 2 | 2570 | 96.2 | 12 | | | |
| <u>Scomber japonicus</u> | 650 | 67.1 | 1 | | | | | | |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | | | | 100 | 3.8 | 8 | trace | - | 2 |
| <u>Onychoteuthis borealijaponicus</u> | 300 | 30.9 | 1 | | | | 30 | 100.0 | 1 |
| <u>Todarodes pacificus</u> | | | | trace | - | 1 | | | |
| <u>Berryteuthis magister</u> | | | | trace | - | 2 | trace | - | 1 |
| <u>Gonatus fabricii</u> | | | | | | | trace | - | 1 |
| Total | 970 | 100.0 | | 2670 | 100.0 | | 30 | 100.0 | |
| Stomachs with food | | 3 | | | 11 | | | 1 | |
| Stomachs with trace | | 1 | | | 12 | | | 3 | |
| Stomachs without food | | 16 | | | 94 | | | 4 | |

| Food Items | 1972 | | | 1973 | | | | | |
|---------------------------------------|--------|-----------|-----|--------|-----------|-----|--|--|--|
| | April | | | May | | | | | |
| | Volume | Frequency | | Volume | Frequency | | | | |
| | cc | % | No. | cc | % | No. | | | |
| Fish | | | | | | | | | |
| <u>Engraulis japonicus</u> | | | | 400 | 6.0 | 1 | | | |
| Myctophidae | 4700 | 99.3 | 15 | 5325 | 80.1 | 20 | | | |
| <u>Scomber japonicus</u> | 30 | 0.7 | 1 | | | | | | |
| Squid | | | | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | trace | - | 2 | 70 | 1.0 | 2 | | | |
| <u>Berryteuthis magister</u> | trace | - | 1 | 860 | 12.9 | 27 | | | |
| Total | 4730 | 100.0 | | 6655 | 100.0 | | | | |
| Stomachs with food | | 8 | | | 16 | | | | |
| Stomachs with trace | | 10 | | | 27 | | | | |

| Food Items | Sanriku | | | | | | | | |
|---------------------------------------|---------|-----------|-----|----------|-----------|-----|--------|-----------|-----|
| | 1976 | | | | | | | | |
| | January | | | February | | | March | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | | | | 590 | 10.1 | 8 | 7360 | 80.8 | 11 |
| <u>Laemonema longipes</u> | 200 | 14.3 | 1 | 2100 | 36.1 | 3 | | | |
| <u>Theragra chalcogramma</u> | 400 | 28.6 | 1 | trace | - | 1 | | | |
| <u>Scomber japonicus</u> | 750 | 53.5 | 1 | 100 | 1.7 | 1 | 70 | 0.8 | 1 |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | | | | trace | - | 1 | 70 | 0.8 | 1 |
| <u>Onychoteuthis borealijaponicus</u> | | | | 2840 | 48.7 | 12 | 1610 | 17.6 | 12 |
| <u>Gonatopsis</u> sp. | 50 | 3.6 | 2 | 200 | 3.4 | 1 | | | |
| Total | 1400 | 100.0 | | 5830 | 100.0 | | 9110 | 100.0 | |
| Stomachs with food | | 4 | | | 12 | | | 11 | |
| Stomachs with trace | | 1 | | | 5 | | | 6 | |
| Stomachs without food | | 10 | | | 20 | | | 11 | |
| | | | | | | | | | |
| | | | | April | | May | | | |
| Fish | | | | | | | | | |
| <u>Engraulis japonicus</u> | | | | 1800 | 17.7 | 2 | | | |
| Salmonidae | | | | 50 | 0.5 | 1 | | | |
| Myctophidae | 4640 | 75.6 | 11 | 8050 | 79.3 | 19 | | | |
| <u>Theragra chalcogramma</u> | | | | 30 | 0.3 | 2 | | | |
| <u>Scomber japonicus</u> | 650 | 10.6 | 3 | trace | - | 1 | | | |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | | | | trace | - | 1 | | | |
| <u>Onychoteuthis borealijaponicus</u> | 850 | 13.8 | 15 | 170 | 1.7 | 10 | | | |
| <u>Berryteuthis magister</u> | trace | - | 8 | 50 | 0.5 | 8 | | | |
| Total | 6140 | 100.0 | | 10150 | 100.0 | | | | |
| Stomachs with food | | 13 | | | 23 | | | | |
| Stomachs with trace | | 15 | | | 19 | | | | |
| Stomachs without food | | 90 | | | 111 | | | | |

| <u>Food Items</u> | <u>Sanriku</u> | | |
|---------------------------------------|----------------|------------------|------------|
| | <u>1977</u> | | |
| | <u>January</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | |
| | <u>cc</u> | <u>%</u> | <u>No.</u> |
| Fish | | | |
| Myctophidae | 1950 | 6.6 | 4 |
| <u>Laemonema longipes</u> | 4820 | 16.2 | 4 |
| <u>Theragra chalcogramma</u> | 9850 | 33.2 | 7 |
| <u>Scomber japonicus</u> | 12460 | 41.9 | 17 |
| Squid | | | |
| <u>Watasenia scintillans</u> | 640 | 2.1 | 15 |
| <u>Onychoteuthis borealijaponicus</u> | trace | - | 1 |
| <u>Berryteuthis magister</u> | trace | - | 1 |
| Total | 29720 | 100.0 | |
| Stomachs with food | | 30 | |
| Stomachs with trace | | 8 | |
| Stomachs without food | | 37 | |

| <u>Food Items</u> | <u>Doto</u> | | | | | |
|---------------------------------------|---------------|------------------|------------|-----------------|------------------|------------|
| | <u>1961</u> | | | <u>1966</u> | | |
| | <u>June</u> | | | <u>December</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | <u>cc</u> | <u>%</u> | <u>No.</u> | <u>cc</u> | <u>%</u> | <u>No.</u> |
| Fish | | | | | | |
| Myctophidae | 2705 | 73.8 | 15 | | | |
| <u>Laemonema longipes</u> | | | | 17845 | 98.5 | 23 |
| Squid | | | | | | |
| <u>Watasenia scintillans</u> | | | | 55 | 0.3 | 1 |
| <u>Onychoteuthis borealijaponicus</u> | 210 | 5.7 | 8 | | | |
| <u>Todarodes pacificus</u> | 587 | 16.0 | 22 | | | |
| <u>Berryteuthis magister</u> | 162 | 4.5 | 24 | 210 | 1.2 | 2 |
| <u>Chroteuthis veranyi</u> | | | | trace | - | 2 |
| Unidentified squid | trace | - | 1 | | | |
| Total | 3664 | 100.0 | | 18110 | 100.0 | |
| Stomachs with food | | 18 | | | 22 | |
| Stomachs with trace | | 38 | | | 2 | |
| Stomachs without food | | 69 | | | 47 | |

| <u>Food Items</u> | <u>Doto</u> | | | | | |
|------------------------------|----------------|------------------|-----|----------------|------------------|-----|
| | <u>1967</u> | | | <u>1968</u> | | |
| | <u>January</u> | | | <u>January</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Myctophidae | 1080 | 19.1 | 1 | 120 | 1.9 | 4 |
| <u>Laemonema longipes</u> | 4340 | 76.8 | 8 | 5930 | 93.1 | 25 |
| <u>Theragra chalcogramma</u> | | | | trace | - | 1 |
| <u>Scomber japonicus</u> | | | | 250 | 3.9 | 2 |
| Squid | | | | | | |
| Watasenia scintillans | 50 | 0.9 | 1 | 75 | 1.1 | 19 |
| Berryteuthis magister | 180 | 3.2 | 3 | trace | - | 1 |
| Gonatus fabricii | trace | - | 2 | trace | - | 2 |
| Chiroteuthis veranyi | trace | - | 2 | trace | - | 1 |
| Total | 5650 | 100.0 | | 6375 | 100.0 | |
| Stomachs with food | | 7 | | | 18 | |
| Stomachs with trace | | 6 | | | 23 | |
| Stomachs without food | | 20 | | | 49 | |

| <u>Food Items</u> | <u>1969</u> | | | <u>1970</u> | | |
|------------------------------|-----------------|------------------|-----|----------------|------------------|-----|
| | <u>December</u> | | | <u>January</u> | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| <u>Laemonema longipes</u> | 550 | 79.7 | 2 | 3100 | 100.0 | 3 |
| <u>Theragra chalcogramma</u> | 140 | 20.3 | 2 | | | |
| Squid | | | | | | |
| Berryteuthis magister | trace | - | 1 | | | |
| Total | 690 | 100.0 | | 3100 | 100.0 | |
| Stomachs with food | | 3 | | | 3 | |
| Stomachs with trace | | 2 | | | - | |
| Stomachs without food | | 7 | | | 1 | |

| Food Items | Doto | | | | | | | | |
|---------------------------------------|---------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | 1972 | | | | | | | | |
| | January | | | May | | | June | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Myctophidae | 155 | 10.8 | 3 | 95 | 12.8 | 3 | 8830 | 83.7 | * |
| <u>Laemonema longipes</u> | 1040 | 72.5 | 2 | | | | | | |
| <u>Theragra chalcogramma</u> | 25 | 1.7 | 1 | trace | - | 2 | | | |
| <u>Scomber japonicus</u> | | | | 260 | 34.9 | 3 | 60 | 0.6 | * |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | 125 | 8.7 | 7 | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 60 | 4.2 | 2 | | | | 800 | 7.6 | * |
| <u>Todarodes pacificus</u> | | | | | | | trace | - | * |
| <u>Berryteuthis magister</u> | 30 | 2.1 | 2 | 390 | 52.3 | 24 | 860 | 8.1 | * |
| <u>Gonatus fabricii</u> | trace | - | 1 | trace | - | 2 | | | |
| Total | 1435 | 100.0 | | 745 | 100.0 | | 10550 | 100.0 | |
| Stomachs with food | | 6 | | | 8 | | | 24 | |
| Stomachs with trace | | 5 | | | 22 | | | 19 | |
| Stomachs without food | | 14 | | | 80 | | | 39 | |

* Frequency data were not present on the copy available for typing in English (Ed.).

| Food Items | Doto | | | | | | | | |
|---------------------------------------|--------|-----------|-----|-----------|-----------|-----|----------|-----------|-----|
| | 1974 | | | 1975 | | | 1976 | | |
| | June | | | June-July | | | December | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | | | | 2250 | 38.7 | 6 | | | |
| Myctophidae | 730 | 49.2 | 6 | 2210 | 38.0 | 5 | 450 | 14.4 | 2 |
| <u>Laemonema longipes</u> | | | | | | | 70 | 2.2 | 1 |
| <u>Cololabis saira</u> | trace | - | 1 | | | | | | |
| <u>Scomber japonicus</u> | 130 | 8.8 | 1 | 70 | 1.2 | 1 | 1850 | 59.3 | 4 |
| Squid | | | | | | | | | |
| <u>Watasenia scintillans</u> | trace | - | 1 | | | | 750 | 24.1 | 8 |
| <u>Onychoteuthis borealijaponicus</u> | 15 | 1.0 | 6 | 120 | 2.1 | 2 | trace | - | 2 |
| <u>Todarodes pacificus</u> | 595 | 40.1 | 11 | | | | | | |
| <u>Berryteuthis magister</u> | 15 | 1.0 | 6 | 1160 | 20.0 | 21 | trace | - | 5 |
| Total | 1485 | 100.0 | | 5810 | 100.0 | | 3120 | 100.0 | |
| Stomachs with food | | 8 | | | 20 | | | 8 | |
| Stomachs with trace | | 17 | | | 9 | | | 9 | |
| Stomachs without food | | 56 | | | 47 | | | 13 | |

Table 20

Monthly stomach contents of fur seals taken in the Western Bering Sea.

| Food Items | 1961 | | | 1962 | | |
|------------------------------------|--------|-----------|-----|--------|-----------|-----|
| | July | | | June | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | | | | 50 | 0.7 | 1 |
| <u>Salvelinus</u> sp. | 1110 | 24.9 | 3 | | | |
| <u>Theragra chalcogramma</u> | 530 | 11.9 | 3 | 50 | 0.7 | 1 |
| <u>Ammodytes hexapterus</u> | 2510 | 56.4 | 3 | 6370 | 94.2 | 10 |
| <u>Pleurogrammus monopterygius</u> | 300 | 6.8 | 1 | 300 | 4.4 | 1 |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | trace | - | 1 | | | |
| Total | 4450 | 100.0 | | 6770 | 100.0 | |
| Stomachs with food | | 5 | | | 11 | |
| Stomachs with trace | | 1 | | | 0 | |
| Stomachs without food | | 0 | | | 39 | |

| Food Items | 1965 | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|
| | June | | | July | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | 19225 | 36.4 | 22 | 10690 | 43.4 | 10 |
| <u>Theragra chalcogramma</u> | 2350 | 4.4 | 8 | 620 | 2.5 | 2 |
| <u>Ammodytes hexapterus</u> | 20120 | 38.1 | 27 | 7560 | 30.7 | 9 |
| Hexagrammidae | 6210 | 11.8 | 8 | 5250 | 21.3 | 2 |
| Unidentified fish | 800 | 1.5 | 3 | | | |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | 3850 | 7.4 | 9 | 500 | 2.1 | 2 |
| <u>Gonatus fabricii</u> | 200 | 0.4 | 1 | | | |
| Total | 52755 | 100.0 | | 24620 | 100.0 | |
| Stomachs with food | | 67 | | | 24 | |
| Stomachs with trace | | 1 | | | 1 | |
| Stomachs without food | | 89 | | | 27 | |

| <u>Food Items</u> | 1966 | | | | | |
|-------------------------------------|---------------|------------------|-----|---------------|------------------|-----|
| | May | | | June | | |
| | <u>Volume</u> | <u>Frequency</u> | | <u>Volume</u> | <u>Frequency</u> | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | | | | 16300 | 19.0 | 14 |
| <u>Theragra chalcogramma</u> | 320 | 0.2 | 3 | 3900 | 4.6 | 5 |
| <u>Ammodytes hexapterus</u> | 1000 | 0.6 | 1 | 22500 | 26.3 | 20 |
| <u>Sebastes</u> sp. | 2300 | 1.4 | 2 | | | |
| Hexagrammidae | 154950 | 93.7 | 52 | 34150 | 39.9 | 21 |
| <u>Reinhardtius hippoglossoides</u> | 3300 | 2.0 | 2 | | | |
| Unidentified fish | 250 | 0.1 | 3 | 500 | 0.6 | 1 |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | 2200 | 1.3 | 3 | 8300 | 9.6 | 11 |
| Unidentified squid | 1050 | 0.7 | 2 | | | |
| Total | 165370 | 100.0 | | 85650 | 100.0 | |
| Stomachs with food | | 64 | | | 66 | |
| Stomachs with trace | | 0 | | | 0 | |
| Stomachs without food | | 45 | | | 74 | |

| Food Items | 1967 | | | | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|--------|-----------|-----|
| | May | | | June | | | July | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | 430 | 0.4 | 1 | 140 | 0.2 | 1 | 1600 | 20.2 | 1 |
| <u>Theragra chalcogramma</u> | 6790 | 5.9 | 6 | trace | - | 1 | trace | - | 1 |
| <u>Ammodytes hexapterus</u> | 4390 | 3.8 | 3 | 25940 | 45.6 | 23 | 4530 | 57.3 | 6 |
| Hexagrammidae | 100320 | 88.1 | 21 | 29210 | 51.2 | 7 | 1770 | 22.5 | 3 |
| Unidentified fish | 60 | - | 2 | 1235 | 2.1 | 5 | | | |
| Squid | | | | | | | | | |
| <u>Berryteuthis magister</u> | 1320 | 1.3 | 9 | 60 | 0.1 | 3 | trace | - | 3 |
| <u>Gonatus fabricii</u> | 550 | 0.5 | 6 | 440 | 0.8 | 3 | | | |
| Total | 113860 | 100.0 | | 57025 | 100.0 | | 7900 | 100.0 | |
| Stomachs with food | | 29 | | | 28 | | | 8 | |
| Stomachs with trace | | 8 | | | 10 | | | 4 | |
| Stomachs without food | | 7 | | | 58 | | | 6 | |

| Food Items | 1968 | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|
| | June | | | July | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | 4050 | 2.6 | 4 | 70 | 3.9 | 1 |
| <u>Theragra chalcogramma</u> | trace | - | 2 | | | |
| <u>Ammodytes hexapterus</u> | 11300 | 7.1 | 7 | 1740 | 96.1 | 5 |
| Hexagrammidae | 142800 | 90.1 | 28 | | | |
| Squid | | | | | | |
| <u>Todarodes pacificus</u> | trace | - | 1 | | | |
| <u>Berryteuthis magister</u> | 400 | 0.2 | 2 | trace | - | 2 |
| <u>Gonatus fabricii</u> | trace | - | 1 | | | |
| Total | 158550 | 100.0 | | 1810 | 100.0 | |
| Stomachs with food | | 38 | | | 6 | |
| Stomachs with trace | | 4 | | | 1 | |
| Stomachs without food | | 16 | | | 22 | |

| Food Items | 1970 | | | | | |
|------------------------------|--------|-----------|-----|--------|-----------|-----|
| | May | | | June | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | 250 | 0.4 | 1 | 350 | 4.1 | 1 |
| <u>Theragra chalcogramma</u> | 5710 | 8.9 | 6 | 1440 | 17.1 | 2 |
| <u>Ammodytes hexapterus</u> | | | | 4660 | 55.1 | 8 |
| <u>Sebastodes</u> sp. | 500 | 0.8 | 1 | | | |
| Hexagrammidae | 55440 | 86.6 | 19 | 2000 | 23.7 | 2 |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | 2150 | 3.3 | 5 | trace | - | 2 |
| Total | 64050 | 100.0 | | 8450 | 100.0 | |
| Stomachs with food | | 25 | | | 13 | |
| Stomachs with trace | | 0 | | | 1 | |
| Stomachs without food | | 11 | | | 40 | |

| Food Items | 1974 | | | | | | | | |
|---------------------------------------|--------|-----------|-----|-----------|-----------|-----|---------|-----------|-----|
| | August | | | September | | | October | | |
| | Volume | Frequency | | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. | cc | % | No. |
| Fish | | | | | | | | | |
| Salmonidae | 1280 | 8.3 | 3 | 590 | 5.7 | 2 | | | |
| <u>Theragra chalcogramma</u> | 1360 | 8.9 | 9 | 1820 | 17.5 | 8 | 1620 | 4.8 | 8 |
| <u>Ammodytes hexapterus</u> | 170 | 1.2 | 1 | 7660 | 73.5 | 16 | 16050 | 47.3 | 26 |
| Hexagrammidae | 11530 | 75.4 | 12 | | | | 3900 | 11.5 | 6 |
| <u>Aptocyclus ventricosus</u> | 150 | 1.0 | 1 | | | | | | |
| Squid | | | | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 20 | 0.1 | 2 | 300 | 2.8 | 2 | 1080 | 3.2 | 2 |
| <u>Berryteuthis magister</u> | 790 | 5.1 | 3 | 50 | 0.5 | 5 | 11290 | 33.2 | 30 |
| Total | 15300 | 100.0 | | 10420 | 100.0 | | 33940 | 100.0 | |
| Stomachs with food | | 23 | | | 19 | | | 46 | |
| Stomachs with trace | | 5 | | | 5 | | | 8 | |
| Stomachs without food | | 35 | | | 56 | | | 83 | |

| Food Items | 1978 | | | | | |
|-------------------------------|---------|-----------|-----|----------|-----------|-----|
| | October | | | November | | |
| | Volume | Frequency | | Volume | Frequency | |
| | cc | % | No. | cc | % | No. |
| Fish | | | | | | |
| Salmonidae | 20 | - | 1 | | | |
| <u>Theragra chalcogramma</u> | 4700 | 10.4 | 4 | 4320 | 43.4 | 4 |
| <u>Ammodytes hexapterus</u> | 19520 | 43.0 | 36 | 830 | 8.3 | 3 |
| Hexagrammidae | 1580 | 3.5 | 6 | 3300 | 33.2 | 9 |
| <u>Aptocyclus ventricosus</u> | 2200 | 4.9 | 1 | | | |
| Squid | | | | | | |
| <u>Berryteuthis magister</u> | 17330 | 38.2 | 46 | 1500 | 15.1 | 12 |
| Total | 45350 | 100.0 | | 9950 | 100.0 | |
| Stomachs with food | | 70 | | | 20 | |

DATA COLLECTION BY JAPAN

As with the USSR, pelagic investigations by Japan have been carried out annually since 1958 under the Interim Convention on the Conservation of North Pacific Fur Seals. The periods and areas covered each year are summarized in Table 21.

A booklet entitled "Guidance of Japanese Pelagic Investigation on Fur Seals" was distributed to all participants (including crew members) in order to help them understand the detailed methods of investigation.

SHIPBOARD PROCEDURES

Vessels

Harpoon vessels (tsukimbo sen) were used for pelagic research from 1958 to 1967. These vessels were designed mainly for hunting swordfish, seals, and porpoises; they are relatively small (36 gross tons, length 18.3 m, beam 4.2 m) and are powered by 120 to 160 hp engines producing a maximum speed of 15 km/h. The primary advantages of these harpoon vessels were maneuverability (tiller steered) when hunting and the large crew when sighting, following, and retrieving seals. The entire crew (about 12 to 15) was not necessary for fur seal research but was hired for the year by the vessel owner for other fishing activities. A major disadvantage was the limited distance the vessels could cover in a day (185 km) and the lack of modern (radar) navigational equipment; navigation was by compass, radio direction finder, and the captain's knowledge of the locality. Because of this, the vessels left port each morning between 0100 and 0400 h, depending on the area to be covered, and returned to harbor each night except when the sea was calm. Fig. 6 shows a harpoon vessel.

Since 1968, larger vessels (75 to 703 gross tons) equipped with modern navigational equipment were chartered to carry out offshore research on fur seals. These larger vessels carried a small boat to ensure efficient hunting and collecting of seals during favorable sea conditions.

Method of Investigation

Sighting

To assist in determining the distribution of fur seals, the research vessels ran transects (predetermined courses) from sunrise to sunset. No animals were collected, but all sightings of fur seals and of all other marine mammals were recorded. Sightings were made either by naked eye or by binoculars; a scientist and 3 crew members worked three shifts of 4 hours on the bridge. Fig. 7 shows the type of information recorded.

Table 21
Summary of vessel and survey information from fur seal research
in the Western Pacific region by Japan during 1958-78.

| Year | Period and Area | | | | | | | | | | | | Observed | Collected | Vessels | | Participant | |
|------|----------------------------------|---|---|---|---|---|---|---|---|----|----|----|----------|-----------|---------|-----------|-------------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | No. | Tonnage | S | A |
| 1958 | Joban, Sanriku, Doto | | | | | | | | | | | | | 2993 | 11 | 20 - 78 | 7 | 6 |
| 1959 | Joban, Sanriku | | | | | | | | | | | | | 2861 | 8 | 30 - 225 | 8 | 4 |
| 1960 | Sanriku Western Bering Sea | | | | | | | | | | | | | 1451 | 5 | 32 - 211 | 4 | 3 |
| 1961 | Sanriku, Doto Okhotsk Sea | | | | | | | | | | | | 2637 | 1585 | 3 | 30 - 36 | 4 | 3 |
| 1962 | Joban, Sanriku | | | | | | | | | | | | 2364 | 1525 | 3 | 30 - 36 | 3 | 3 |
| 1963 | Joban, Sanriku, Doto | | | | | | | | | | | | 2603 | 1593 | 3 | 30 - 36 | 3 | 3 |
| 1964 | Joban, Sanriku, Doto | | | | | | | | | | | | 2321 | 1338 | 3 | 30 - 36 | 3 | 6 |
| 1965 | Joban, Sanriku, Doto | | | | | | | | | | | | 2007 | 1149 | 3 | 30 - 36 | 4 | 3 |
| 1966 | Joban, Sanriku | | | | | | | | | | | | 2758 | 715 | 2 | 30 - 36 | 5 | 3 |
| 1967 | Joban, Sanriku, Doto | | | | | | | | | | | | 2516 | 910 | 2 | 30 - 35 | 6 | 3 |
| 1968 | Joban, Sanriku | | | | | | | | | | | | 1585 | 263 | 1 | 471 | 3 | 4 |
| 1969 | Sanriku | | | | | | | | | | | | 2758 | 285 | 1 | 471 | 3 | 4 |
| 1970 | Joban, Sanriku, Japan Sea | | | | | | | | | | | | 1919 | 570 | 2 | 494 - 703 | 3 | 6 |
| 1971 | Joban, Sanriku, Japan Sea | | | | | | | | | | | | 1922 | 495 | 3 | 186 - 703 | 3 | 7 |
| 1972 | Joban, Sanriku, Doto Okhotsk Sea | | | | | | | | | | | | 2842 | 796 | 3 | 18 - 437 | 3 | 6 |
| 1973 | Sanriku, Doto Okhotsk Sea | | | | | | | | | | | | 1441 | 507 | 1 | 292 | 3 | 3 |
| 1974 | Okhotsk Sea | | | | | | | | | | | | 1914 | 770 | 1 | 75 | 3 | 3 |
| 1975 | Okhotsk Sea | | | | | | | | | | | | 2660 | 1119 | 1 | 75 | 2 | 4 |
| 1976 | Okhotsk Sea | | | | | | | | | | | | 1521 | 563 | 1 | 75 | 2 | 4 |
| 1977 | Okhotsk Sea, Doto | | | | | | | | | | | | 260 | 147 | 1 | 75 | 3 | 1 |
| 1978 | Joban, Sanriku Okhotsk Sea | | | | | | | | | | | | 1985 | 792 | 1 | 153 | 3 | 2 |

Joban; 36°N to 38°N., Sanriku; 38°N to 41°-30'N.,
Doto(east and south coast of Hokkaido); 41°-30'N to 43°-30'N.
S; Scientists, A; Assistant



Figure 6. Harpoon vessel of the type used by Japan for pelagic seal research during 1958-67.

Figure 7a. Form used to record selected biological, atmospheric, and oceanographic observations.

| 年 月 日 | | | 船名 | | 正午位置 | | | — N, — E | | No. | | | | | | | | | | | | | | | | | | |
|---------|-----|----|----|----|------|----|----|----------|----|-----|----|----|-------------|-----|----|---------|----|----|-------------|----------|-----|-----|----|----|----|----------|-----|------------|
| 定 時 観 測 | | | | | | | | | | | | | お と せ い 発 見 | | | | | | 其 の 他 の 発 見 | | | | | | | | | |
| 時 刻 | 位 置 | 気温 | 水温 | 天候 | 風力 | 風向 | 波浪 | 気圧 | 海流 | 潮目 | 視界 | 水色 | 時 刻 | 位 置 | 水温 | 作 群 状 態 | | | 移動 方向 | 捕獲 頭数 | 時 刻 | 位 置 | 水温 | 種類 | 作群 | 移動 方向 | 浮遊物 | 採集船 の種類 |
| | | | | | | | | | | | | | | | | 睡眠 | 遊び | 移動 | | | | | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| . | — N | | | | | | | | | | | | . | — N | | | | | | | . | — N | | | | | | |
| . | — E | | | | | | | | | | | | . | — E | | | | | | | . | — E | | | | | | |
| 備 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 考 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure 7b. The English version of Figure 7a.

年 月 日 Date

船名 Name of vessel

正午位置 Ship position at noon

定 時 観 測 Regular time observation

時刻 Time 波浪 Waves

位置 Position 気圧 Atmospheric pressure

気温 Temperature 海流 Ocean current

| | | | |
|----|-------------------|----|-------------|
| 水温 | Water temperature | 潮目 | Current rip |
|----|-------------------|----|-------------|

| 天候 | Weather condition | 視界 | View |
|----|-------------------|----|------|
|----|-------------------|----|------|

風力 Wind scale 水色 Color of sea

風向 Wind direction

おっ と せい 発見 Fur seal observation

| 時 刻 | Time | 遊 び | Playing |
|-------|-------|-------|---------|
| 10:00 | 10:00 | 10:00 | 10:00 |
| 10:10 | 10:10 | 10:10 | 10:10 |
| 10:20 | 10:20 | 10:20 | 10:20 |
| 10:30 | 10:30 | 10:30 | 10:30 |
| 10:40 | 10:40 | 10:40 | 10:40 |
| 10:50 | 10:50 | 10:50 | 10:50 |
| 11:00 | 11:00 | 11:00 | 11:00 |
| 11:10 | 11:10 | 11:10 | 11:10 |
| 11:20 | 11:20 | 11:20 | 11:20 |
| 11:30 | 11:30 | 11:30 | 11:30 |
| 11:40 | 11:40 | 11:40 | 11:40 |
| 11:50 | 11:50 | 11:50 | 11:50 |
| 12:00 | 12:00 | 12:00 | 12:00 |
| 12:10 | 12:10 | 12:10 | 12:10 |
| 12:20 | 12:20 | 12:20 | 12:20 |
| 12:30 | 12:30 | 12:30 | 12:30 |
| 12:40 | 12:40 | 12:40 | 12:40 |
| 12:50 | 12:50 | 12:50 | 12:50 |
| 13:00 | 13:00 | 13:00 | 13:00 |
| 13:10 | 13:10 | 13:10 | 13:10 |
| 13:20 | 13:20 | 13:20 | 13:20 |
| 13:30 | 13:30 | 13:30 | 13:30 |
| 13:40 | 13:40 | 13:40 | 13:40 |
| 13:50 | 13:50 | 13:50 | 13:50 |
| 14:00 | 14:00 | 14:00 | 14:00 |
| 14:10 | 14:10 | 14:10 | 14:10 |
| 14:20 | 14:20 | 14:20 | 14:20 |
| 14:30 | 14:30 | 14:30 | 14:30 |
| 14:40 | 14:40 | 14:40 | 14:40 |
| 14:50 | 14:50 | 14:50 | 14:50 |
| 15:00 | 15:00 | 15:00 | 15:00 |
| 15:10 | 15:10 | 15:10 | 15:10 |
| 15:20 | 15:20 | 15:20 | 15:20 |
| 15:30 | 15:30 | 15:30 | 15:30 |
| 15:40 | 15:40 | 15:40 | 15:40 |
| 15:50 | 15:50 | 15:50 | 15:50 |
| 16:00 | 16:00 | 16:00 | 16:00 |
| 16:10 | 16:10 | 16:10 | 16:10 |
| 16:20 | 16:20 | 16:20 | 16:20 |
| 16:30 | 16:30 | 16:30 | 16:30 |
| 16:40 | 16:40 | 16:40 | 16:40 |
| 16:50 | 16:50 | 16:50 | 16:50 |
| 17:00 | 17:00 | 17:00 | 17:00 |
| 17:10 | 17:10 | 17:10 | 17:10 |
| 17:20 | 17:20 | 17:20 | 17:20 |
| 17:30 | 17:30 | 17:30 | 17:30 |
| 17:40 | 17:40 | 17:40 | 17:40 |
| 17:50 | 17:50 | 17:50 | 17:50 |
| 18:00 | 18:00 | 18:00 | 18:00 |
| 18:10 | 18:10 | 18:10 | 18:10 |
| 18:20 | 18:20 | 18:20 | 18:20 |
| 18:30 | 18:30 | 18:30 | 18:30 |
| 18:40 | 18:40 | 18:40 | 18:40 |
| 18:50 | 18:50 | 18:50 | 18:50 |
| 19:00 | 19:00 | 19:00 | 19:00 |
| 19:10 | 19:10 | 19:10 | 19:10 |
| 19:20 | 19:20 | 19:20 | 19:20 |
| 19:30 | 19:30 | 19:30 | 19:30 |
| 19:40 | 19:40 | 19:40 | 19:40 |
| 19:50 | 19:50 | 19:50 | 19:50 |
| 20:00 | 20:00 | 20:00 | 20:00 |
| 20:10 | 20:10 | 20:10 | 20:10 |
| 20:20 | 20:20 | 20:20 | 20:20 |
| 20:30 | 20:30 | 20:30 | 20:30 |
| 20:40 | 20:40 | 20:40 | 20:40 |
| 20:50 | 20:50 | 20:50 | 20:50 |
| 21:00 | 21:00 | 21:00 | 21:00 |
| 21:10 | 21:10 | 21:10 | 21:10 |
| 21:20 | 21:20 | 21:20 | 21:20 |
| 21:30 | 21:30 | 21:30 | 21:30 |
| 21:40 | 21:40 | 21:40 | 21:40 |
| 21:50 | 21:50 | 21:50 | 21:50 |
| 22:00 | 22:00 | 22:00 | 22:00 |
| 22:10 | 22:10 | 22:10 | 22:10 |
| 22:20 | 22:20 | 22:20 | 22:20 |
| 22:30 | 22:30 | 22:30 | 22:30 |
| 22:40 | 22:40 | 22:40 | 22:40 |
| 22:50 | 22:50 | 22:50 | 22:50 |
| 23:00 | 23:00 | 23:00 | 23:00 |
| 23:10 | | | |

位置 Position 移動 Traveling

| | | | |
|----|-------------------|----------|------------------|
| 水温 | Water temperature | 移動 方向 | Traveling course |
|----|-------------------|----------|------------------|

| | | | |
|------|---------------------------------|----------|-----------------|
| 作群狀態 | Group size and its condition | 捕獲 頭數 | Number of catch |
|------|---------------------------------|----------|-----------------|

睡眠 Sleeping

其 の 他 の 発 見 Other observation

| 時 刻 | Time | 作群 | Group size |
|-----|------|----|------------|
|-----|------|----|------------|

| 位 置 | Position | 移動 方向 | Traveling course |
|-----|----------|----------|------------------|
|-----|----------|----------|------------------|

水温 Water temperature 浮遊物 Floating matters

| 種類 | Name of species | 操業船 の種類 | Type of fishing boat |
|----|-----------------|------------|----------------------|
|----|-----------------|------------|----------------------|

| 備考 | Remarks |
|----|---------|
|----|---------|

Collecting Seals

Shotguns (12 gauge) were generally used for shooting seals from the collecting boat or main vessel. Three methods have been used to collect seals at sea as noted below: hunting from the main vessel (mothership), hunting from the small boat, and catching in drift gillnets.

Main vessel - used to hunt seals primarily when weather and sea conditions are unfavorable.

Small boat - used only when conditions are favorable. The boat always maintains radio contact with the larger main vessel when hunting. The crew consists of a hunter, boat operator, and a person to retrieve seals.

Gillnet - At times when the sea condition is favorable, seals are captured live by using a gillnet. Threatening noises are used to drive the seals into the gillnet during daylight hours and colored lights are used to lure the seals to the net at night. Gillnets have been used to capture seals since 1973.

Collecting Biological Data

The size of seals (length and weight), color of vibrassae or whiskers (since 1968), and color of the gall bladder (since 1972) were recorded. The type of biological data collected from each individual seal is shown in Fig. 8. The length from tip of snout to tip of tail was measured during 1958-78 with a seal on its belly, and after 1978 with a seal on its belly and additionally on its back (values in Tables 26-45 are from the former measurements with back up). Body weight was taken with a beam balance. Female reproductive organs, male baculum, stomachs, and snouts containing the canine teeth (lowers and uppers) of both sexes were collected aboard the mothership for later examination in the laboratory. The condition of mammary glands has been observed and recorded since 1972. Finally, various other organs as well as whole specimens were collected for special studies.

LABORATORY PROCEDURES

Age Determination

The snouts were cooked and the teeth were pulled, cleaned, identified with a particular animal, and placed in envelopes. The teeth were later ground lengthwise (longitudinal section) by holding against a mechanically turned grinding wheel. When the desired thickness (at the center) was reached, the work was finished manually on a grinding stone. Internal annuli in the dentine, which appear as alternate clear and opaque layers of growth, were then counted to determine age. Although age was determined from all teeth, seals 11 yr of age and older are in some cases shown as "10+" in Tables 22-25. Only the canine teeth collected since 1968 (except

Figure 8a. Form used to record biological data collected from each individual seal processed aboard the research vessels.

年 月 日 船名: No.

| | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 発見時刻 | . | . | . | . | . |
| 発見位置 | — N — E | — N — E | — N — E | — N — E | — N — E |
| 発見頭数 (作群状態) | 睡眠 遊び 移動 | 睡眠 遊び 移動 | 睡眠 遊び 移動 | 睡眠 遊び 移動 | 睡眠 遊び 移動 |
| 移動方向 | | | | | |
| 発見時表面水温(℃) | | | | | |
| 捕獲頭数 | | | | | |
| 沈下頭数 | | | | | |
| 命中一遁走頭数 | | | | | |

| | | | | | |
|-----------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 標本番号 | | | | | |
| 捕獲時刻 | . | . | . | . | . |
| 性別 | ♂・♀・♀(P) | ♂・♀・♀(P) | ♂・♀・♀(P) | ♂・♀・♀(P) | ♂・♀・♀(P) |
| 体長 (cm) | | | | | |
| 体重 (kg) | | | | | |
| 標識番号 | | | | | |
| チェック・マーク | 有・無・疑 上肢:右・左 下肢:右・左 | 有・無・疑 上肢:右・左 下肢:右・左 | 有・無・疑 上肢:右・左 下肢:右・左 | 有・無・疑 上肢:右・左 下肢:右・左 | 有・無・疑 上肢:右・左 下肢:右・左 |
| 胎性別 | ♂・♀ | ♂・♀ | ♂・♀ | ♂・♀ | ♂・♀ |
| 胎児体長 (cm) | | | | | |
| 胎児体重 (g) | | | | | |
| 採集標本 | 生殖腺・陰莖骨・ 胃・胎児・毛皮・ 犬歯・4肢 | 生殖腺・陰莖骨・ 胃・胎児・毛皮・ 犬歯・4肢 | 生殖腺・陰莖骨・ 胃・胎児・毛皮・ 犬歯・4肢 | 生殖腺・陰莖骨・ 胃・胎児・毛皮・ 犬歯・4肢 | 生殖腺・陰莖骨・ 胃・胎児・毛皮・ 犬歯・4肢 |
| 頬髭 | 白・黒・半 | 白・黒・半 | 白・黒・半 | 白・黒・半 | 白・黒・半 |
| 妊娠側 | 右・左 | 右・左 | 右・左 | 右・左 | 右・左 |
| 乳分泌 | | | | | |
| 胆ノウ | | | | | |
| 捕獲方法 | | | | | |
| 備考 | | | | | |

Figure 8b. The English version of Figure 8a.

| | | | | | |
|----------------|---|--------------------|--|-----|----------------|
| 年 | 月 | 日 | Date | 船名: | Name of vessel |
| 発見時刻 | Time of observation | 発見位置 | Position of observation | | |
| 発見頭数 (作群状態) | Number of observation (Group size and its condition) | | | | |
| 睡眠 | Sleeping | 遊び | Playing | 移動 | Traveling |
| 移動方向 | Traveling course | 沈下頭数 | Number of seals lost | | |
| 発見時表面水温(℃) | Surface water temperature of observation | 命中一遁走頭数 | Number of seals run away with a bullet hit | | |
| 捕獲頭数 | Number of catch | | | | |
| 標本番号 | Sample number | 体長 (cm) | Body length | | |
| 捕獲時刻 | Time of catch | 体重 (kg) | Body weight | | |
| 性別 | Sex | 標識番号 | Series of tag and tag number | | |
| チェック・マーク | Check mark | | | | |
| 有 | Yes | 無 | No | 疑 | Uncertain |
| 上肢:右・左 | Upper flipper:Right,Left | 下肢:右・左 | Lower flipper:Right,Left | | |
| 胎児 | Fetus | | | | |
| 性別 | Sex | 体重 (g) | Body weight | | |
| 体長 (cm) | Body length | | | | |
| 採集標本 | Sample collected | | | | |
| 生殖腺 | Genital organs | 陰莖骨 | Penis bone | 胃 | Stomach |
| 胎児 | Fetus | 毛皮 | Pelt | 犬歯 | Canine tooth |
| 4肢 | Flippers(Samples collected on confirmation of check mark) | | | | |
| 頬髭 | 白・黒・半 | Color of whiskers: | White, Black, Gray | | |
| 妊娠側 | 右・左 | Pregnant side: | Right, Left | | |
| 乳分泌 | Condition of mammary glands | 胆 | ノ | ウ | Color of gall |
| 捕獲方法 | Method of catch | | | | |

those used for microscopic examination) are available at the laboratory. Other data pertaining to the weight, length, and diameter of teeth are available. The type of data recorded for each tooth collected is shown in Fig. 9.

Reproductive Condition

The general reproductive condition was determined in the field and in the laboratory from examination of only the uterine horns during 1958-67. Since 1968, however, thorough macroscopic examinations of both the uterine horns and ovaries have been conducted to determine the reproductive status of each female seal taken. The type of reproductive data recorded is shown in Fig. 10 and the data are in Tables 22-25. All reproductive tracts taken since 1968 are in storage at the laboratory and are available for further examination.

The weight, length, and diameter of the male baculum were also determined.

Stomach Contents

The stomach was cut open longitudinally by slicing along its entire length. The contents were removed and the total wet weight and volume (water displacement) were taken. The frequency of a particular fish or squid species in the stomach was estimated from counts of identifiable whole or partial specimens, including the dorsal and ventral squid beaks and skeletal remains of fish. Stomach contents weighing less than 10 cc were recorded as "trace" (fish otoliths and squid beaks were recorded as "trace" regardless of the number estimated). When 2 or more species could not be easily separated, the examiner estimated their proportionate volume.

Specimens were identified by comparing them to known skeletal or preserved whole reference material and by referring to various fish and cephalopod identification keys. The data form for each stomach examined is shown in Fig. 11. The contents of stomachs collected prior to 1967 have been discarded but contents of stomachs collected since then are stored in the laboratory.

The names of the following two species of squid have been changed:

| <u>Current name</u> | <u>Former name</u> | <u>Year changed</u> |
|--|--------------------------------------|---------------------|
| <u>Onychoteuthis boreali-japonicus</u> | <u>O. banksii</u> | 1974 |
| <u>Todarodes pacificus</u> | <u>Ommastrephes sloani pacificus</u> | 1978 |

16

[illegible]

Figure 9b. The English version of Figure 9a.

| | | | |
|----|---------------|-----|---------------|
| 標本 | | 性 | 捕獲 |
| 番号 | Sample number | Sex | Date of catch |
| | | 別 | 月日 |

マ ル

Determine the age by
counting external growth
ring of a canine tooth

| 年令 | 明 度 | Age | Degree of hardness of counting the growth ring |
|----|--------|-----|--|
|----|--------|-----|--|

ハンサイ

Longitudinal section passing
major axis of a canine tooth

| 年令 | 明 度 | Age | Degree of hardness of counting the growth ring |
|----|--------|-----|--|
|----|--------|-----|--|

標 識
チェックマーク

Tag, Check mark

| 場所番号 | 年令 | Tagging place, Tag number, Series of tag. | Age |
|------|----|---|-----|
|------|----|---|-----|

判

Determination of age

定

犬 歯 横 断

Horizontal cross section
of canine tooth

| 短 径 測定 | 長 径 測定 | Minimum diameter | Maximum diameter |
|-----------|-----------|---------------------|---------------------|
|-----------|-----------|---------------------|---------------------|

犬 歯

Canine tooth

| 重 量 g | 長 径 測定 | Weight | Maximum diameter |
|----------|-----------|--------|---------------------|
|----------|-----------|--------|---------------------|

陰 茎 骨

Penis bone

| 重 量 g | 長 径 測定 | Weight | Maximum diameter |
|----------|-----------|--------|------------------|
|----------|-----------|--------|------------------|

Figure 10a. Form used to record reproductive data for each female seal collected.

| 卵巢調査台帳 | | | | | | | | | | | | | | | | | | | | 年： | | 番号： | | | | | | | | | | | |
|--------|------|----|----|-----|-----|------|------|------|-----|----|----|----|-----|----|----|-----|---|----|-----|----|----|-----|-----|----|--------|---|------|------|------|-----|-----|------|------|
| 標本番号 | 捕獲月日 | 年令 | 性別 | 左・右 | 妊娠中 | 今年出産 | 今年排卵 | 排卵黄体 | 卵 巢 | | | | 黄 体 | | | 白 体 | | | 子 宮 | | | | 卵 胞 | | 卵巢黄体体積 | | | 比 率 | | | 備 考 | 出產判定 | 性腺判定 |
| | | | | | | | | | 長径 | 短径 | 高径 | 重量 | 数 | 長径 | 短径 | 高径 | 数 | 長径 | 短径 | 高径 | 血管 | 皺 | 壁厚 | 直径 | 数 | 径 | 卵巢体積 | 黄体体積 | 黄体卵巢 | 黄長卵 | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 左 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 右 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure 10b. The English version of Figure 10a.

| | | | | | | | | | |
|------------------|------------------------|------------------|-----------------------|------------------|-------------------------|------------------|----------------------|------------------|----------------------|
| 標 本 番 号 | Sample number | 捕 獲 月 日 | Date of catch | 年 令 | Age | 性 別 | Sex | 妊 娠 中 | Pregnant |
| 今 年 出 産 | Delivered this year | 今 年 排 卵 | Ovulated this year | 排 卵 黄 体 | False yellow body | 出 産 判 定 | Uterine condition | 性 腺 判 定 | Ovarian condition |

| 卵 巢 | | | | Ovary | | | | 卵 胞 | | Follicle | |
|-----|-----|-----|-----|---------------------|---------------------|--------------------|--------|-----|---|----------|---------------------|
| 長 径 | 短 径 | 高 径 | 重 量 | Maximum diameter | Minimum diameter | Height diameter | Weight | 数 | 径 | Number | Maximum diameter |

| 黄 体 | | | | Yellow body | | | |
|-----|-----|-----|-----|-------------|---------------------|---------------------|--------------------|
| 数 | 長 径 | 短 径 | 高 径 | Number | Maximum diameter | Minimum diameter | Height diameter |

| 白 体 | | | | White body | | | |
|-----|-----|-----|-----|------------|---------------------|---------------------|--------------------|
| 数 | 長 径 | 短 径 | 高 径 | Number | Maximum diameter | Minimum diameter | Height diameter |

| 子 宮 | | | | Uterus | | | |
|--------|---|--------|--------|--|-------------------------------------|-----------------------------|-----------------------|
| 血 管 | 皺 | 壁 厚 | 直 径 | Visibility of blood vessel of surface uterus | Wrinkles on surface of uterus | Thickness of uterus wall | Diameter of uterus |

| 卵巢黄体体積 | | | Capacity of ovary and yellow body | | |
|----------|----------|----------|-----------------------------------|----------------------------|--|
| 卵巢 体積 | 黄体 体積 | 黄体 卵巢 | Capacity of ovary | Capacity of yellow body | The ratio capacity of ovary: capacity of yellow body |

| 比 率 | | | Ratio | | |
|----------|----------|----------|-------|--|--|
| 黄長 卵長 | 黄短 卵短 | 黄高 卵高 | | | |

The ratio height diameter of ovary: height diameter of yellow body
 The ratio minimum diameter of ovary: minimum diameter of yellow body
 The ratio maximum diameter of ovary: maximum diameter of yellow body

Figure 11a. Form used to record seal stomach contents.

No. _____

| 標 本 番 号 | 捕 獲 | | | 内容物 | 種 名 | 重 量 (g) | 排水量 (cc) | 未 消 化 | | | 種 名 | 重 量 (g) | 排水量 (cc) | 未 消 化 | | | 總 計 | | | 備 考 | |
|------------|-----|-----|-----|-----|-----|------------|-------------|-------|------------|-----------|-----|------------|-------------|-------|------------|-----------|-----|------------|-------------|-----|--|
| | 月 日 | 時 刻 | 位 置 | | | | | 数 | 体長 (cm) | 体重 (g) | | | | 数 | 体長 (cm) | 体重 (g) | 種 名 | 重 量 (g) | 排水量 (cc) | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |
| | . | . | — N | 有 | | | | | | | | | | | | | | | | | |
| | | | — E | 無 | | | | | | | | | | | | | | | | | |

胃内容物検査表

Figure 11b. The English version of Figure 11a.

| Sample number | | | | Catch | | |
|---------------|------------------|---------------------|-------------|-------------|--------|-------------------|
| 捕獲 | | | | Catch | | |
| 日 | 時 | 刻 | 位 置 | Date | Time | Position of catch |
| 食物 | Stomach contents | 有 | Yes | 無 | No | 痕 跡 Trace |
| 名 | Species | 重 量 (g) | Weight | 排水量 (cc) | Volume | |
| 未 消 化 | | Undigested contents | | | | |
| 体長 (cm) | 体重 (g) | Number | Body length | Body weight | | |
| 総 計 | | Grand total | | | | |
| 名 | 重 量 (g) | 排水量 (cc) | Species | Weight | Volume | |
| 考 Remarks | | | | | | |

Summary of Data, 1958-78

The detailed data formats in Figs. 7 to 11 are summarized in Fig. 12. All data recorded in the format of Fig. 12 have been put on microfilm, and these data are now being recorded on magnetic computer tape for subsequent analysis.

| 標 本 番 号 | 発 見 | | 発見位置 | 作群頭数 | 発見時 水 温 (℃) | 性 別 | 年 令 | 体 長 (cm) | 体 重 (kg) | 胎 児 | | | 標識番号 | チェック マーク | 出 産 判 定 | 生 殖 腺 判 定 | 胃 内 容 | |
|------------------|-----|-----|------|------|-------------------|-----|-----|-------------|-------------|-----|-------------|------------|------|-------------|------------------|-----------------------|-------|--|
| | 月 日 | 時 刻 | | | | | | | | 性別 | 体 長 (cm) | 体 重 (g) | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — N | 睡 眠 | | | | | | | | | | | | | | |
| | . | . | — E | 睡 眠 | | | | | | | | | | | | | | |

出 産 判 定 I : Immature, N : Nulliparous, P : Primiparous, M : Multiparous,

生物調査台帳

生殖腺判定 未 : 未成熟, 無 : 無排卵, 排 : 排卵黄体, 妊 : 妊娠黄体,

Figure 12b. The English version of Figure 12a.

| 標 番 | 本 号 | Sample number | 発 見 | | Observation | |
|--|--|--|-----------------------------------|--------------|-------------|------|
| | | | 月 日 | 時 刻 | Date | Time |
| 発見位置 Position of observation | | | 作群頭数 Group size and its condition | | | |
| 睡眠 Sleeping | | 遊び Playing | | 移動 Traveling | | |
| 発見時 水温 (℃) | | Surface water temperature of observation | | 性別 Sex | 年令 Age | |
| 体 長 (cm) | | Body length | | 体 重 (kg) | Body weight | |
| | | 胃 内 容 Stomach contents | | | | |
| 胎 児 | | | Fetus | | | |
| 性別 | 体 長 (cm) | 体 重 (g) | Sex | Body length | Body weight | |
| 標識番号 場 所 | Series of tag, tag number and tagging place | | | チェックマーク | Check mark | |
| 出産判定 | | Uterine condition | | | | |
| I : Immature, N : Nulliparous, P : Primiparous, M : Multiparous, | | | | | | |
| 生殖腺判定 | | Ovarian condition | | | | |
| 未 成 熟 | | Immature; Females which have not ovulated yet. | | | | |
| 無 排 卵 | | Non-ovulation; Females which had ovulated or experienced pregnancy or parturition in the past but did not ovulate in the previous breeding season. | | | | |
| 排 卵 黄 体 | | False yellow body; Females which ovulated in the previous breeding season but missed pregnancy. | | | | |
| 妊 娠 黄 体 | | True yellow body; Females which possess functional corpus luteum associated with pregnancy. Include abortion, resorption and existence of dead foetus. | | | | |

Table 22
Age (yr) and sex (M = male, F = female) of fur seals.
(X designates unknown age)

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|----------------|-----|----------|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|-------|----|-----|
| month | Sex | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 20+ | 21 | 22 | 23 | 24 | 25 | | 26 | X |
| Sea of Okhotsk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 6 | 5 | 7 | 11 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 38 |
| | F | 0 | 0 | 2 | 6 | 14 | 7 | 11 | 10 | 16 | 8 | 0 | 0 | 2 | 6 | 1 | 4 | 3 | 5 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 104 |
| Aug. | M | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | F | 0 | 0 | 1 | 4 | 1 | 4 | 4 | 6 | 0 | 2 | 5 | 0 | 4 | 2 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 1 | 5 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | F | 0 | 0 | 1 | 0 | 0 | 4 | 4 | 9 | 9 | 14 | 8 | 0 | 6 | 11 | 3 | 6 | 9 | 7 | 10 | 1 | 4 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 109 |
| Aug. | M | 0 | 1 | 5 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | F | 0 | 0 | 4 | 8 | 13 | 8 | 7 | 2 | 17 | 7 | 16 | 0 | 15 | 18 | 11 | 13 | 8 | 12 | 10 | 8 | 3 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 189 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 2 | 4 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | F | 0 | 0 | 0 | 4 | 4 | 3 | 6 | 8 | 2 | 4 | 5 | 0 | 9 | 15 | 14 | 7 | 5 | 11 | 6 | 8 | 6 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 122 |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 0 | 6 | 4 | 5 | 3 | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| | F | 0 | 0 | 1 | 6 | 8 | 4 | 7 | 16 | 7 | 8 | 18 | 0 | 13 | 24 | 20 | 22 | 20 | 13 | 12 | 8 | 8 | 3 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 222 |
| Aug. | M | 0 | 1 | 8 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| | F | 0 | 0 | 6 | 12 | 14 | 12 | 15 | 25 | 16 | 9 | 15 | 0 | 20 | 28 | 19 | 20 | 14 | 18 | 19 | 9 | 4 | 5 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 484 |
| Sept. | M | 0 | 2 | 3 | 3 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | F | 3 | 0 | 14 | 12 | 10 | 9 | 10 | 13 | 10 | 6 | 11 | 0 | 14 | 12 | 8 | 10 | 15 | 15 | 9 | 8 | 11 | 4 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 208 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | 0 | 1 | 8 | 22 | 24 | 26 | 14 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| | F | 0 | 0 | 0 | 3 | 12 | 16 | 19 | 23 | 15 | 18 | 11 | 0 | 19 | 23 | 24 | 31 | 20 | 20 | 23 | 13 | 12 | 1 | 0 | 5 | 2 | 0 | 1 | 2 | 0 | 0 | 313 |
| Aug. | M | 0 | 0 | 2 | 11 | 9 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| | F | 0 | 0 | 6 | 20 | 23 | 16 | 24 | 21 | 21 | 22 | 10 | 0 | 18 | 16 | 27 | 21 | 16 | 14 | 18 | 14 | 5 | 4 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 321 |
| Sept. | M | 0 | 0 | 8 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | F | 0 | 1 | 21 | 18 | 19 | 35 | 18 | 17 | 23 | 11 | 10 | 0 | 10 | 12 | 14 | 13 | 7 | 5 | 4 | 2 | 5 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 252 |
| Oct. | M | 2 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | F | 3 | 2 | 11 | 2 | 2 | 9 | 3 | 4 | 3 | 4 | 2 | 0 | 1 | 2 | 7 | 6 | 3 | 3 | 5 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 78 |

| Year and month | | Sex | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|-----|--------------------------------------|----|-----|-----|-----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|-----|-------|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 20+ | 21 | 22 | 23 | 24 | 25 | 26 | X | Total |
| | | | <u>Sea of Okhotsk</u> (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | M | | 0 | 1 | 11 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| | F | | 0 | 0 | 9 | 17 | 18 | 22 | 32 | 29 | 29 | 16 | 14 | 0 | 3 | 17 | 13 | 20 | 17 | 23 | 8 | 4 | 7 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 302 |
| Sept. | M | | 0 | 3 | 3 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| | F | | 3 | 1 | 10 | 15 | 8 | 19 | 18 | 9 | 11 | 15 | 8 | 0 | 3 | 8 | 7 | 4 | 4 | 3 | 3 | 1 | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 158 | |
| Oct. | M | | 0 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| | F | | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 20 | |
| Nov. | M | | 3 | 2 | 3 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| | F | | 3 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 5 | 4 | 3 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 31 | |
| 1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | M | | 0 | 0 | 1 | 2 | 6 | 10 | 12 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | |
| | F | | 0 | 0 | 0 | 3 | 9 | 23 | 21 | 19 | 22 | 22 | 12 | 0 | 18 | 17 | 15 | 20 | 19 | 28 | 21 | 12 | 10 | 8 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 281 | |
| Aug. | M | | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| | F | | 0 | 0 | 2 | 3 | 6 | 17 | 10 | 13 | 18 | 15 | 10 | 0 | 10 | 14 | 7 | 10 | 10 | 11 | 16 | 7 | 8 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 195 | |
| | | | <u>Joban, Sanriku, and Doto</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1958 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | M | | 0 | 5 | 29 | 45 | 5 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | |
| | F | | 0 | 3 | 9 | 20 | 8 | 9 | 5 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | |
| March | M | | 0 | 2 | 61 | 84 | 28 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | |
| | F | | 0 | 5 | 26 | 41 | 21 | 12 | 5 | 1 | 3 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | |
| April | M | | 0 | 24 | 174 | 257 | 56 | 21 | 11 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 553 | |
| | F | | 0 | 10 | 95 | 219 | 125 | 94 | 57 | 26 | 14 | 13 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 692 | |
| May | M | | 0 | 24 | 160 | 246 | 46 | 9 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 495 | |
| | F | | 0 | 9 | 84 | 199 | 87 | 83 | 36 | 17 | 16 | 12 | 7 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 602 | |
| June | M | | 0 | 4 | 34 | 29 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | |
| | F | | 0 | 1 | 12 | 33 | 19 | 14 | 8 | 6 | 2 | 2 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 106 | |
| 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | | 0 | 7 | 24 | 43 | 25 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | |
| | F | | 0 | 1 | 15 | 35 | 30 | 31 | 20 | 18 | 21 | 12 | 7 | 0 | 6 | 4 | 3 | 4 | 3 | 3 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 219 | |
| April | M | | 0 | 23 | 53 | 50 | 30 | 11 | 7 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | |
| | F | | 0 | 11 | 21 | 39 | 28 | 30 | 13 | 9 | 11 | 11 | 7 | 0 | 3 | 4 | 2 | 2 | 4 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 203 | |

| Year and month | | Sex | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | Total | | | | | |
|----------------|---|-----|------------------|----|----|-----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|-------|----|----|---|----|-----|
| | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 20+ | 21 | 22 | 23 | 24 | 25 | 26 | X | | |
| | | | Sanriku and Doto | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1961 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | | 0 | 1 | 4 | 6 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| | F | | 0 | 1 | 2 | 6 | 8 | 3 | 3 | 5 | 3 | 1 | 2 | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| April | M | | 0 | 21 | 55 | 119 | 36 | 10 | 8 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 254 |
| | F | | 0 | 3 | 55 | 82 | 63 | 51 | 44 | 30 | 14 | 7 | 9 | 0 | 8 | 2 | 4 | 5 | 5 | 3 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 395 |
| May | M | | 0 | 3 | 56 | 107 | 45 | 10 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 233 |
| | F | | 0 | 2 | 56 | 75 | 76 | 52 | 60 | 25 | 9 | 13 | 12 | 0 | 7 | 9 | 5 | 4 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 415 |
| June | M | | 0 | 0 | 9 | 10 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| | F | | 0 | 0 | 0 | 4 | 3 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | M | | 0 | 3 | 10 | 15 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| | F | | 0 | 2 | 8 | 11 | 9 | 5 | 7 | 7 | 3 | 7 | 4 | 0 | 5 | 4 | 6 | 7 | 4 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| June | M | | 0 | 8 | 23 | 16 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| | F | | 0 | 4 | 14 | 34 | 31 | 11 | 12 | 13 | 6 | 11 | 13 | 0 | 9 | 2 | 8 | 5 | 2 | 6 | 3 | 1 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 191 |
| | | | Joban | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1962 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | F | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| March | M | | 0 | 1 | 5 | 7 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | F | | 0 | 1 | 7 | 19 | 20 | 10 | 7 | 4 | 5 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| April | M | | 0 | 6 | 30 | 65 | 26 | 17 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 148 |
| | F | | 0 | 7 | 32 | 35 | 32 | 22 | 13 | 11 | 8 | 7 | 4 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 175 |
| May | M | | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | F | | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 1963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | | 0 | 3 | 14 | 4 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| | F | | 0 | 3 | 6 | 8 | 9 | 8 | 5 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| April | M | | 0 | 1 | 10 | 6 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| | F | | 0 | 0 | 3 | 0 | 6 | 6 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | | | Sanriku | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1960 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | M | | 0 | 0 | 11 | 5 | 4 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | |
| | F | | 0 | 0 | 2 | 6 | 5 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |

Table 23

Age specific pregnancy rates of female fur seals.

An X designates unknown age.

(n = number of females examined, p = number pregnant,
and % = percentage pregnant)Sea of Okhotsk

| Age | 1972 | | | | | | 1973 | | | 1974 | | |
|-----------|------|----|-------|--------|-----|------|------|----|------|------|-----|------|
| | July | | | August | | | July | | | July | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 8 | 0 | 0.0 | 4 | 0 | 0.0 | 6 | 0 | 0.0 |
| 4 | 0 | 0 | - | 13 | 2 | 15.4 | 4 | 0 | 0.0 | 8 | 1 | 12.5 |
| 5 | 0 | 3 | 75.0 | 8 | 4 | 50.0 | 3 | 1 | 33.3 | 4 | 3 | 75.0 |
| 6 | 4 | 2 | 50.0 | 7 | 5 | 71.4 | 6 | 4 | 66.7 | 7 | 5 | 71.4 |
| 7 | 9 | 7 | 77.8 | 2 | 1 | 50.0 | 8 | 7 | 87.5 | 16 | 10 | 62.5 |
| 8 | 9 | 6 | 66.7 | 17 | 13 | 76.5 | 2 | 1 | 50.0 | 7 | 5 | 71.4 |
| 9 | 14 | 10 | 71.4 | 7 | 5 | 71.4 | 4 | 1 | 25.0 | 8 | 4 | 50.0 |
| 10 | 8 | 6 | 75.0 | 16 | 12 | 75.0 | 5 | 4 | 80.0 | 18 | 17 | 94.4 |
| 11 | 6 | 5 | 83.3 | 15 | 11 | 73.3 | 9 | 6 | 66.7 | 13 | 9 | 69.2 |
| 12 | 11 | 11 | 100.0 | 18 | 13 | 72.2 | 15 | 13 | 86.7 | 24 | 20 | 83.3 |
| 13 | 3 | 2 | 66.7 | 11 | 9 | 81.8 | 14 | 10 | 71.4 | 20 | 15 | 75.0 |
| 14 | 6 | 4 | 66.7 | 13 | 11 | 84.6 | 7 | 4 | 57.1 | 22 | 19 | 86.4 |
| 15 | 9 | 7 | 77.8 | 8 | 5 | 62.5 | 5 | 3 | 60.0 | 20 | 14 | 70.0 |
| 16 | 7 | 6 | 85.7 | 12 | 9 | 75.0 | 11 | 4 | 36.4 | 13 | 8 | 61.5 |
| 17 | 10 | 8 | 80.0 | 10 | 6 | 60.0 | 6 | 2 | 33.3 | 12 | 10 | 83.3 |
| 18 | 1 | 0 | 0.0 | 8 | 5 | 62.5 | 8 | 4 | 50.0 | 8 | 6 | 75.0 |
| 19 | 4 | 2 | 50.0 | 3 | 2 | 66.7 | 6 | 2 | 33.3 | 8 | 3 | 37.5 |
| 20 | 1 | 0 | 0.0 | 4 | 2 | 50.0 | 2 | 1 | 50.0 | 3 | 2 | 66.7 |
| 21 | 2 | 0 | 0.0 | 5 | 0 | 0.0 | 2 | 0 | 0.0 | 2 | 1 | 50.0 |
| 22 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 1 | 0 | 0.0 |
| 23 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| Total | 108 | 79 | 73.1 | 185 | 115 | 62.2 | 122 | 67 | 54.9 | 221 | 152 | 68.8 |
| > 10 only | 68 | 51 | 75.0 | 123 | 85 | 69.1 | 91 | 53 | 58.2 | 165 | 124 | 75.2 |

| Age | 1974 | | | | | | 1975 | | | | | |
|-----|--------|---|------|-----------|---|------|------|----|------|--------|----|------|
| | August | | | September | | | July | | | August | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 12 | 0 | 0.0 | 12 | 0 | 0.0 | 3 | 0 | 0.0 | 20 | 0 | 0.0 |
| 4 | 14 | 3 | 21.4 | 10 | 0 | 0.0 | 12 | 3 | 25.0 | 23 | 8 | 34.8 |
| 5 | 12 | 8 | 66.7 | 9 | 5 | 55.6 | 16 | 8 | 50.0 | 16 | 10 | 62.5 |
| 6 | 15 | 6 | 40.0 | 10 | 6 | 60.0 | 19 | 14 | 73.7 | 24 | 13 | 54.2 |

Sea of Okhotsk
(continued)

| Age | <u>1974</u> (continued) | | | | | | <u>1975</u> (continued) | | | | | |
|-----------|----------------------------|-----|-------|-----------|-----|-------|----------------------------|-----|-------|--------|-----|-------|
| | August | | | September | | | July | | | August | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 7 | 25 | 19 | 76.0 | 13 | 9 | 69.2 | 23 | 21 | 91.3 | 21 | 17 | 81.0 |
| 8 | 16 | 13 | 81.3 | 10 | 9 | 90.0 | 15 | 12 | 80.0 | 21 | 17 | 81.0 |
| 9 | 9 | 7 | 77.8 | 6 | 6 | 100.0 | 18 | 13 | 72.2 | 22 | 19 | 86.4 |
| 10 | 15 | 12 | 80.0 | 11 | 11 | 100.0 | 11 | 10 | 90.9 | 10 | 8 | 80.0 |
| 11 | 20 | 14 | 70.0 | 14 | 12 | 85.7 | 19 | 15 | 78.9 | 18 | 14 | 77.8 |
| 12 | 28 | 23 | 82.1 | 12 | 10 | 83.3 | 23 | 20 | 87.0 | 16 | 14 | 87.5 |
| 13 | 19 | 12 | 63.2 | 8 | 7 | 87.5 | 24 | 24 | 100.0 | 27 | 21 | 77.8 |
| 14 | 20 | 15 | 75.0 | 10 | 10 | 100.0 | 31 | 24 | 77.4 | 21 | 17 | 81.0 |
| 15 | 14 | 10 | 71.4 | 15 | 14 | 93.3 | 20 | 16 | 80.0 | 16 | 15 | 93.8 |
| 16 | 18 | 15 | 83.3 | 15 | 12 | 80.0 | 20 | 14 | 70.0 | 14 | 14 | 100.0 |
| 17 | 19 | 16 | 84.2 | 9 | 9 | 100.0 | 23 | 18 | 78.3 | 18 | 14 | 77.8 |
| 18 | 9 | 6 | 66.7 | 8 | 6 | 75.0 | 13 | 10 | 76.9 | 14 | 7 | 50.0 |
| 19 | 4 | 4 | 100.0 | 11 | 8 | 72.7 | 12 | 9 | 75.0 | 5 | 3 | 60.0 |
| 20 | 5 | 4 | 80.0 | 4 | 3 | 75.0 | 1 | 1 | 100.0 | 4 | 1 | 25.0 |
| 21 | 3 | 0 | 0.0 | 3 | 2 | 66.7 | 5 | 3 | 60.0 | 2 | 0 | 0.0 |
| 22 | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 | 1 | 0 | 0.0 |
| 23 | 1 | 0 | 0.0 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 24 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 2 | 1 | 50.0 |
| 25 | 0 | 0 | - | 0 | 0 | - | 2 | 0 | 0.0 | 0 | 0 | - |
| Total | 278 | 187 | 67.3 | 191 | 139 | 72.8 | 313 | 236 | 75.4 | 315 | 213 | 67.6 |
| ≥ 10 only | 175 | 131 | 74.9 | 121 | 104 | 86.0 | 207 | 165 | 79.7 | 168 | 129 | 76.8 |

| Age | <u>1975</u> | | | | | | <u>1976</u> | | | | | |
|-----|-------------|----|-------|---------|---|-------|-------------|----|-------|-----------|----|-------|
| | September | | | October | | | August | | | September | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 18 | 0 | 0.0 | 2 | 0 | 0.0 | 17 | 1 | 5.9 | 15 | 0 | 0.0 |
| 4 | 19 | 4 | 21.1 | 2 | 1 | 50.0 | 18 | 7 | 38.9 | 8 | 3 | 35.7 |
| 5 | 35 | 25 | 71.4 | 9 | 7 | 77.8 | 22 | 19 | 86.4 | 19 | 16 | 84.2 |
| 6 | 18 | 14 | 77.8 | 3 | 2 | 66.7 | 32 | 26 | 81.3 | 18 | 16 | 88.9 |
| 7 | 17 | 17 | 100.0 | 4 | 2 | 50.0 | 29 | 23 | 79.3 | 9 | 7 | 77.8 |
| 8 | 23 | 21 | 91.3 | 3 | 3 | 100.0 | 29 | 25 | 86.2 | 11 | 11 | 100.0 |
| 9 | 11 | 10 | 90.9 | 4 | 3 | 75.0 | 16 | 14 | 87.5 | 15 | 15 | 100.0 |
| 10 | 10 | 9 | 90.0 | 2 | 2 | 100.0 | 14 | 14 | 100.0 | 8 | 6 | 75.0 |
| 11 | 10 | 10 | 100.0 | 1 | 1 | 100.0 | 3 | 1 | 33.3 | 3 | 2 | 66.7 |
| 12 | 12 | 11 | 91.7 | 2 | 2 | 100.0 | 17 | 14 | 82.4 | 8 | 8 | 100.0 |
| 13 | 14 | 14 | 100.0 | 7 | 5 | 71.4 | 13 | 9 | 69.2 | 7 | 5 | 71.4 |
| 14 | 13 | 11 | 84.6 | 6 | 2 | 33.3 | 20 | 16 | 80.0 | 4 | 3 | 75.0 |
| 15 | 7 | 7 | 100.0 | 3 | 2 | 66.7 | 17 | 14 | 82.4 | 4 | 3 | 75.0 |
| 16 | 5 | 4 | 80.0 | 3 | 2 | 66.7 | 23 | 19 | 82.6 | 3 | 2 | 66.7 |

Sea of Okhotsk
(continued)

| Age | <u>1975</u> (continued) | | | | | | <u>1976</u> (continued) | | | | | |
|-----------|----------------------------|-----|------|----------------|----|-------|----------------------------|-----|-------|------------------|-----|-------|
| | <u>September</u> | | | <u>October</u> | | | <u>August</u> | | | <u>September</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 17 | 4 | 2 | 50.0 | 5 | 3 | 60.0 | 8 | 5 | 62.5 | 3 | 3 | 100.0 |
| 18 | 2 | 1 | 50.0 | 3 | 2 | 66.7 | 4 | 1 | 25.0 | 1 | 1 | 100.0 |
| 19 | 5 | 3 | 60.0 | 1 | 1 | 100.0 | 7 | 4 | 57.1 | 2 | 2 | 100.0 |
| 20 | 5 | 2 | 40.0 | 0 | 0 | - | 1 | 1 | 100.0 | 1 | 0 | 0.0 |
| 21 | 2 | 1 | 50.0 | 0 | 0 | - | 3 | 0 | 0.0 | 3 | 2 | 66.7 |
| 22 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 1 | 0 | 0.0 |
| 23 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 1 | 0 | 0.0 |
| Total | 230 | 166 | 72.2 | 62 | 42 | 67.7 | 293 | 213 | 72.7 | 144 | 105 | 72.9 |
| > 10 only | 89 | 75 | 84.3 | 35 | 24 | 68.6 | 130 | 98 | 75.4 | 49 | 37 | 75.5 |

| Age | <u>1976</u> | | | | | | <u>1978</u> | | | | | |
|-----------|----------------|----|-------|-----------------|----|-------|-------------|-----|-------|---------------|-----|-------|
| | <u>October</u> | | | <u>November</u> | | | <u>July</u> | | | <u>August</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 1 | 0 | 0.0 | 0 | 0 | - | 3 | 0 | 0.0 | 3 | 0 | 0.0 |
| 4 | 0 | 0 | - | 1 | 1 | 100.0 | 9 | 5 | 55.6 | 6 | 2 | 33.3 |
| 5 | 0 | 0 | - | 0 | 0 | - | 23 | 19 | 82.6 | 17 | 14 | 82.4 |
| 6 | 2 | 2 | 100.0 | 0 | 0 | - | 21 | 15 | 71.4 | 10 | 7 | 70.0 |
| 7 | 2 | 1 | 50.0 | 0 | 0 | - | 19 | 19 | 100.0 | 13 | 13 | 100.0 |
| 8 | 0 | 0 | - | 0 | 0 | - | 22 | 16 | 72.7 | 18 | 16 | 88.9 |
| 9 | 0 | 0 | - | 0 | 0 | - | 22 | 15 | 68.2 | 15 | 11 | 73.3 |
| 10 | 3 | 3 | 100.0 | 0 | 0 | - | 12 | 12 | 100.0 | 10 | 10 | 100.0 |
| 11 | 0 | 0 | - | 0 | 0 | - | 18 | 17 | 94.4 | 10 | 8 | 80.0 |
| 12 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 17 | 15 | 88.2 | 14 | 12 | 85.7 |
| 13 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 15 | 12 | 80.0 | 7 | 6 | 85.7 |
| 14 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 20 | 14 | 70.0 | 10 | 8 | 80.0 |
| 15 | 2 | 1 | 50.0 | 1 | 0 | 0.0 | 19 | 16 | 84.2 | 10 | 8 | 80.0 |
| 16 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 28 | 19 | 67.9 | 11 | 6 | 54.5 |
| 17 | 0 | 0 | - | 5 | 2 | 40.0 | 21 | 12 | 57.1 | 16 | 14 | 87.5 |
| 18 | 0 | 0 | - | 4 | 2 | 50.0 | 12 | 4 | 33.3 | 7 | 6 | 85.7 |
| 19 | 1 | 1 | 100.0 | 3 | 1 | 33.3 | 10 | 4 | 40.0 | 8 | 4 | 50.0 |
| 20 | 0 | 0 | - | 1 | 0 | 0.0 | 8 | 2 | 25.0 | 4 | 1 | 25.0 |
| 21 | 1 | 0 | 0.0 | 3 | 1 | 33.3 | 3 | 2 | 66.7 | 4 | 3 | 75.0 |
| 22 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 23 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| Total | 18 | 14 | 77.8 | 24 | 13 | 54.2 | 303 | 218 | 71.9 | 193 | 149 | 77.2 |
| > 10 only | 13 | 11 | 84.6 | 23 | 12 | 52.2 | 184 | 129 | 70.1 | 111 | 86 | 77.5 |

Joban, Sanriku, and Doto

| Age | <u>1964</u> | | | | | | | | | | | |
|---------------------|-------------|-----|-------|-------|-----|-------|-----|-----|-------|------|----|-------|
| | March | | | April | | | May | | | June | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 30 | 0 | 0.0 | 34 | 0 | 0.0 | 56 | 0 | 0.0 | 14 | 0 | 0.0 |
| 4 | 29 | 18 | 62.1 | 26 | 15 | 57.7 | 53 | 27 | 50.9 | 15 | 5 | 30.0 |
| 5 | 31 | 26 | 83.9 | 28 | 25 | 89.3 | 49 | 42 | 85.7 | 12 | 8 | 66.7 |
| 6 | 20 | 17 | 85.0 | 13 | 12 | 92.3 | 39 | 32 | 82.1 | 9 | 7 | 77.8 |
| 7 | 17 | 17 | 100.0 | 8 | 8 | 100.0 | 17 | 17 | 100.0 | 6 | 6 | 100.0 |
| 8 | 19 | 19 | 100.0 | 10 | 9 | 90.0 | 13 | 13 | 100.0 | 5 | 3 | 60.0 |
| 9 | 12 | 10 | 83.3 | 11 | 10 | 90.9 | 20 | 20 | 100.0 | 1 | 1 | 100.0 |
| 10 | 7 | 6 | 85.7 | 7 | 7 | 100.0 | 10 | 10 | 100.0 | 0 | 0 | - |
| 11 | 6 | 5 | 83.3 | 3 | 3 | 100.0 | 8 | 7 | 87.5 | 1 | 1 | 100.0 |
| 12 | 4 | 4 | 100.0 | 4 | 3 | 75.0 | 4 | 3 | 75.0 | 1 | 1 | 100.0 |
| 13 | 3 | 2 | 66.7 | 2 | 2 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 14 | 4 | 4 | 100.0 | 2 | 2 | 100.0 | 3 | 1 | 33.3 | 1 | 1 | 100.0 |
| 15 | 3 | 3 | 100.0 | 4 | 1 | 25.0 | 4 | 3 | 75.0 | 0 | 0 | - |
| 16 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 17 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 18 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 19 | 0 | 0 | - | 2 | 2 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 20 | 3 | 0 | 0.0 | 1 | 0 | 0.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 21 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 22 | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 193 | 136 | 70.5 | 159 | 102 | 64.2 | 279 | 176 | 63.1 | 66 | 34 | 51.5 |
| <u>> 10 only</u> | 35 | 29 | 82.9 | 29 | 23 | 79.3 | 32 | 25 | 78.1 | 4 | 4 | 100.0 |

| Age | <u>1965</u> | | | | | | | | | | | |
|-----|-------------|----|-------|-------|---|-------|-----|----|-------|------|----|-------|
| | March | | | April | | | May | | | June | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 11 | 0 | 0.0 | 7 | 0 | 0.0 | 39 | 0 | 0.0 | 47 | 0 | 0.0 |
| 4 | 16 | 10 | 62.5 | 5 | 2 | 40.0 | 40 | 16 | 40.0 | 39 | 11 | 28.2 |
| 5 | 7 | 5 | 71.4 | 6 | 6 | 100.0 | 39 | 27 | 69.2 | 28 | 14 | 50.0 |
| 6 | 15 | 10 | 66.7 | 6 | 6 | 100.0 | 33 | 27 | 81.8 | 19 | 16 | 84.2 |
| 7 | 13 | 12 | 92.3 | 7 | 6 | 85.7 | 38 | 36 | 94.7 | 25 | 19 | 76.0 |
| 8 | 10 | 8 | 80.0 | 4 | 2 | 50.0 | 17 | 16 | 94.1 | 13 | 8 | 61.5 |
| 9 | 3 | 3 | 100.0 | 7 | 6 | 85.7 | 16 | 13 | 81.3 | 16 | 14 | 87.5 |
| 10 | 5 | 5 | 100.0 | 2 | 2 | 100.0 | 18 | 18 | 100.0 | 5 | 5 | 100.0 |
| 11 | 4 | 3 | 75.0 | 2 | 2 | 100.0 | 8 | 7 | 85.7 | 2 | 2 | 100.0 |
| 12 | 3 | 3 | 100.0 | 1 | 1 | 100.0 | 3 | 3 | 100.0 | 6 | 6 | 100.0 |
| 13 | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 5 | 4 | 80.0 | 3 | 2 | 66.7 |

Joban, Sanriku, and Doto
(continued)

| Age | <u>1965</u> (continued) | | | | | | | | | | | |
|-----------|----------------------------|----|-------|-------|----|-------|-----|-----|-------|------|----|------|
| | March | | | April | | | May | | | June | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 14 | 1 | 0 | 0.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 2 | 1 | 50.0 |
| 15 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 16 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 0 | 0 | - |
| 20 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Total | 93 | 63 | 67.7 | 50 | 36 | 72.0 | 260 | 170 | 65.4 | 205 | 98 | 47.8 |
| > 10 only | 18 | 15 | 83.3 | 8 | 8 | 100.0 | 38 | 35 | 92.1 | 18 | 16 | 88.9 |

| Age | <u>1965</u> | | | <u>1967</u> | | | | | | | | |
|-----------|-------------|---|-----|-------------|----|-------|----------|-----|-------|-------|----|-------|
| | July | | | January | | | February | | | March | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 3 | 0 | 0.0 | 0 | 0 | 0.0 | 17 | 0 | 0.0 | 15 | 2 | 13.3 |
| 4 | 2 | 0 | 0.0 | 5 | 2 | 40.0 | 14 | 6 | 42.9 | 18 | 8 | 44.4 |
| 5 | 0 | 0 | - | 8 | 6 | 75.0 | 11 | 10 | 90.9 | 26 | 22 | 84.6 |
| 6 | 0 | 0 | - | 7 | 7 | 100.0 | 24 | 21 | 87.5 | 13 | 12 | 92.3 |
| 7 | 0 | 0 | - | 11 | 11 | 100.0 | 25 | 21 | 84.0 | 5 | 4 | 80.0 |
| 8 | 0 | 0 | - | 10 | 9 | 90.0 | 29 | 29 | 100.0 | 5 | 4 | 80.0 |
| 9 | 0 | 0 | - | 5 | 4 | 80.0 | 16 | 15 | 93.8 | 10 | 9 | 90.0 |
| 10 | 0 | 0 | - | 7 | 7 | 100.0 | 14 | 14 | 100.0 | 3 | 3 | 100.0 |
| 11 | 0 | 0 | - | 8 | 7 | 87.5 | 13 | 11 | 84.6 | 7 | 4 | 57.1 |
| 12 | 0 | 0 | - | 7 | 6 | 85.7 | 13 | 13 | 100.0 | 0 | 0 | - |
| 13 | 0 | 0 | - | 3 | 3 | 100.0 | 16 | 14 | 87.5 | 10 | 8 | 80.0 |
| 14 | 0 | 0 | - | 4 | 3 | 75.0 | 5 | 5 | 100.0 | 6 | 5 | 83.3 |
| 15 | 0 | 0 | - | 2 | 2 | 100.0 | 4 | 3 | 75.0 | 3 | 1 | 33.3 |
| 16 | 0 | 0 | - | 4 | 3 | 75.0 | 5 | 3 | 60.0 | 2 | 2 | 100.0 |
| 17 | 0 | 0 | - | 0 | 0 | - | 6 | 3 | 50.0 | 1 | 1 | 100.0 |
| 18 | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 | 1 | 1 | 100.0 |
| 19 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 1 | 0 | 0.0 |
| 20 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 5 | 0 | 0.0 | 82 | 71 | 86.6 | 215 | 170 | 79.1 | 126 | 86 | 68.3 |
| > 10 only | 0 | 0 | - | 36 | 32 | 88.9 | 79 | 68 | 86.1 | 34 | 25 | 73.5 |

Joban, Sanriku, and Doto
(continued)

| Age | 1967 | | | | | | 1972 | | | | | |
|-----------|-------|----|-------|-----|----|-------|----------|----|-------|-------|-----|-------|
| | April | | | May | | | February | | | March | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 22 | 1 | 4.5 | 30 | 0 | 0.0 | 3 | 0 | 0.0 | 23 | 0 | 0.0 |
| 4 | 21 | 7 | 33.3 | 15 | 5 | 33.3 | 4 | 2 | 50.0 | 36 | 5 | 13.9 |
| 5 | 25 | 20 | 80.0 | 24 | 19 | 79.2 | 4 | 2 | 50.0 | 44 | 27 | 61.4 |
| 6 | 11 | 9 | 81.8 | 13 | 11 | 84.6 | 2 | 2 | 100.0 | 25 | 16 | 64.0 |
| 7 | 12 | 10 | 83.3 | 16 | 10 | 62.5 | 1 | 1 | 100.0 | 12 | 11 | 91.7 |
| 8 | 7 | 5 | 71.4 | 16 | 14 | 87.5 | 2 | 2 | 100.0 | 20 | 16 | 80.0 |
| 9 | 6 | 4 | 66.7 | 12 | 11 | 91.7 | 2 | 2 | 100.0 | 21 | 17 | 81.0 |
| 10 | 5 | 4 | 80.0 | 4 | 3 | 75.0 | 0 | 0 | - | 12 | 9 | 75.0 |
| 11 | 3 | 3 | 100.0 | 6 | 5 | 83.3 | 2 | 2 | 100.0 | 8 | 6 | 75.0 |
| 12 | 8 | 7 | 87.5 | 2 | 2 | 100.0 | 0 | 0 | - | 7 | 7 | 100.0 |
| 13 | 1 | 1 | 100.0 | 4 | 4 | 100.0 | 0 | 0 | - | 6 | 4 | 66.7 |
| 14 | 4 | 4 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 | 5 | 4 | 80.0 |
| 15 | 3 | 2 | 66.7 | 1 | 1 | 100.0 | 0 | 0 | - | 5 | 2 | 40.0 |
| 16 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 8 | 5 | 62.5 |
| 17 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 3 | 3 | 100.0 |
| 18 | 1 | 0 | 0.0 | 0 | 0 | - | 1 | 0 | 0.0 | 4 | 3 | 75.0 |
| 19 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 6 | 4 | 66.7 |
| 20 | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 21 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 5 | 3 | 60.0 |
| Total | 131 | 79 | 60.3 | 144 | 85 | 59.0 | 23 | 14 | 60.9 | 251 | 143 | 57.0 |
| > 10 only | 27 | 23 | 85.2 | 18 | 15 | 83.3 | 5 | 3 | 60.0 | 70 | 51 | 72.9 |

| Age | 1972 | | | | | | 1978 | | | | | |
|-----|-------|---|-------|-----|---|-------|------|---|-------|---------|---|-------|
| | April | | | May | | | June | | | January | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 6 | 0 | 0.0 | 1 | 0 | 0.0 | 3 | 0 | 0.0 | 1 | 0 | 0.0 |
| 4 | 13 | 4 | 30.8 | 2 | 0 | 0.0 | 1 | 0 | 0.0 | 1 | 1 | 100.0 |
| 5 | 20 | 9 | 45.0 | 3 | 2 | 66.7 | 0 | 0 | - | 0 | 0 | - |
| 6 | 7 | 4 | 57.1 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 7 | 6 | 5 | 83.3 | 2 | 1 | 50.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 8 | 5 | 2 | 40.0 | 3 | 2 | 16.7 | 1 | 0 | 0.0 | 0 | 0 | - |
| 9 | 4 | 4 | 100.0 | 0 | 0 | - | 0 | 0 | - | 3 | 3 | 100.0 |
| 10 | 3 | 3 | 100.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 11 | 6 | 5 | 83.3 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 12 | 5 | 4 | 80.0 | 0 | 0 | - | 1 | 1 | 100.0 | 3 | 3 | 100.0 |
| 13 | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 15 | 8 | 5 | 62.5 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 16 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |

Joban, Sanriku, and Doto
(continued)

| Age | <u>1972</u> (continued) | | | | | | | | | <u>1978</u> (continued) | | |
|-----------|----------------------------|----|-------|------------|---|------|-------------|---|------|----------------------------|----|-------|
| | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | | <u>January</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 17 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 18 | 4 | 4 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 19 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| 20 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 21 | 2 | 2 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 22 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 23 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| Total | 94 | 55 | 58.5 | 13 | 6 | 46.2 | 7 | 1 | 14.3 | 17 | 14 | 82.4 |
| ≥ 10 only | 33 | 27 | 81.8 | 2 | 1 | 50.0 | 2 | 1 | 50.0 | 11 | 9 | 81.8 |

| Age | <u>1978</u> | | | | | |
|-----------|-------------|----|-------|-------------|-----|-------|
| | <u>May</u> | | | <u>June</u> | | |
| | n | p | % | n | p | % |
| 3 | 4 | 0 | 0.0 | 8 | 0 | 0.0 |
| 4 | 0 | 0 | - | 14 | 5 | 35.7 |
| 5 | 0 | 0 | - | 9 | 6 | 66.7 |
| 6 | 1 | 0 | 0.0 | 16 | 11 | 68.8 |
| 7 | 4 | 2 | 50.0 | 14 | 10 | 71.4 |
| 8 | 5 | 4 | 80.0 | 12 | 11 | 91.7 |
| 9 | 0 | 0 | - | 12 | 9 | 75.0 |
| 10 | 2 | 2 | 100.0 | 11 | 10 | 90.9 |
| 11 | 1 | 1 | 100.0 | 7 | 7 | 100.0 |
| 12 | 1 | 1 | 100.0 | 5 | 5 | 100.0 |
| 13 | 4 | 3 | 75.0 | 6 | 6 | 100.0 |
| 14 | 1 | 1 | 100.0 | 4 | 4 | 100.0 |
| 15 | 0 | 0 | - | 10 | 6 | 60.0 |
| 16 | 1 | 0 | 0.0 | 4 | 4 | 100.0 |
| 17 | 2 | 1 | 50.0 | 6 | 3 | 50.0 |
| 18 | 0 | 0 | - | 1 | 1 | 100.0 |
| 19 | 1 | 1 | 100.0 | 4 | 1 | 25.0 |
| 20 | 0 | 0 | - | 3 | 2 | 66.7 |
| 22 | 1 | 0 | 0.0 | 0 | 0 | - |
| Total | 28 | 16 | 57.1 | 146 | 101 | 69.2 |
| ≥ 10 only | 14 | 10 | 71.4 | 61 | 49 | 80.3 |

Joban and Sanriku

| Age | <u>1958</u> | | | | | | <u>1959</u> | | | | | |
|-----------|-----------------------|-----|------|-----------------|----|-------|--------------|-----|-------|--------------|-----|-------|
| | <u>February-June*</u> | | | <u>February</u> | | | <u>March</u> | | | <u>April</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 512 | 8 | 1.6 | 18 | 0 | 0.0 | 80 | 0 | 0.0 | 219 | 2 | 0.9 |
| 4 | 260 | 129 | 49.6 | 15 | 8 | 53.3 | 53 | 35 | 66.0 | 176 | 98 | 55.7 |
| 5 | 212 | 181 | 85.4 | 5 | 3 | 60.0 | 37 | 31 | 83.8 | 94 | 81 | 86.2 |
| 6 | 111 | 88 | 79.3 | 4 | 4 | 100.0 | 25 | 18 | 72.0 | 62 | 53 | 85.5 |
| 7 | 58 | 52 | 89.7 | 6 | 5 | 83.3 | 17 | 15 | 88.2 | 35 | 28 | 80.0 |
| 8 | 35 | 31 | 88.6 | 1 | 1 | 100.0 | 12 | 10 | 83.8 | 17 | 13 | 76.5 |
| 9 | 30 | 28 | 93.3 | 1 | 1 | 100.0 | 8 | 7 | 87.5 | 14 | 13 | 92.9 |
| 10 | 17 | 15 | 88.2 | 0 | 0 | - | 6 | 6 | 100.0 | 9 | 8 | 88.9 |
| 10+ | 100 | 79 | 79.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 11 | 0 | 0 | - | 2 | 2 | 100.0 | 7 | 6 | 85.7 | 8 | 7 | 87.5 |
| 12 | 0 | 0 | - | 0 | 0 | - | 6 | 4 | 66.7 | 7 | 7 | 100.0 |
| 13 | 0 | 0 | - | 0 | 0 | - | 7 | 6 | 85.7 | 5 | 4 | 80.0 |
| 14 | 0 | 0 | - | 1 | 1 | 100.0 | 7 | 3 | 42.9 | 1 | 1 | 100.0 |
| 15 | 0 | 0 | - | 3 | 2 | 66.7 | 7 | 4 | 57.1 | 0 | 0 | - |
| 16 | 0 | 0 | - | 3 | 3 | 100.0 | 6 | 3 | 50.0 | 2 | 2 | 100.0 |
| 17 | 0 | 0 | - | 7 | 5 | 71.4 | 5 | 4 | 80.0 | 5 | 5 | 100.0 |
| 18 | 0 | 0 | - | 2 | 1 | 50.0 | 5 | 4 | 80.0 | 3 | 3 | 100.0 |
| 19 | 0 | 0 | - | 3 | 2 | 66.7 | 1 | 1 | 100.0 | 3 | 2 | 66.7 |
| 20 | 0 | 0 | - | 2 | 1 | 50.0 | 5 | 0 | 0.0 | 2 | 2 | 100.0 |
| 21 | 0 | 0 | - | 2 | 0 | 0.0 | 0 | 0 | - | 3 | 3 | 100.0 |
| 22 | 0 | 0 | - | 1 | 1 | 100.0 | 1 | 0 | 0.0 | 2 | 0 | 0.0 |
| 23 | 0 | 0 | - | 1 | 0 | 0.0 | 1 | 0 | 0.0 | 1 | 0 | 0.0 |
| 25 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| 26 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - |
| Total | 1589 | 611 | 38.5 | 77 | 40 | 51.9 | 298 | 157 | 52.7 | 668 | 332 | 49.7 |
| > 10 only | 117 | 94 | 80.3 | 27 | 18 | 66.7 | 66 | 41 | 62.1 | 51 | 44 | 86.3 |

* The data from 1958 sampling are not available by time and area.

| Age | <u>1959</u> | | | | | | <u>1966</u> | | | | | |
|-----|-------------|----|------|-------------|---|-------|--------------|----|------|--------------|----|------|
| | <u>May</u> | | | <u>June</u> | | | <u>March</u> | | | <u>April</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 58 | 0 | 0.0 | 10 | 0 | 0.0 | 31 | 0 | 0.0 | 17 | 0 | 0.0 |
| 4 | 56 | 35 | 62.5 | 9 | 4 | 44.4 | 18 | 3 | 16.7 | 24 | 10 | 41.7 |
| 5 | 40 | 33 | 82.5 | 8 | 6 | 75.0 | 18 | 15 | 83.3 | 27 | 24 | 88.9 |
| 6 | 28 | 27 | 96.4 | 5 | 4 | 80.0 | 10 | 8 | 80.0 | 18 | 17 | 94.4 |
| 7 | 13 | 11 | 84.6 | 1 | 1 | 100.0 | 10 | 8 | 80.0 | 18 | 15 | 83.3 |

Joban and Sanriku
(continued)

| Age | <u>1959</u> (continued) | | | | | | <u>1966</u> (continued) | | | | | |
|---------------------|----------------------------|-----|-------|-------------|----|------|----------------------------|----|-------|--------------|----|-------|
| | <u>May</u> | | | <u>June</u> | | | <u>March</u> | | | <u>April</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 8 | 15 | 15 | 100.0 | 1 | 0 | 0.0 | 5 | 4 | 90.0 | 14 | 12 | 85.7 |
| 9 | 6 | 6 | 100.0 | 0 | 0 | - | 3 | 3 | 100.0 | 3 | 3 | 100.0 |
| 10 | 5 | 5 | 100.0 | 0 | 0 | - | 2 | 2 | 100.0 | 2 | 2 | 100.0 |
| 11 | 3 | 3 | 100.0 | 0 | 0 | - | 4 | 2 | 50.0 | 4 | 3 | 75.0 |
| 12 | 2 | 2 | 100.0 | 0 | 0 | - | 2 | 2 | 100.0 | 5 | 4 | 80.0 |
| 13 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 3 | 3 | 100.0 |
| 15 | 0 | 0 | - | 1 | 0 | 0.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 16 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 17 | 1 | 1 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 228 | 139 | 61.0 | 35 | 15 | 42.9 | 106 | 50 | 47.2 | 135 | 93 | 68.9 |
| <u>> 10 only</u> | 12 | 12 | 100.0 | 1 | 0 | 0.0 | 11 | 9 | 81.8 | 14 | 12 | 85.7 |

| Age | <u>1966</u> | | | | | | <u>1968</u> | | | | | |
|---------------------|-------------|-----|-------|-------------|----|-------|----------------|----|-------|-----------------|----|-------|
| | <u>May</u> | | | <u>June</u> | | | <u>January</u> | | | <u>February</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 28 | 0 | 0.0 | 10 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 4 | 34 | 15 | 44.1 | 12 | 0 | 0.0 | 1 | 0 | 0.0 | 1 | 0 | 0.0 |
| 5 | 33 | 25 | 75.8 | 13 | 9 | 69.2 | 0 | 0 | - | 8 | 3 | 37.5 |
| 6 | 18 | 13 | 72.2 | 9 | 4 | 44.4 | 1 | 1 | 100.0 | 7 | 6 | 85.7 |
| 7 | 11 | 10 | 90.9 | 7 | 4 | 57.1 | 0 | 0 | - | 10 | 10 | 100.0 |
| 8 | 16 | 14 | 87.5 | 4 | 2 | 50.0 | 6 | 6 | 100.0 | 25 | 24 | 96.0 |
| 9 | 19 | 18 | 94.7 | 0 | 0 | - | 6 | 4 | 66.7 | 11 | 9 | 81.8 |
| 10 | 7 | 7 | 100.0 | 2 | 2 | 100.0 | 2 | 2 | 100.0 | 6 | 6 | 100.0 |
| 11 | 4 | 3 | 75.0 | 2 | 1 | 50.0 | 4 | 3 | 75.0 | 11 | 10 | 90.9 |
| 12 | 6 | 3 | 50.0 | 0 | 0 | - | 2 | 2 | 100.0 | 12 | 9 | 75.0 |
| 13 | 7 | 6 | 85.7 | 2 | 1 | 50.0 | 2 | 2 | 100.0 | 6 | 6 | 100.0 |
| 14 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 6 | 6 | 100.0 |
| 15 | 1 | 1 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - | 4 | 4 | 100.0 |
| 16 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 |
| 17 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 19 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Total | 189 | 120 | 73.5 | 62 | 23 | 37.1 | 24 | 20 | 83.3 | 109 | 94 | 86.2 |
| <u>> 10 only</u> | 30 | 25 | 83.3 | 7 | 4 | 57.1 | 10 | 9 | 90.0 | 47 | 42 | 89.4 |

Joban and Sanriku
(continued)

| Age | 1968 | | | | | | 1970 | | | | | |
|-----------|-------|----|-------|-------|----|-------|---------|----|-------|----------|-----|------|
| | March | | | April | | | January | | | February | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 3 | 0 | 0.0 | 0 | 0 | - | 1 | 0 | 0.0 | 7 | 0 | 0.0 |
| 4 | 4 | 0 | 0.0 | 4 | 1 | 25.0 | 6 | 0 | 0.0 | 9 | 4 | 44.4 |
| 5 | 6 | 4 | 66.7 | 8 | 5 | 62.5 | 2 | 1 | 50.0 | 7 | 2 | 28.6 |
| 6 | 8 | 7 | 87.5 | 2 | 2 | 100.0 | 4 | 3 | 75.0 | 19 | 15 | 78.9 |
| 7 | 10 | 8 | 80.0 | 4 | 4 | 100.0 | 4 | 4 | 100.0 | 24 | 18 | 75.0 |
| 8 | 7 | 6 | 85.7 | 5 | 3 | 60.0 | 7 | 4 | 57.1 | 15 | 13 | 86.7 |
| 9 | 7 | 7 | 100.0 | 2 | 1 | 50.0 | 6 | 5 | 83.3 | 13 | 12 | 92.3 |
| 10 | 5 | 4 | 80.0 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 12 | 9 | 75.0 |
| 10+ | 0 | 0 | - | 0 | 0 | - | 27 | 24 | 88.9 | 108 | 90 | 83.3 |
| 11 | 7 | 5 | 71.4 | 3 | 2 | 66.7 | 0 | 0 | - | 0 | 0 | - |
| 12 | 4 | 3 | 75.0 | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |
| 13 | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 14 | 3 | 3 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 16 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 65 | 48 | 73.8 | 35 | 23 | 65.7 | 60 | 44 | 73.3 | 214 | 163 | 76.2 |
| > 10 only | 20 | 16 | 80.0 | 10 | 7 | 70.0 | 30 | 27 | 90.0 | 120 | 99 | 82.5 |

| Age | 1970 | | | | | | 1971 | | | | | |
|-----------|-------|-----|------|----------|----|-------|-------|----|-------|-------|---|-------|
| | March | | | February | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 17 | 0 | 0.0 | 15 | 0 | 0.0 | 38 | 0 | 0.0 | 4 | 0 | 0.0 |
| 4 | 15 | 1 | 6.7 | 25 | 3 | 12.0 | 36 | 5 | 13.9 | 6 | 2 | 33.3 |
| 5 | 12 | 7 | 58.3 | 24 | 14 | 58.3 | 21 | 17 | 81.0 | 2 | 1 | 50.0 |
| 6 | 25 | 18 | 72.0 | 6 | 4 | 66.7 | 8 | 4 | 50.0 | 2 | 2 | 100.0 |
| 7 | 21 | 12 | 57.1 | 7 | 5 | 71.4 | 2 | 1 | 50.0 | 1 | 1 | 100.0 |
| 8 | 21 | 18 | 85.7 | 3 | 2 | 66.7 | 7 | 6 | 85.7 | 0 | 0 | - |
| 9 | 34 | 30 | 88.2 | 6 | 5 | 83.3 | 2 | 2 | 100.0 | 2 | 2 | 100.0 |
| 10 | 21 | 20 | 95.2 | 7 | 6 | 85.7 | 7 | 7 | 100.0 | 1 | 0 | 0.0 |
| 10+ | 87 | 74 | 85.1 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 11 | 0 | 0 | - | 6 | 5 | 83.3 | 5 | 3 | 60.0 | 0 | 0 | - |
| 12 | 0 | 0 | - | 3 | 2 | 66.7 | 8 | 8 | 100.0 | 0 | 0 | - |
| 13 | 0 | 0 | - | 3 | 3 | 100.0 | 7 | 7 | 100.0 | 0 | 0 | - |
| 14 | 0 | 0 | - | 1 | 1 | 100.0 | 5 | 4 | 80.0 | 0 | 0 | - |
| 15 | 0 | 0 | - | 6 | 4 | 66.7 | 3 | 3 | 100.0 | 0 | 0 | - |
| 16 | 0 | 0 | - | 4 | 4 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - |
| 17 | 0 | 0 | - | 1 | 1 | 100.0 | 2 | 2 | 100.0 | 0 | 0 | - |
| 18 | 0 | 0 | - | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 20 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 253 | 180 | 71.1 | 120 | 61 | 50.8 | 153 | 70 | 45.8 | 18 | 8 | 44.4 |
| > 10 only | 108 | 94 | 87.0 | 34 | 28 | 82.4 | 39 | 35 | 89.7 | 1 | 0 | 0.0 |

Joban and Sanriku
(continued)

Sanriku and Doto

| Age | 1971 | | | | | | 1961 | | | | | |
|-----------|------|----|-------|------|---|-------|-------|----|-------|-------|-----|-------|
| | May | | | June | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 9 | 0 | 0.0 | 1 | 0 | 0.0 | 6 | 0 | 0.0 | 82 | 0 | 0.0 |
| 4 | 8 | 3 | 37.5 | 1 | 1 | 100.0 | 8 | 4 | 50.0 | 63 | 29 | 46.0 |
| 5 | 6 | 2 | 33.3 | 1 | 0 | 0.0 | 3 | 1 | 33.3 | 51 | 46 | 90.2 |
| 6 | 4 | 3 | 75.0 | 0 | 0 | - | 3 | 3 | 100.0 | 44 | 41 | 93.2 |
| 7 | 3 | 3 | 100.0 | 2 | 1 | 50.0 | 5 | 4 | 80.0 | 30 | 25 | 83.3 |
| 8 | 6 | 4 | 66.7 | 1 | 0 | 0.0 | 3 | 3 | 100.0 | 14 | 14 | 100.0 |
| 9 | 2 | 1 | 50.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 7 | 6 | 85.7 |
| 10 | 2 | 2 | 100.0 | 0 | 0 | - | 2 | 2 | 100.0 | 9 | 9 | 100.0 |
| 11 | 2 | 1 | 50.0 | 0 | 0 | - | 1 | 1 | 100.0 | 8 | 6 | 75.0 |
| 12 | 3 | 3 | 100.0 | 1 | 0 | 0.0 | 0 | 0 | - | 2 | 1 | 50.0 |
| 13 | 3 | 3 | 100.0 | 2 | 2 | 100.0 | 2 | 2 | 100.0 | 4 | 4 | 100.0 |
| 14 | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 5 | 5 | 100.0 |
| 15 | 1 | 0 | 0.0 | 0 | 0 | - | 1 | 1 | 100.0 | 5 | 4 | 80.0 |
| 16 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 3 | 2 | 66.7 |
| 17 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 5 | 3 | 60.0 |
| 18 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |
| 19 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 2 | 1 | 50.0 |
| unknown | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| Total | 51 | 27 | 52.9 | 11 | 6 | 54.5 | 38 | 25 | 65.8 | 337 | 199 | 59.1 |
| > 10 only | 13 | 11 | 84.6 | 4 | 3 | 75.0 | 9 | 9 | 100.0 | 45 | 37 | 82.2 |

Sanriku and Doto

| Age | 1961 | | | | | | 1963 | | | | | |
|-----|------|----|-------|------|---|-------|-------|---|-------|-------|----|-------|
| | May | | | June | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 75 | 1 | 1.3 | 4 | 1 | 25.0 | 2 | 0 | 0.0 | 34 | 0 | 0.0 |
| 4 | 76 | 44 | 57.9 | 3 | 1 | 33.3 | 0 | 0 | - | 23 | 10 | 43.5 |
| 5 | 52 | 38 | 73.1 | 5 | 4 | 80.0 | 0 | 0 | - | 27 | 23 | 85.2 |
| 6 | 60 | 47 | 78.3 | 1 | 1 | 100.0 | 0 | 0 | - | 22 | 16 | 72.7 |
| 7 | 25 | 22 | 88.0 | 1 | 1 | 100.0 | 1 | 0 | 0.0 | 8 | 7 | 87.5 |
| 8 | 9 | 7 | 77.8 | 1 | 1 | 100.0 | 0 | 0 | - | 15 | 12 | 80.0 |
| 9 | 13 | 12 | 92.3 | 0 | 0 | - | 0 | 0 | - | 10 | 10 | 100.0 |
| 10 | 12 | 10 | 83.3 | 0 | 0 | - | 0 | 0 | - | 7 | 7 | 100.0 |
| 10+ | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 3 | 2 | 66.7 |
| 11 | 7 | 6 | 85.7 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 12 | 9 | 8 | 88.9 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |
| 13 | 5 | 4 | 80.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 14 | 4 | 2 | 50.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 15 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |

Sanriku and Doto
(continued)

| Age | <u>1961</u> (continued) | | | | | | <u>1963</u> (continued) | | | | | |
|---------------------|----------------------------|-----|-------|------|---|------|----------------------------|---|-------|-------|----|-------|
| | May | | | June | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 16 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 1 | 0 | 0.0 |
| 18 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 19 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| unknown | 5 | 3 | 60.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Total | 357 | 208 | 58.3 | 15 | 9 | 60.0 | 4 | 1 | 25.5 | 156 | 93 | 59.6 |
| <u>> 10 only</u> | 42 | 34 | 81.0 | 0 | 0 | - | 1 | 1 | 100.0 | 17 | 15 | 88.2 |

| Age | <u>1963</u> | | | | | | | | | <u>1973</u> | | |
|---------------------|-------------|-----|-------|------|----|-------|------|---|-----|-------------|----|-------|
| | May | | | June | | | July | | | May | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 60 | 0 | 0.0 | 74 | 0 | 0.0 | 1 | 0 | 0.0 | 11 | 0 | 0.0 |
| 4 | 84 | 39 | 46.4 | 46 | 15 | 32.6 | 0 | 0 | - | 9 | 5 | 55.6 |
| 5 | 69 | 55 | 79.7 | 50 | 26 | 52.0 | 0 | 0 | - | 5 | 3 | 60.0 |
| 6 | 36 | 29 | 80.6 | 24 | 18 | 75.0 | 0 | 0 | - | 7 | 6 | 85.7 |
| 7 | 21 | 19 | 90.5 | 8 | 6 | 75.0 | 0 | 0 | - | 7 | 5 | 71.4 |
| 8 | 33 | 30 | 90.9 | 7 | 5 | 71.4 | 0 | 0 | - | 3 | 3 | 100.0 |
| 9 | 15 | 15 | 100.0 | 10 | 9 | 90.0 | 0 | 0 | - | 7 | 7 | 100.0 |
| 10 | 3 | 2 | 66.7 | 1 | 0 | 0.0 | 0 | 0 | - | 4 | 3 | 75.0 |
| 10+ | 2 | 1 | 50.0 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 11 | 7 | 6 | 85.7 | 2 | 2 | 100.0 | 0 | 0 | - | 5 | 3 | 60.0 |
| 12 | 2 | 2 | 100.0 | 3 | 3 | 100.0 | 0 | 0 | - | 4 | 1 | 25.0 |
| 13 | 3 | 3 | 100.0 | 0 | 0 | - | 0 | 0 | - | 6 | 6 | 100.0 |
| 14 | 3 | 3 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - | 7 | 7 | 100.0 |
| 15 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 4 | 3 | 75.0 |
| 16 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 4 | 2 | 50.0 |
| 17 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 2 | 2 | 100.0 |
| 18 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 20 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| Total | 340 | 204 | 60.0 | 227 | 85 | 37.4 | 1 | 0 | 0.0 | 86 | 57 | 66.3 |
| <u>> 10 only</u> | 22 | 17 | 77.3 | 8 | 6 | 75.0 | 0 | 0 | - | 37 | 28 | 75.7 |

Sanriku and Doto
(continued)

Joban

| Age | 1973 | | | | | | 1962 | | | | | |
|-----------|------|----|-------|----------|---|-------|-------|----|-------|-------|----|-------|
| | June | | | February | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 34 | 0 | 0.0 | 0 | 0 | - | 19 | 0 | 0.0 | 35 | 0 | 0.0 |
| 4 | 31 | 1 | 3.2 | 1 | 0 | 0.0 | 20 | 11 | 55.0 | 32 | 17 | 53.1 |
| 5 | 11 | 3 | 27.3 | 0 | 0 | - | 10 | 6 | 60.0 | 22 | 18 | 81.8 |
| 6 | 12 | 4 | 33.3 | 1 | 1 | 100.0 | 7 | 6 | 85.7 | 13 | 13 | 100.0 |
| 7 | 13 | 6 | 46.2 | 0 | 0 | - | 4 | 4 | 100.0 | 11 | 11 | 100.0 |
| 8 | 6 | 3 | 50.0 | 1 | 1 | 100.0 | 5 | 5 | 100.0 | 8 | 7 | 87.5 |
| 9 | 11 | 9 | 81.8 | 1 | 1 | 100.0 | 1 | 1 | 100.0 | 7 | 7 | 100.0 |
| 10 | 13 | 4 | 30.8 | 0 | 0 | - | 2 | 1 | 50.0 | 4 | 4 | 100.0 |
| 10+ | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 11 | 9 | 6 | 66.7 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 12 | 2 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 13 | 8 | 5 | 62.5 | 0 | 0 | - | 1 | 1 | 100.0 | 1 | 1 | 100.0 |
| 14 | 5 | 2 | 40.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 15 | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 16 | 6 | 4 | 66.7 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 17 | 3 | 3 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 18 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 19 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 20 | 3 | 2 | 66.7 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 21 | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| unknown | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Total | 173 | 54 | 31.2 | 5 | 4 | 80.0 | 69 | 35 | 50.7 | 136 | 81 | 59.6 |
| ≥ 10 only | 55 | 28 | 50.9 | 1 | 1 | 100.0 | 3 | 2 | 66.7 | 8 | 8 | 100.0 |

Joban
(continued)

Sanriku

| Age | 1962 | | | 1963 | | | | | | 1960 | | |
|-----|------|---|-----|-------|---|-------|-------|---|-------|-------|---|-------|
| | May | | | March | | | April | | | March | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 8 | 0 | 0.0 | 0 | 0 | - | 6 | 0 | 0.0 |
| 4 | 0 | 0 | - | 9 | 3 | 33.3 | 6 | 3 | 50.0 | 5 | 2 | 40.0 |
| 5 | 0 | 0 | - | 8 | 5 | 62.5 | 6 | 6 | 100.0 | 5 | 4 | 80.0 |
| 6 | 0 | 0 | - | 5 | 4 | 80.0 | 1 | 1 | 100.0 | 4 | 4 | 100.0 |
| 7 | 0 | 0 | - | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 1 | 1 | 100.0 |
| 9 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 10 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 10+ | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 11 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |

| Age | <u>Joban</u> (continued) | | | | | | | | | <u>Sanriku</u> (continued) | | |
|---------------------|-----------------------------|---|-----|----------------------------|----|------|--------------|----|-------|-------------------------------|----|-------|
| | <u>1962</u> (continued) | | | <u>1963</u> (continued) | | | | | | <u>1960</u> (continued) | | |
| | <u>May</u> | | | <u>March</u> | | | <u>April</u> | | | <u>March</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 13 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 |
| 15 | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 20 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 2 | 0 | 0.0 | 34 | 15 | 44.1 | 18 | 15 | 83.3 | 19 | 12 | 63.2 |
| <u>> 10 only</u> | 0 | 0 | - | 1 | 0 | 0.0 | 4 | 4 | 100.0 | 1 | 1 | 100.0 |

| <u>Sanriku</u> (continued) | | | | | | | | | | | | |
|-------------------------------|--------------|-----|-------|------------|-----|-------|-------------|----|-------|-----------------|---|-------|
| Age | <u>1960</u> | | | | | | | | | <u>1962</u> | | |
| | <u>April</u> | | | <u>May</u> | | | <u>June</u> | | | <u>February</u> | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 88 | 1 | 1.1 | 61 | 0 | 0.0 | 5 | 0 | 0.0 | 0 | 0 | - |
| 4 | 82 | 40 | 48.8 | 65 | 37 | 56.9 | 7 | 3 | 42.9 | 0 | 0 | - |
| 5 | 83 | 71 | 85.5 | 52 | 36 | 69.2 | 13 | 12 | 92.3 | 0 | 0 | - |
| 6 | 51 | 47 | 92.2 | 34 | 26 | 76.5 | 8 | 7 | 87.5 | 0 | 0 | - |
| 7 | 31 | 29 | 93.5 | 25 | 23 | 92.0 | 5 | 5 | 100.0 | 0 | 0 | - |
| 8 | 17 | 15 | 88.2 | 15 | 15 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 9 | 13 | 11 | 84.6 | 6 | 5 | 83.3 | 1 | 1 | 100.0 | 0 | 0 | - |
| 10 | 5 | 5 | 100.0 | 4 | 4 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 11 | 5 | 5 | 100.0 | 5 | 5 | 100.0 | 2 | 1 | 50.0 | 0 | 0 | - |
| 12 | 5 | 4 | 80.0 | 3 | 3 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 |
| 13 | 6 | 6 | 100.0 | 2 | 2 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 14 | 1 | 1 | 100.0 | 4 | 3 | 75.0 | 0 | 0 | - | 0 | 0 | - |
| 15 | 1 | 1 | 100.0 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 16 | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |
| 17 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 19 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| 20 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| unknown | 8 | 5 | 62.5 | 9 | 4 | 44.4 | 1 | 1 | 100.0 | 0 | 0 | - |
| Total | 399 | 244 | 61.2 | 287 | 164 | 57.1 | 44 | 32 | 72.7 | 1 | 1 | 100.0 |
| ≥ 10 only | 26 | 25 | 96.2 | 20 | 18 | 90.0 | 3 | 2 | 66.7 | 1 | 1 | 100.0 |

Sanriku
(continued)

| Age | 1962 | | | | | | | | | | | |
|-----------|-------|---|-------|-------|-----|-------|-----|----|-------|------|----|------|
| | March | | | April | | | May | | | June | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 0 | 0 | - | 76 | 1 | 1.3 | 40 | 1 | 2.5 | 23 | 0 | 0.0 |
| 4 | 1 | 0 | 0.0 | 68 | 40 | 58.8 | 38 | 19 | 50.0 | 8 | 2 | 25.0 |
| 5 | 0 | 0 | - | 35 | 29 | 82.9 | 24 | 20 | 83.3 | 4 | 3 | 75.0 |
| 6 | 0 | 0 | - | 32 | 29 | 90.6 | 20 | 15 | 75.0 | 6 | 5 | 83.3 |
| 7 | 2 | 2 | 100.0 | 38 | 34 | 89.5 | 12 | 9 | 75.0 | 0 | 0 | - |
| 8 | 0 | 0 | - | 18 | 17 | 94.4 | 10 | 9 | 90.0 | 2 | 1 | 50.0 |
| 9 | 0 | 0 | - | 13 | 12 | 92.3 | 5 | 4 | 80.0 | 1 | 0 | 0.0 |
| 10 | 0 | 0 | - | 9 | 9 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 10+ | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| 11 | 0 | 0 | - | 4 | 4 | 100.0 | 4 | 4 | 100.0 | 0 | 0 | - |
| 12 | 0 | 0 | - | 2 | 2 | 100.0 | 4 | 4 | 100.0 | 0 | 0 | - |
| 13 | 0 | 0 | - | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - |
| 14 | 0 | 0 | - | 2 | 2 | 100.0 | 1 | 1 | 100.0 | 0 | 0 | - |
| 15 | 0 | 0 | - | 3 | 3 | 100.0 | 2 | 1 | 50.0 | 0 | 0 | - |
| 16 | 0 | 0 | - | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - |
| 17 | 0 | 0 | - | 3 | 2 | 66.7 | 0 | 0 | - | 0 | 0 | - |
| 18 | 0 | 0 | - | 2 | 1 | 50.0 | 0 | 0 | - | 0 | 0 | - |
| 20 | 0 | 0 | - | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - |
| 21 | 1 | 1 | 100.0 | 0 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| unknown | 0 | 0 | - | 1 | 0 | 0.0 | 0 | 0 | - | 0 | 0 | - |
| Total | 4 | 3 | 75.0 | 311 | 190 | 61.1 | 164 | 90 | 54.8 | 44 | 11 | 25.0 |
| ≥ 10 only | 1 | 1 | 100.0 | 30 | 28 | 93.3 | 15 | 13 | 86.7 | 0 | 0 | - |

| Age | 1969 | | | | | | | | | | | |
|-----------|---------|----|-------|----------|----|-------|-------|----|-------|-------|----|-------|
| | January | | | February | | | March | | | April | | |
| | n | p | % | n | p | % | n | p | % | n | p | % |
| 3 | 2 | 0 | 0.0 | 8 | 0 | 0.0 | 14 | 0 | 0.0 | 3 | 0 | 0.0 |
| 4 | 1 | 0 | 0.0 | 7 | 1 | 14.3 | 4 | 0 | 0.0 | 2 | 0 | 0.0 |
| 5 | 3 | 2 | 66.7 | 10 | 8 | 80.0 | 10 | 8 | 80.0 | 2 | 1 | 50.0 |
| 6 | 0 | 0 | - | 7 | 5 | 71.4 | 9 | 7 | 77.8 | 4 | 4 | 100.0 |
| 7 | 2 | 2 | 100.0 | 11 | 11 | 100.0 | 14 | 13 | 92.9 | 3 | 3 | 100.0 |
| 8 | 1 | 1 | 100.0 | 12 | 11 | 91.7 | 17 | 16 | 94.1 | 1 | 1 | 100.0 |
| 9 | 0 | 0 | - | 9 | 9 | 100.0 | 8 | 7 | 87.5 | 1 | 1 | 100.0 |
| 10 | 0 | 0 | - | 9 | 9 | 100.0 | 7 | 7 | 100.0 | 2 | 2 | 100.0 |
| 10+ | 9 | 8 | 88.9 | 23 | 21 | 91.3 | 33 | 23 | 69.7 | 5 | 4 | 80.0 |
| Total | 18 | 13 | 72.2 | 96 | 75 | 78.1 | 116 | 81 | 69.8 | 23 | 16 | 69.6 |
| ≥ 10 only | 9 | 8 | 88.9 | 32 | 30 | 93.8 | 40 | 30 | 75.0 | 7 | 6 | 85.7 |

Doto

| Age | <u>1963</u> | | | <u>1977</u> | | |
|------------------|-------------|---|-----|-----------------|----|-------|
| | <u>July</u> | | | <u>December</u> | | |
| | n | p | % | n | p | % |
| 3 | 12 | 0 | 0.0 | 2 | 1 | 50.0 |
| 4 | 4 | 0 | 0.0 | 2 | 2 | 100.0 |
| 5 | 0 | 0 | - | 1 | 1 | 100.0 |
| 6 | 0 | 0 | - | 2 | 2 | 100.0 |
| 7 | 1 | 0 | 0.0 | 0 | 0 | - |
| 8 | 0 | 0 | - | 2 | 1 | 50.0 |
| 11 | 0 | 0 | - | 1 | 1 | 100.0 |
| 14 | 0 | 0 | - | 1 | 1 | 100.0 |
| 15 | 0 | 0 | - | 1 | 1 | 100.0 |
| 16 | 0 | 0 | - | 3 | 3 | 100.0 |
| 17 | 0 | 0 | - | 1 | 1 | 100.0 |
| 18 | 0 | 0 | - | 2 | 0 | 0.0 |
| 22 | 0 | 0 | - | 1 | 0 | 0.0 |
| Total | 17 | 0 | 0.0 | 19 | 14 | 73.7 |
| <u>≥ 10 only</u> | 0 | 0 | - | 10 | 7 | 70.0 |

Table 24
Reproductive condition (uterine) of female fur seals.
An X designates unknown age.
(N = nulliparous, P = primiparous, M = multiparous)

| Year and month | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | | |
|-------------------|-------------|----------------|---|---|---|----|---|---|---|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|-----|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 | X |
| | | Sea of Okhotsk | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1972 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Nonpreg. N | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | P | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Preg. P | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Postpart. P | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 6 | 10 | 6 | 0 | 5 | 11 | 2 | 4 | 7 | 6 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| Aug. | Immature | 0 | 0 | 4 | 8 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| | Nonpreg. N | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | P | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 3 | 0 | 4 | 4 | 2 | 2 | 3 | 3 | 4 | 3 | 1 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 42 |
| | Postpart. P | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | M | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 13 | 5 | 12 | 0 | 11 | 13 | 9 | 11 | 5 | 9 | 6 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 0 | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | Nonpreg. N | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | P | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 3 | 2 | 4 | 2 | 2 | 7 | 4 | 4 | 4 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 41 |
| | Preg. M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Postpart. P | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 1 | 4 | 0 | 6 | 11 | 10 | 4 | 3 | 4 | 2 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| | 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 1 | 6 | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | Nonpreg. N | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | J | 0 | 0 | 0 | 0 | 0 | 4 |
| | P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 4 | 4 | 5 | 3 | 6 | 5 | 2 | 2 | 5 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 46 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|----------|-----------|----------|---|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | 25 |

Sea of Okhotsk
(continued)

1976 (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|------------|------------|---|---|---|---|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|-----|
| Sept. | Postpart.P | 0 | 0 | 0 | 0 | 3 | 14 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| | M | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 7 | 11 | 15 | 6 | 0 | 2 | 8 | 5 | 3 | 3 | 2 | 3 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 82 |
| Oct. | Immature | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Nonpreg. P | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Postpart.M | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Nov. | Immature | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Nonpreg. M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| | Postpart.P | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| 1978 | July | Immature | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | Nonpreg. N | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | P | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 1 | 2 | 3 | 6 | 3 | 9 | 9 | 8 | 6 | 6 | 1 | 0 | 1 | 0 | 0 | 64 |
| | Preg. P | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Postpart.P | 0 | 0 | 0 | 0 | 4 | 8 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | | M | 0 | 0 | 0 | 0 | 0 | 10 | 13 | 19 | 16 | 15 | 11 | 0 | 17 | 15 | 12 | 14 | 16 | 19 | 12 | 4 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 201 |
| | Aug. | Immature | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | | Nonpreg. N | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | | P | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | | M | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 2 | 1 | 2 | 2 | 5 | 2 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 27 |
| | | Postpart.P | 0 | 0 | 0 | 0 | 2 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | | M | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 13 | 15 | 11 | 10 | 0 | 8 | 12 | 6 | 8 | 8 | 6 | 14 | 6 | 4 | 1 | 3 | 0 | 0 | 0 | 0 | 134 |

178

Table 25
Reproductive condition (ovarian) of female fur seals.

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|----------------|-------------|----------|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|-----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 |
| Sea of Okhotsk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1974 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 1 | 6 | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | Mature | 0 | 0 | 0 | 0 | 1 | 3 | 7 | 15 | 7 | 7 | 18 | 0 | 13 | 24 | 20 | 22 | 20 | 13 | 12 | 8 | 8 | 3 | 1 | 1 | 1 | 0 | 0 | 204 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 12 |
| | Ovulated | 0 | 0 | 0 | 0 | 1 | 3 | 7 | 13 | 6 | 7 | 18 | 0 | 13 | 24 | 19 | 21 | 19 | 11 | 12 | 8 | 6 | 2 | 0 | 1 | 1 | 0 | 0 | 192 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 3 | 1 | 0 | 4 | 4 | 4 | 2 | 5 | 3 | 2 | 2 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 41 |
| | Pregnant | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 10 | 5 | 4 | 17 | 0 | 9 | 20 | 15 | 19 | 14 | 8 | 10 | 6 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 151 |
| Aug. | Immature | 0 | 0 | 6 | 12 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| | Mature | 0 | 0 | 0 | 0 | 4 | 10 | 14 | 25 | 16 | 9 | 15 | 0 | 20 | 28 | 19 | 20 | 14 | 18 | 19 | 9 | 4 | 5 | 3 | 0 | 1 | 0 | 0 | 253 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 19 |
| | Ovulated | 0 | 0 | 0 | 0 | 4 | 10 | 12 | 24 | 14 | 9 | 15 | 0 | 18 | 27 | 18 | 20 | 14 | 17 | 17 | 7 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 234 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 5 | 1 | 2 | 3 | 0 | 4 | 4 | 6 | 5 | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | Pregnant | 0 | 0 | 0 | 0 | 3 | 8 | 6 | 19 | 13 | 7 | 12 | 0 | 14 | 23 | 12 | 15 | 10 | 15 | 16 | 6 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 187 |
| Sept. | Immature | 3 | 0 | 14 | 12 | 6 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| | Mature | 0 | 0 | 0 | 0 | 4 | 8 | 8 | 12 | 10 | 6 | 11 | 0 | 14 | 12 | 8 | 10 | 15 | 15 | 9 | 8 | 11 | 4 | 3 | 0 | 1 | 0 | 0 | 169 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 1 | 0 | 1 | 0 | 0 | 10 |
| | Ovulated | 0 | 0 | 0 | 0 | 4 | 7 | 8 | 12 | 10 | 6 | 11 | 0 | 14 | 11 | 8 | 10 | 15 | 14 | 9 | 7 | 8 | 3 | 2 | 0 | 0 | 0 | 0 | 159 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| | Pregnant | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 9 | 9 | 6 | 11 | 0 | 12 | 10 | 7 | 10 | 14 | 12 | 9 | 6 | 8 | 3 | 2 | 0 | 0 | 0 | 0 | 139 |
| 1975 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 0 | 3 | 4 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | Mature | 0 | 0 | 0 | 0 | 8 | 11 | 18 | 23 | 15 | 18 | 11 | 0 | 19 | 23 | 24 | 31 | 20 | 20 | 23 | 13 | 12 | 1 | 5 | 2 | 0 | 1 | 2 | 300 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 2 | 15 |
| | Ovulated | 0 | 0 | 0 | 0 | 8 | 11 | 17 | 23 | 14 | 17 | 11 | 0 | 19 | 23 | 24 | 28 | 20 | 19 | 22 | 12 | 11 | 1 | 3 | 1 | 0 | 1 | 0 | 285 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 5 | 3 | 3 | 2 | 2 | 4 | 1 | 0 | 4 | 3 | 0 | 4 | 4 | 5 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 49 |
| | Pregnant | 0 | 0 | 0 | 0 | 3 | 8 | 14 | 21 | 12 | 13 | 10 | 0 | 15 | 20 | 24 | 24 | 16 | 14 | 18 | 10 | 9 | 1 | 3 | 1 | 0 | 0 | 0 | 236 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|------------------|-------------|-------------------------------|---|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|-----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 |
| | | Sea of Okhotsk (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1975 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | Immature | 0 | 0 | 6 | 20 | 14 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | |
| | Mature | 0 | 0 | 0 | 0 | 9 | 15 | 20 | 21 | 21 | 22 | 10 | 0 | 18 | 16 | 27 | 21 | 16 | 14 | 18 | 14 | 5 | 4 | 2 | 1 | 0 | 1 | 0 | 275 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | |
| | Ovulated | 0 | 0 | 0 | 0 | 9 | 15 | 19 | 21 | 21 | 21 | 10 | 0 | 18 | 15 | 25 | 21 | 15 | 14 | 16 | 13 | 4 | 3 | 2 | 1 | 0 | 1 | 0 | 264 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 1 | 5 | 6 | 4 | 4 | 2 | 2 | 0 | 4 | 1 | 4 | 4 | 0 | 0 | 2 | 6 | 1 | 2 | 2 | 1 | 0 | 1 | 0 | 52 |
| | Pregnant | 0 | 0 | 0 | 0 | 8 | 10 | 13 | 17 | 17 | 19 | 8 | 0 | 14 | 14 | 21 | 17 | 15 | 14 | 14 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 212 |
| Sept. | Immature | 0 | 1 | 21 | 18 | 12 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 |
| | Mature | 0 | 0 | 0 | 0 | 7 | 31 | 17 | 17 | 23 | 11 | 10 | 0 | 10 | 12 | 14 | 13 | 7 | 5 | 4 | 2 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 195 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| | Ovulated | 0 | 0 | 0 | 0 | 7 | 31 | 16 | 17 | 23 | 11 | 10 | 0 | 10 | 11 | 14 | 12 | 7 | 4 | 2 | 2 | 4 | 4 | 2 | 0 | 0 | 0 | 0 | 187 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 3 | 6 | 2 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 21 |
| | Pregnant | 0 | 0 | 0 | 0 | 4 | 25 | 14 | 17 | 21 | 10 | 9 | 0 | 10 | 11 | 14 | 11 | 7 | 4 | 2 | 1 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 166 |
| Oct. | Immature | 3 | 2 | 11 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| | Mature | 0 | 0 | 0 | 0 | 1 | 8 | 3 | 4 | 3 | 4 | 2 | 0 | 1 | 2 | 7 | 6 | 3 | 3 | 5 | 3 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 58 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | Ovulated | 0 | 0 | 0 | 0 | 1 | 7 | 3 | 3 | 3 | 3 | 2 | 0 | 1 | 2 | 5 | 5 | 3 | 2 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 49 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | 0 | 0 | 0 | 0 | 1 | 7 | 2 | 2 | 3 | 3 | 2 | 0 | 1 | 2 | 5 | 2 | 2 | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 42 |
| 1976 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aug. | Immature | 0 | 0 | 9 | 16 | 11 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| | Mature | 0 | 0 | 0 | 1 | 7 | 20 | 31 | 29 | 29 | 16 | 14 | 0 | 3 | 17 | 13 | 20 | 17 | 23 | 8 | 4 | 7 | 1 | 3 | 0 | 0 | 0 | 0 | 263 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 11 |
| | Ovulated | 0 | 0 | 0 | 1 | 7 | 20 | 30 | 28 | 29 | 16 | 14 | 0 | 2 | 17 | 12 | 20 | 16 | 21 | 7 | 2 | 7 | 1 | 2 | 0 | 0 | 0 | 0 | 252 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 4 | 2 | 0 | 0 | 1 | 3 | 3 | 4 | 2 | 2 | 2 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 39 |
| | Pregnant | 0 | 0 | 0 | 1 | 7 | 19 | 26 | 23 | 25 | 14 | 14 | 0 | 1 | 14 | 9 | 16 | 14 | 19 | 5 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 213 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|------------------|-------------|-------------------------------|---|----|----|---|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|-----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 |
| | | Sea of Okhotsk (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1976 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sept. | Immature | 3 | 1 | 10 | 15 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | |
| | Mature | 0 | 0 | 0 | 0 | 5 | 17 | 18 | 9 | 11 | 15 | 8 | 0 | 3 | 8 | 7 | 4 | 4 | 3 | 3 | 1 | 2 | 1 | 3 | 1 | 1 | 0 | 0 | 124 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 6 |
| | Ovulated | 0 | 0 | 0 | 0 | 5 | 17 | 18 | 8 | 11 | 15 | 7 | 0 | 2 | 8 | 7 | 4 | 4 | 2 | 3 | 1 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 118 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 13 |
| | Pregnant | 0 | 0 | 0 | 0 | 3 | 16 | 16 | 7 | 11 | 15 | 6 | 0 | 2 | 8 | 5 | 3 | 3 | 2 | 3 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 105 |
| Oct. | Immature | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Mature | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 17 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Ovulated | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 16 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| | Pregnant | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Nov. | Immature | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Mature | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 5 | 4 | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 24 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 5 |
| | Ovulated | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 2 | 3 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 19 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 |
| | Pregnant | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| 1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | Immature | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| | Mature | 0 | 0 | 0 | 0 | 5 | 23 | 21 | 19 | 22 | 22 | 12 | 0 | 18 | 17 | 15 | 20 | 19 | 28 | 21 | 12 | 10 | 8 | 3 | 0 | 1 | 0 | 0 | 296 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 20 |
| | Ovulated | 0 | 0 | 0 | 0 | 5 | 22 | 19 | 19 | 22 | 21 | 12 | 0 | 18 | 17 | 15 | 19 | 18 | 24 | 18 | 9 | 7 | 7 | 3 | 0 | 1 | 0 | 0 | 276 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 6 | 6 | 0 | 0 | 1 | 2 | 3 | 5 | 2 | 5 | 6 | 5 | 3 | 5 | 1 | 0 | 1 | 0 | 0 | 58 |
| | Pregnant | 0 | 0 | 0 | 0 | 5 | 19 | 15 | 19 | 16 | 15 | 12 | 0 | 17 | 15 | 12 | 14 | 16 | 19 | 12 | 4 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 218 |

| Year and month | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|-------------------|-----------|----------|---|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |

Sea of Okhotsk
(continued)

1978 (continued)

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|---|---|---|---|---|----|----|----|----|----|----|---|----|----|---|----|----|----|----|---|---|---|---|---|---|---|---|-----|
| Aug. | Immature | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Mature | 0 | 0 | 0 | 0 | 5 | 16 | 10 | 13 | 18 | 15 | 10 | 0 | 10 | 14 | 7 | 10 | 10 | 11 | 16 | 7 | 8 | 4 | 4 | 0 | 0 | 0 | 0 | 188 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Ovulated | 0 | 0 | 0 | 0 | 5 | 16 | 10 | 13 | 16 | 14 | 10 | 0 | 10 | 14 | 7 | 9 | 10 | 11 | 15 | 7 | 7 | 4 | 4 | 0 | 0 | 0 | 0 | 182 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 2 | 2 | 1 | 1 | 2 | 5 | 1 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 33 |
| | Pregnant | 0 | 0 | 0 | 0 | 2 | 14 | 7 | 13 | 16 | 11 | 10 | 0 | 8 | 12 | 6 | 8 | 8 | 6 | 14 | 6 | 4 | 1 | 3 | 0 | 0 | 0 | 0 | 149 |

| Year and month | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|-------------------|-----------|----------|---|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |

Joban, Sanriku, and Doto

1972

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------------|---|---|---|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|
| Feb. | Immature | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | Mature | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Ovulated | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Pregnant | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| March | Immature | 0 | 0 | 9 | 23 | 28 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| | Mature | 0 | 0 | 0 | 0 | 8 | 39 | 24 | 12 | 20 | 21 | 12 | 0 | 8 | 7 | 6 | 5 | 5 | 8 | 3 | 4 | 6 | 1 | 5 | 0 | 0 | 0 | 0 | 194 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | Ovulated | 0 | 0 | 0 | 0 | 8 | 37 | 23 | 12 | 20 | 21 | 12 | 0 | 8 | 7 | 6 | 5 | 4 | 8 | 3 | 4 | 6 | 1 | 5 | 0 | 0 | 0 | 0 | 190 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 3 | 10 | 7 | 1 | 4 | 4 | 3 | 0 | 2 | 0 | 2 | 1 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 46 |
| | Pregnant | 0 | 0 | 0 | 0 | 5 | 27 | 16 | 11 | 16 | 17 | 9 | 0 | 6 | 7 | 4 | 4 | 2 | 5 | 3 | 3 | 4 | 1 | 4 | 0 | 0 | 0 | 0 | 144 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|------------------|-------------|---|----|---|---|---|----|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 |
| | | Joban, Sanriku, and Doto (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1972 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Immature | 0 | 0 | 4 | 6 | 9 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| | Mature | 0 | 0 | 0 | 0 | 4 | 17 | 5 | 6 | 4 | 4 | 3 | 0 | 6 | 5 | 2 | 0 | 8 | 2 | 1 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 73 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | Ovulated | 0 | 0 | 0 | 0 | 4 | 16 | 5 | 6 | 4 | 4 | 3 | 0 | 6 | 5 | 2 | 0 | 8 | 2 | 1 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 72 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | Pregnant | 0 | 0 | 0 | 0 | 4 | 11 | 4 | 5 | 3 | 4 | 3 | 0 | 5 | 4 | 1 | 0 | 5 | 2 | 1 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 58 |
| May | Immature | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Mature | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Ovulated | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| | Pregnant | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| June | Immature | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Mature | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Ovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Pregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | Immature | 0 | 21 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| | Mature | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 16 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | Ovulated | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 15 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Pregnant | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 14 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------|---|---|---|---|----|---|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Total |
| | | Joban, Sanriku, and Doto (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1978 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Immature | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Mature | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 2 | 0 | 1 | 1 | 4 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 24 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | Ovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 0 | 2 | 0 | 1 | 1 | 4 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 2 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| June | Immature | 0 | 3 | 6 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | Mature | 0 | 0 | 0 | 0 | 12 | 9 | 16 | 14 | 12 | 12 | 11 | 0 | 7 | 5 | 6 | 4 | 10 | 4 | 6 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 136 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Ovulated | 0 | 0 | 0 | 0 | 12 | 9 | 16 | 14 | 12 | 12 | 11 | 0 | 7 | 5 | 6 | 4 | 9 | 4 | 6 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 134 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 7 | 3 | 5 | 4 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 33 |
| | Pregnant | 0 | 0 | 0 | 0 | 5 | 6 | 11 | 10 | 11 | 9 | 10 | 0 | 7 | 5 | 6 | 4 | 6 | 4 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 101 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | | | Total |
|----------|-------------|------------------|---|---|----|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| | | Sanriku and Doto | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1973 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | Immature | 0 | 2 | 8 | 11 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| | Mature | 0 | 0 | 0 | 0 | 6 | 4 | 7 | 7 | 3 | 7 | 4 | 0 | 5 | 4 | 6 | 7 | 4 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 71 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Ovulated | 0 | 0 | 0 | 0 | 6 | 4 | 7 | 6 | 3 | 7 | 3 | 0 | 5 | 4 | 6 | 7 | 4 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 68 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | Pregnant | 0 | 0 | 0 | 0 | 5 | 4 | 6 | 5 | 3 | 7 | 3 | 0 | 3 | 1 | 6 | 7 | 3 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 59 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|------------------|-------------|--|---|----|----|----|----|----|----|---|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|-----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 |
| | | <u>Sanriku and Doto</u> (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1973 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | Immature | 0 | 4 | 15 | 34 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 |
| | Mature | 0 | 0 | 0 | 0 | 6 | 10 | 12 | 13 | 6 | 11 | 14 | 0 | 9 | 2 | 8 | 5 | 2 | 6 | 3 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 113 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | Ovulated | 0 | 0 | 0 | 0 | 6 | 10 | 11 | 13 | 5 | 11 | 12 | 0 | 9 | 2 | 8 | 5 | 1 | 6 | 3 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 108 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 4 | 5 | 7 | 7 | 1 | 2 | 7 | 0 | 3 | 2 | 3 | 3 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 49 |
| | Pregnant | 0 | 0 | 0 | 0 | 2 | 5 | 4 | 6 | 4 | 9 | 5 | 0 | 6 | 0 | 5 | 2 | 1 | 4 | 3 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 59 |

| Year and month | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|-------------------|-------------|--------------------------|---|----|----|----|----|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 |
| | | <u>Joban and Sanriku</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1971 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feb. | Immature | 0 | 0 | 7 | 15 | 20 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| | Mature | 0 | 0 | 0 | 0 | 5 | 16 | 5 | 7 | 3 | 6 | 7 | 15 | 5 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Ovulated | 0 | 0 | 0 | 0 | 5 | 16 | 5 | 7 | 3 | 6 | 7 | 15 | 5 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | Pregnant | 0 | 0 | 0 | 0 | 3 | 14 | 4 | 5 | 2 | 5 | 6 | 13 | 4 | 1 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| March | Immature | 0 | 2 | 18 | 38 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 |
| | Mature | 0 | 0 | 0 | 0 | 10 | 20 | 8 | 2 | 7 | 2 | 7 | 14 | 3 | 7 | 4 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Ovulated | 0 | 0 | 0 | 0 | 10 | 20 | 8 | 2 | 7 | 2 | 7 | 14 | 3 | 7 | 4 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 5 | 3 | 4 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | Pregnant | 0 | 0 | 0 | 0 | 5 | 17 | 4 | 1 | 6 | 2 | 7 | 13 | 2 | 7 | 4 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |

| Year and | | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | |
|------------------|-------------|----------------------------------|---|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|
| month | Condition | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 |
| | | Joban and Sanriku (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1971 (continued) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | Immature | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| | Mature | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Ovulated | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Pregnant | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| May | Immature | 0 | 0 | 2 | 9 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| | Mature | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 3 | 6 | 2 | 2 | 5 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | Ovulated | 0 | 0 | 0 | 0 | 4 | 5 | 3 | 3 | 5 | 2 | 2 | 4 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | Pregnant | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 | 4 | 1 | 2 | 4 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| June | Immature | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Mature | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Ovulated | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | Pregnant | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |

| Year and month | Condition | Age (yr) | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------|-------------|-------------|---|---|---|---|---|---|---|---|---|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | 24 | 25 |
| | | <u>Doto</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1977 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec. | Immature | 8 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | Mature | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 18 |
| | Nonovulated | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| | Ovulated | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 16 |
| | Nonpregnant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| | Pregnant | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |

Table 26

Length and weight of fur seal fetuses, by sex (M = male,
F = female), collected in the Sea of Japan.
(X = mean, n = sample size, and s = standard deviation for n > 10)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|----------------|-----|-------------|---|---|-------|-------------|---|---|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1971</u> | | | | | | | | | | |
| May | 21-30 | M | 63.0 | 2 | - | - | 5.1 | 2 | - | 4.9-5.2 |

Table 26a

Length and weight of fur seal fetuses, by sex (M = male,
F = female), collected in the Sea of Okhotsk.
(x = mean, n = sample size, and s = standard deviation for n > 10)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|----------------|-----|-------------|---|---|-----------|-------------|---|---|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1961</u> | | | | | | | | | | |
| July | 11-20 | M | 60.0 | 1 | - | - | 6.0 | 1 | - | - |
| | | F | 57.0 | 1 | - | - | 5.0 | 1 | - | - |
| <u>1972</u> | | | | | | | | | | |
| July | 1-10 | F | 60.0 | 1 | - | - | 4.7 | 1 | - | - |
| | 11-20 | M | 65.5 | 1 | - | - | 5.8 | 1 | - | - |
| | | F | 61.5 | 3 | - | 61.0-62.0 | 5.6 | 3 | - | 5.1-6.0 |
| <u>1973</u> | | | | | | | | | | |
| July | 11-20 | M | 63.0 | 1 | - | - | 6.1 | 1 | - | - |
| | | F | 63.5 | 1 | - | - | 6.3 | 1 | - | - |
| <u>1974</u> | | | | | | | | | | |
| July | 11-20 | M | 64.3 | 4 | - | 64.0-65.0 | 6.3 | 4 | - | 5.7-6.8 |
| | | F | 59.5 | 2 | - | 59.0-60.0 | 5.9 | 2 | - | 5.3-6.5 |
| <u>1975</u> | | | | | | | | | | |
| July | 1-10 | M | 59.3 | 3 | - | 57.0-63.0 | 5.9 | 3 | - | 5.1-7.0 |
| | | F | 60.0 | 3 | - | 55.0-65.0 | 6.3 | 3 | - | 5.3-7.0 |

Sea of Okhotsk
(continued)

| Month | Ten-day Period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------|-------------------|-----|-------------|---|---|-------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |

1975
(continued)

| | | | | | | | | | | |
|------|-------|---|------|---|---|-----------|-----|---|---|---------|
| July | 11-20 | M | 54.0 | 1 | - | - | 5.8 | 1 | - | - |
| | | F | 54.6 | 4 | - | 53.0-59.0 | 4.5 | 4 | - | 3.9-5.0 |

1978

| | | | | | | | | | | |
|------|-------|---|------|---|---|-----------|-----|---|---|---------|
| July | 11-20 | M | 57.3 | 2 | - | 53.5-61.0 | 4.8 | 2 | - | 3.7-5.9 |
|------|-------|---|------|---|---|-----------|-----|---|---|---------|

Table 26b

Length and weight of fur seal fetuses, by sex (M = male,
F = female), collected off Joban.

(x = mean, n = sample size, and s = standard deviation for n > 10)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------|-------------------|-----|-------------|---|---|-------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |

1958

| | | | | | | | | | | |
|-------|-------|---|------|----|-----|-----------|-----|----|------|---------|
| Feb. | 21-30 | F | 23.0 | 1 | - | - | * | 1 | - | * |
| March | 21-30 | M | 37.5 | 4 | - | 35.0-40.0 | 1.4 | 4 | - | 1.3-1.5 |
| | | F | 34.3 | 8 | - | 25.0-49.0 | 1.2 | 8 | - | 0.7-1.7 |
| April | 1-10 | M | 37.5 | 30 | 0.2 | 27.0-47.0 | 2.6 | 30 | 14.2 | * |
| | | F | 35.2 | 28 | 0.2 | 25.0-45.0 | 3.2 | 28 | 16.9 | * |
| | 21-30 | M | 37.0 | 1 | - | - | 2.3 | 1 | - | - |

1959

| | | | | | | | | | | |
|-------|-------|---|------|----|-----|-----------|-----|----|-----|---------|
| March | 1-10 | M | 32.2 | 6 | - | 30.0-35.0 | 0.8 | 6 | - | 0.7-1.0 |
| | | F | 30.0 | 3 | - | - | 0.7 | 3 | - | 0.7-0.8 |
| | 21-30 | M | 37.0 | 9 | - | 30.0-44.0 | 1.6 | 9 | - | 1.3-2.3 |
| | | F | 33.9 | 10 | 0.1 | 30.0-44.0 | 1.3 | 10 | 4.0 | 0.8-2.2 |
| April | 1-10 | M | 37.4 | 34 | 0.2 | 20.0-45.0 | 1.5 | 34 | 8.9 | 0.6-2.5 |
| | | F | 36.2 | 21 | 0.2 | 25.0-45.0 | 1.3 | 21 | 6.1 | 0.6-2.5 |
| | 11-20 | M | 42.5 | 2 | - | 40.0-45.0 | 2.0 | 2 | - | - |
| | | F | 40.0 | 3 | - | 35.0-45.0 | 2.2 | 3 | - | 2.0-2.5 |
| | 21-30 | F | 46.3 | 3 | - | 42.0-50.0 | 2.9 | 3 | - | 2.2-3.5 |

Joban
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|-------------------|------|-------------|-----|-----------|-----------|-------------|-----|---------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1962</u> | | | | | | | | | | |
| Feb. | 11-20 | M | 30.0 | 1 | - | - | 0.7 | 1 | - | - |
| | | F | 27.0 | 1 | - | - | 0.6 | 1 | - | - |
| | 21-30 | F | 29.0 | 2 | - | 28.0-30.0 | 0.6 | 2 | - | 0.5-0.7 |
| March | 11-20 | M | 35.1 | 13 | 0.1 | 30.0-40.0 | 1.1 | 13 | 3.9 | 0.7-1.3 |
| | | F | 33.5 | 19 | 0.1 | 30.0-40.0 | 1.0 | 19 | 4.1 | 0.7-1.5 |
| | 21-30 | M | 38.3 | 3 | - | 35.0-42.0 | 1.2 | 3 | - | 1.0-1.5 |
| April | 1-10 | M | 42.1 | 16 | 0.2 | 37.0-48.0 | 1.7 | 16 | 6.9 | 1.4-2.5 |
| | | F | 37.9 | 17 | 0.2 | 31.0-43.0 | 1.5 | 17 | 6.3 | 1.2-2.5 |
| | 11-20 | M | 44.4 | 28 | 0.2 | 40.0-53.0 | 1.9 | 28 | 10.0 | 1.5-2.3 |
| F | | 41.7 | 20 | 0.2 | 32.0-50.0 | 1.7 | 20 | 7.4 | 1.1-2.1 | |
| <u>1963</u> | | | | | | | | | | |
| March | 21-30 | M | 37.7 | 8 | - | 31.2-45.0 | 1.2 | 8 | - | 0.9-1.5 |
| | | F | 35.9 | 7 | - | 32.0-40.0 | 1.0 | 7 | - | 0.6-1.2 |
| April | 1-10 | M | 43.0 | 5 | - | 34.0-50.0 | 1.7 | 5 | - | 0.4-2.5 |
| | | M | 42.2 | 5 | - | 34.0-45.0 | 1.9 | 5 | - | 1.8-2.0 |
| | | F | 43.4 | 5 | - | 40.0-45.0 | 1.8 | 5 | - | 1.6-2.0 |
| <u>1964</u> | | | | | | | | | | |
| March | 21-30 | M | 43.0 | 1 | - | - | 1.3 | 1 | - | - |
| | | F | 31.0 | 1 | - | - | 1.0 | 1 | - | - |
| <u>1965</u> | | | | | | | | | | |
| March | 1-10 | M | 33.5 | 4 | - | 31.0-35.0 | 1.0 | 4 | - | 0.8-1.5 |
| | | F | 30.7 | 7 | - | 25.0-35.0 | 0.8 | 7 | - | 0.6-1.0 |
| | 11-20 | M | 35.7 | 20 | 0.2 | 27.0-46.0 | 1.1 | 20 | 5.1 | 0.9-1.6 |
| F | | 31.5 | 19 | 0.1 | 26.0-38.0 | 0.9 | 19 | 3.7 | 0.5-1.2 | |
| | 21-30 | M | 38.1 | 7 | - | 34.0-42.0 | 1.4 | 7 | - | 1.0-2.5 |
| F | | 36.8 | 9 | - | 27.0-40.0 | 1.2 | 9 | - | 0.8-1.8 | |
| April | 11-20 | M | 44.7 | 18 | 0.2 | 39.0-50.0 | 2.1 | 18 | 8.7 | 1.4-2.6 |
| | | F | 46.2 | 5 | - | 43.0-48.0 | 2.0 | 5 | - | 1.6-2.3 |
| | 21-30 | M | 48.8 | 6 | - | 45.0-55.0 | 2.5 | 6 | - | 2.3-2.8 |
| F | | 47.9 | 8 | - | 44.0-53.0 | 2.3 | 8 | - | 1.5-3.0 | |
| May | 1-10 | M | 50.9 | 11 | 0.2 | 46.0-54.0 | 2.7 | 11 | 9.1 | 2.0-3.3 |
| | | F | 49.3 | 6 | - | 43.0-55.0 | 2.3 | 6 | - | 1.7-2.8 |
| <u>1966</u> | | | | | | | | | | |
| March | 11-20 | M | 34.5 | 2 | - | 34.0-35.0 | 1.1 | 2 | - | 1.0-1.3 |
| | | F | 33.0 | 1 | - | - | 0.8 | 1 | - | - |

Joban
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | | |
|-------------|----------------|-------|-------------|------|-----------|-----------|-------------|-----------|---------|---------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range | |
| <u>1967</u> | | | | | | | | | | | |
| January | 21-30 | M | 12.6 | 1 | - | - | 0.1 | 1 | - | - | |
| | | F | 14.6 | 1 | - | - | 0.1 | 1 | - | - | |
| March | 1-10 | F | 29.3 | 2 | - | 29.2-29.3 | 0.9 | 2 | - | - | |
| <u>1968</u> | | | | | | | | | | | |
| Feb. | 1-10 | F | 23.0 | 1 | - | - | 0.3 | 1 | - | - | |
| | 11-20 | M | 26.1 | 10 | 0.1 | 20.0-29.5 | 0.5 | 10 | 1.5 | 0.3-0.6 | |
| | | F | 26.5 | 9 | - | 23.0-30.5 | 0.5 | 9 | - | 0.3-0.7 | |
| | | M | 32.4 | 18 | 0.1 | 26.5-36.0 | 0.8 | 18 | 3.5 | 0.5-1.2 | |
| | | F | 30.3 | 16 | 0.1 | 25.0-35.0 | 0.7 | 16 | 2.7 | 0.4-0.9 | |
| | | March | 11-20 | M | 33.3 | 6 | - | 28.0-38.0 | 1.0 | 6 | - |
| | F | | 32.6 | 4 | - | 30.0-35.5 | 0.9 | 4 | - | 0.7-1.0 | |
| | | 21-30 | M | 41.3 | 12 | 0.1 | 38.0-44.5 | 1.6 | 12 | 5.5 | 1.3-1.8 |
| | | F | 40.6 | 7 | - | 37.5-44.0 | 1.5 | 7 | - | 1.3-1.7 | |
| | April | 1-10 | M | 44.4 | 4 | - | 39.0-48.5 | 2.3 | 4 | - | 1.8-2.6 |
| <u>1970</u> | | | | | | | | | | | |
| Feb. | 1-10 | M | 24.3 | 25 | 0.1 | 21.0-28.0 | 0.4 | 25 | 2.0 | 0.2-0.6 | |
| | | F | 23.8 | 22 | 0.1 | 16.5-27.5 | 0.4 | 22 | 1.8 | 0.1-0.6 | |
| | 11-20 | M | 26.9 | 5 | - | 25.0-29.0 | 0.5 | 5 | - | 0.4-0.6 | |
| | | F | 25.3 | 8 | - | 22.5-27.0 | 0.5 | 8 | - | 0.3-0.6 | |
| March | 1-10 | M | 33.5 | 5 | - | 28.0-37.0 | 1.0 | 5 | - | 0.6-1.2 | |
| | | F | 33.8 | 6 | - | 32.0-37.0 | 1.0 | 6 | - | 0.8-1.2 | |
| | 11-20 | M | 35.3 | 39 | 0.2 | 29.0-40.0 | 1.1 | 39 | 7.1 | 0.8-1.5 | |
| | | F | 33.5 | 47 | 0.2 | 28.0-37.0 | 1.0 | 47 | 6.9 | 0.6-1.4 | |
| | 21-30 | M | 40.9 | 37 | 0.2 | 34.0-46.0 | 1.5 | 37 | 9.3 | 1.1-2.2 | |
| | | F | 38.6 | 39 | 0.2 | 34.0-44.0 | 1.3 | 39 | 8.0 | 0.8-1.7 | |
| | April | 1-10 | M | 44.0 | 1 | - | - | 1.6 | 1 | - | - |
| | | F | 43.3 | 2 | - | 41.5-45.0 | 1.7 | 2 | - | 1.6-1.8 | |
| <u>1971</u> | | | | | | | | | | | |
| March | 1-10 | M | 33.0 | 2 | - | 26.5-39.5 | 0.8 | 2 | - | 0.5-1.1 | |
| | 11-20 | M | 36.2 | 29 | 0.2 | 28.0-44.0 | 1.2 | 29 | 6.3 | 0.7-1.8 | |
| | | F | 33.3 | 21 | 0.1 | 25.0-39.0 | 1.0 | 21 | 4.5 | 0.7-1.4 | |
| | 21-30 | M | 40.4 | 8 | - | 35.0-46.0 | 1.5 | 8 | - | 1.2-2.0 | |
| F | | 41.8 | 6 | - | 37.0-48.0 | 1.4 | 6 | - | 1.1-1.7 | | |
| April | 1-10 | M | 41.2 | 3 | - | 38.0-43.0 | 1.6 | 3 | - | 1.4-2.0 | |
| | | F | 39.8 | 6 | - | 35.0-45.0 | 1.5 | 6 | - | 1.2-1.8 | |

Joban
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|----------------|-----|-------------|----|-----|-----------|-------------|----|-----|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1972</u> | | | | | | | | | | |
| Feb. | 21-30 | M | 28.3 | 2 | - | 26.0-30.5 | 0.7 | 2 | - | 0.5-0.8 |
| March | 1-10 | M | 31.0 | 1 | - | - | 0.9 | 1 | - | - |
| | 11-20 | M | 38.8 | 2 | - | 36.5-41.0 | 1.4 | 2 | - | 1.3-1.5 |
| | | F | 34.7 | 3 | - | 33.5-37.0 | 1.1 | 3 | - | 1.0-1.2 |
| | 21-30 | M | 39.9 | 7 | - | 37.0-41.5 | 1.4 | 7 | - | 1.1-1.6 |
| | | F | 37.5 | 5 | - | 34.0-41.0 | 1.3 | 5 | - | 1.0-1.6 |
| April | 1-10 | M | 43.1 | 26 | 0.2 | 37.0-50.0 | 1.8 | 26 | 9.0 | 1.2-2.4 |
| | | F | 41.1 | 23 | 0.2 | 37.0-50.0 | 1.6 | 23 | 7.5 | 1.3-2.3 |
| <u>1978</u> | | | | | | | | | | |
| May | 21-30 | M | 58.0 | 1 | - | - | 4.8 | 1 | - | - |
| | | F | 51.0 | 5 | - | 49.0-52.0 | 3.7 | 5 | - | 3.4-4.0 |

*

Table 26c
Length and weight of fur seal fetuses, by sex (M = male,
F = female), collected off Sanriku.
(\bar{x} = mean, n = sample size, and s = standard deviation for n \geq 10)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1958</u> | | | | | | | | | | |
| Feb. | 1-10 | M | 25.0 | 1 | - | - | 0.4 | 1 | - | - |
| | | F | 18.7 | 6 | - | 14.0-23.0 | 0.1 | 6 | - | 0.1-0.2 |
| | 21-30 | M | 30.0 | 5 | - | 27.0-34.0 | * | 5 | - | * |
| | | F | 25.7 | 3 | - | 23.0-28.0 | 6.8 | 3 | - | * |
| March | 1-10 | F | 28.0 | 1 | - | - | 0.5 | 1 | - | - |
| | 11-20 | M | 30.0 | 2 | - | - | 5.7 | 2 | - | * |
| | 21-30 | M | 36.9 | 12 | 0.1 | 32.0-45.0 | 2.0 | 12 | 6.7 | * |
| | | F | 35.8 | 5 | - | 33.0-38.0 | 1.2 | 5 | - | 1.1-1.4 |
| April | 1-10 | M | 41.4 | 27 | 0.2 | 30.4-50.0 | 2.1 | 27 | 10.7 | * |
| | | F | 39.4 | 30 | 0.2 | 30.0-45.0 | 2.4 | 30 | 13.2 | * |
| | 11-20 | M | 43.1 | 16 | 0.2 | 33.0-50.0 | 2.0 | 16 | 7.9 | 0.8-3.0 |
| | | F | 43.0 | 18 | 0.2 | 30.0-47.0 | 1.9 | 18 | 7.9 | 1.2-2.2 |
| | 21-30 | M | 47.0 | 83 | 0.4 | 35.0-57.0 | 2.6 | 83 | 24.1 | 1.0-4.2 |
| | | F | 46.1 | 76 | 0.4 | 30.7-55.0 | 2.5 | 76 | 22.3 | 1.5-5.3 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|----------------------------|----------------|------|-------------|-----|-----------|-----------|-------------|------|---------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1958</u> (continued) | | | | | | | | | | |
| May | 1-10 | M | 51.5 | 34 | 0.3 | 43.0-60.0 | 3.4 | 34 | 19.8 | 2.5-5.5 |
| | | F | 48.6 | 16 | 0.2 | 35.0-54.0 | 2.8 | 16 | 11.2 | 1.9-4.6 |
| | 11-20 | M | 52.3 | 55 | 0.4 | 40.0-62.0 | 3.7 | 55 | 27.1 | 2.0-5.5 |
| | | F | 51.1 | 72 | 0.4 | 40.0-60.0 | 3.4 | 72 | 29.2 | 2.3-5.0 |
| | 21-30 | M | 53.6 | 36 | 0.3 | 50.0-60.0 | 4.0 | 36 | 24.1 | 2.9-5.1 |
| F | | 52.9 | 30 | 0.3 | 45.0-60.0 | 3.8 | 30 | 20.7 | 3.0-5.8 | |
| June | 1-10 | M | 56.0 | 8 | - | 51.0-62.0 | 5.1 | 8 | - | 3.5-6.2 |
| | | F | 55.8 | 17 | 0.2 | 50.0-60.0 | 4.9 | 17 | 20.0 | 3.4-6.0 |
| | 11-20 | M | 51.5 | 2 | - | 45.0-58.0 | 5.3 | 2 | - | 5.0-5.6 |
| | | F | 48.0 | 1 | - | - | 3.5 | 1 | - | - |
| | 21-30 | M | 58.3 | 3 | - | 55.0-60.0 | 6.6 | 3 | - | 5.8-7.6 |
| <u>1959</u> | | | | | | | | | | |
| Feb. | 11-20 | M | 27.5 | 2 | - | 25.0-30.0 | 0.6 | 2 | - | - |
| | 21-30 | M | 29.4 | 17 | 0.1 | 25.0-35.0 | 0.6 | 17 | 2.4 | 0.2-0.9 |
| | | F | 27.5 | 22 | 0.1 | 22.0-32.0 | 0.5 | 22 | 2.4 | 0.1-0.8 |
| March | 1-10 | M | 32.8 | 19 | 0.1 | 25.0-45.0 | 0.8 | 19 | 3.4 | 0.3-1.3 |
| | | F | 30.2 | 22 | 0.1 | 29.0-36.0 | 0.7 | 22 | 3.3 | 0.1-1.0 |
| | 11-20 | M | 33.8 | 32 | 0.2 | 24.0-45.0 | 1.1 | 32 | 6.1 | 0.5-1.5 |
| | | F | 32.5 | 24 | 0.2 | 26.0-40.0 | 1.0 | 24 | 5.0 | 0.5-2.0 |
| | 21-30 | M | 35.9 | 24 | 0.2 | 26.0-42.0 | 1.4 | 24 | 6.6 | 0.7-2.0 |
| F | | 35.9 | 13 | 0.1 | 30.0-42.0 | 1.3 | 13 | 4.5 | 0.9-1.6 | |
| April | 1-10 | M | 37.6 | 41 | 0.2 | 31.0-45.0 | 1.4 | 41 | 8.9 | 0.6-2.8 |
| | | F | 37.0 | 34 | 0.2 | 31.0-45.0 | 1.4 | 34 | 8.3 | 0.6-2.5 |
| | 11-20 | M | 45.0 | 43 | 0.3 | 35.0-55.0 | 2.6 | 43 | 17.1 | 1.4-4.0 |
| | | F | 43.2 | 53 | 0.3 | 31.0-51.0 | 2.3 | 53 | 16.8 | 1.6-5.5 |
| | 21-30 | M | 48.3 | 46 | 0.3 | 42.0-57.0 | 2.9 | 46 | 19.4 | 1.4-5.0 |
| F | | 46.0 | 54 | 0.3 | 35.0-59.0 | 2.6 | 54 | 18.9 | 1.5-4.0 | |
| May | 1-10 | M | 51.1 | 7 | - | 45.0-56.0 | 4.1 | 7 | - | 3.0-5.5 |
| | | F | 49.3 | 6 | - | 45.0-55.0 | 4.2 | 6 | - | 3.5-5.0 |
| | 11-20 | M | 52.8 | 34 | 0.3 | 36.0-60.0 | 3.9 | 34 | 22.5 | 1.5-7.0 |
| | | F | 51.8 | 30 | 0.3 | 45.0-60.0 | 3.4 | 30 | 18.4 | 1.2-5.8 |
| | 21-30 | M | 54.2 | 27 | 0.3 | 45.0-63.0 | 5.3 | 27 | 27.6 | 2.8-7.0 |
| F | | 49.3 | 31 | 0.3 | 35.0-55.0 | 4.4 | 31 | 24.4 | 2.3-7.2 | |
| June | 1-10 | M | 55.0 | 1 | - | - | 4.5 | 1 | - | - |
| | | F | 53.0 | 5 | - | 42.0-59.0 | 4.1 | 5 | - | 3.4-4.8 |
| | 21-30 | M | 54.5 | 2 | - | 53.0-56.0 | 5.2 | 2 | - | 5.0-5.5 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | | | | | | | | | | |
| March | 11-20 | M | 38.7 | 6 | - | 33.0-45.0 | 1.2 | 6 | - | 0.8-1.9 |
| | | F | 33.5 | 6 | - | 25.0-40.0 | 1.1 | 6 | - | 0.6-1.6 |
| April | 1-10 | M | 43.3 | 40 | 0.3 | 39.0-49.0 | 1.9 | 40 | 12.1 | 1.4-2.6 |
| | | F | 41.5 | 37 | 0.2 | 32.0-55.0 | 1.6 | 37 | 10.0 | 1.0-2.7 |
| | 11-20 | M | 44.5 | 58 | 0.3 | 35.0-53.0 | 2.1 | 58 | 16.3 | 1.4-3.3 |
| | | F | 43.8 | 59 | 0.3 | 35.0-51.0 | 2.0 | 59 | 15.3 | 1.3-3.0 |
| | 21-30 | M | 47.3 | 30 | 0.3 | 40.0-55.0 | 2.8 | 30 | 15.2 | 2.0-3.5 |
| | | F | 43.4 | 19 | 0.2 | 23.0-50.0 | 2.2 | 19 | 9.7 | 1.2-3.0 |
| May | 1-10 | M | 51.4 | 33 | 0.3 | 45.0-57.0 | 3.1 | 33 | 18.0 | 2.3-3.8 |
| | | F | 49.4 | 20 | 0.2 | 40.0-55.0 | 2.8 | 20 | 12.7 | 2.1-3.5 |
| | 11-20 | M | 57.5 | 2 | - | 55.0-60.0 | 4.0 | 2 | - | 4.0-4.1 |
| | | F | 52.0 | 1 | - | - | 3.2 | 1 | - | - |
| | 21-30 | M | 54.3 | 45 | 0.4 | 43.0-63.0 | 3.9 | 45 | 26.2 | 2.7-5.4 |
| | | F | 52.1 | 61 | 0.4 | 40.0-60.0 | 3.6 | 61 | 28.2 | 2.3-5.6 |
| June | 1-10 | M | 55.7 | 10 | 0.2 | 45.0-64.0 | 4.6 | 10 | 14.5 | 3.6-6.1 |
| | | F | 52.7 | 20 | 0.2 | 45.0-60.0 | 4.2 | 20 | 18.6 | 3.3-5.2 |
| | 11-20 | F | 56.5 | 1 | - | - | 5.3 | 1 | - | - |
| 1961 | | | | | | | | | | |
| March | 11-20 | M | 35.8 | 9 | - | 33.0-38.0 | 1.3 | 9 | - | 1.0-1.5 |
| | | F | 38.7 | 9 | - | 29.0-53.0 | 1.2 | 9 | - | 0.8-1.7 |
| | 21-30 | M | 39.0 | 2 | - | 38.0-40.0 | 1.4 | 2 | - | 1.4-1.5 |
| | | F | 36.0 | 5 | - | 35.0-37.0 | 1.4 | 5 | - | 1.3-1.6 |
| April | 1-10 | M | 42.8 | 13 | 0.1 | 30.0-50.0 | 1.9 | 13 | 6.7 | 1.2-2.5 |
| | | F | 42.6 | 11 | 0.1 | 35.0-57.0 | 1.7 | 11 | 5.6 | 1.2-2.1 |
| | 11-20 | M | 46.4 | 45 | 0.3 | 40.0-66.0 | 2.5 | 45 | 16.8 | 1.5-4.0 |
| | | F | 43.7 | 38 | 0.3 | 30.0-54.0 | 2.0 | 38 | 12.4 | 1.3-2.7 |
| | 21-30 | M | 49.9 | 47 | 0.3 | 35.0-60.0 | 2.7 | 47 | 18.4 | 1.3-4.0 |
| | | F | 48.6 | 46 | 0.3 | 42.0-59.0 | 2.3 | 46 | 16.0 | 1.2-3.7 |
| May | 1-10 | M | 49.0 | 6 | - | 46.0-52.0 | 3.2 | 6 | - | 2.5-4.2 |
| | | F | 48.5 | 4 | - | 46.0-52.0 | 2.8 | 4 | - | 2.5-3.3 |
| | 11-20 | M | 53.3 | 94 | 0.5 | 44.0-66.0 | 4.1 | 94 | 39.9 | 2.5-7.0 |
| | | F | 50.6 | 96 | 0.5 | 24.0-64.0 | 3.6 | 96 | 35.2 | 2.0-6.5 |
| | 21-30 | M | 57.0 | 3 | - | 55.0-61.0 | 4.4 | 3 | - | 4.2-4.8 |
| | | F | 53.2 | 9 | - | 40.0-60.0 | 4.0 | 9 | - | 3.5-4.6 |
| June | 1-10 | M | 55.0 | 2 | - | - | 4.0 | 2 | - | 3.5-4.5 |
| | | F | 54.0 | 1 | - | - | 4.0 | 1 | - | - |
| 1962 | | | | | | | | | | |
| Feb. | 1-10 | M | 28.0 | 1 | - | - | 0.7 | 1 | - | - |
| March | 11-20 | F | 33.0 | 3 | - | 32.0-35.0 | 0.8 | 3 | - | 0.7-0.9 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|---------------------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1962 (continued) | | | | | | | | | | |
| April | 11-20 | M | 45.9 | 67 | 0.4 | 32.0-54.0 | 2.2 | 67 | 18.3 | 1.0-3.5 |
| | | F | 44.1 | 74 | 0.4 | 32.0-55.0 | 2.0 | 74 | 17.4 | 1.2-3.5 |
| | 21-30 | M | 46.9 | 32 | 0.3 | 40.0-52.0 | 2.5 | 32 | 14.1 | 1.6-3.6 |
| | | F | 45.8 | 29 | 0.2 | 32.0-55.0 | 2.3 | 29 | 12.3 | 0.8-3.3 |
| May | 1-10 | M | 55.0 | 1 | - | - | 3.5 | 1 | - | - |
| | | F | 52.0 | 1 | - | - | 2.7 | 1 | - | - |
| | 11-20 | M | 52.5 | 13 | 0.2 | 45.0-60.0 | 3.6 | 13 | 12.8 | 2.8-4.3 |
| | | F | 49.9 | 18 | 0.2 | 45.0-60.0 | 3.0 | 18 | 12.8 | 2.2-3.8 |
| | 21-30 | M | 50.8 | 13 | 0.2 | 45.0-56.0 | 3.7 | 13 | 13.5 | 3.0-4.5 |
| | | F | 51.4 | 32 | 0.3 | 40.0-58.0 | 3.7 | 32 | 20.7 | 2.5-5.0 |
| June | 11-20 | M | 55.8 | 6 | - | 40.0-65.0 | 5.0 | 6 | - | 4.7-5.5 |
| | | F | 54.3 | 3 | - | 48.0-58.0 | 4.3 | 3 | - | 3.5-5.0 |
| | 21-30 | M | 55.0 | 1 | - | - | 5.0 | 1 | - | - |
| | | F | 57.0 | 1 | - | - | 5.4 | 1 | - | - |
| 1963 | | | | | | | | | | |
| March | 21-30 | F | 35.0 | 1 | - | - | 1.5 | 1 | - | - |
| April | 1-10 | M | 41.0 | 2 | - | 40.0-42.0 | 0.5 | 2 | - | - |
| | | F | 40.0 | 1 | - | - | 0.6 | 1 | - | - |
| | 11-20 | M | 45.0 | 13 | 0.2 | 40.0-50.0 | 1.9 | 13 | 7.0 | 1.1-2.8 |
| | | F | 44.2 | 10 | 0.1 | 40.0-50.0 | 1.8 | 10 | 5.6 | 1.3-2.2 |
| | 21-30 | M | 47.4 | 32 | 0.3 | 42.0-54.0 | 2.4 | 32 | 13.5 | 2.0-3.0 |
| | | F | 45.8 | 35 | 0.3 | 37.0-50.0 | 2.1 | 35 | 12.7 | 1.5-2.8 |
| May | 1-10 | M | 50.6 | 15 | 0.2 | 47.0-53.0 | 2.8 | 15 | 10.8 | 2.4-3.3 |
| | | F | 50.1 | 17 | 0.2 | 45.0-55.0 | 2.7 | 17 | 11.0 | 2.1-3.2 |
| | 11-20 | M | 51.9 | 63 | 0.4 | 45.0-59.0 | 3.4 | 63 | 27.0 | 2.3-4.3 |
| | | F | 50.4 | 70 | 0.4 | 45.0-55.0 | 3.0 | 70 | 25.4 | 2.0-4.0 |
| | 21-30 | M | 54.3 | 16 | 0.2 | 50.0-62.0 | 3.9 | 16 | 15.6 | 2.7-5.0 |
| | | F | 53.0 | 21 | 0.2 | 45.0-60.0 | 3.5 | 21 | 16.2 | 3.0-4.5 |
| June | 1-10 | M | 57.1 | 12 | 0.2 | 52.0-60.0 | 4.2 | 12 | 14.6 | 3.6-5.0 |
| | | F | 53.4 | 23 | 0.2 | 45.0-60.0 | 4.0 | 23 | 19.1 | 3.5-5.0 |
| | 11-20 | M | 58.4 | 23 | 0.3 | 54.0-65.0 | 4.7 | 23 | 22.5 | 3.1-6.5 |
| | | F | 55.9 | 25 | 0.3 | 45.0-62.0 | 4.1 | 25 | 20.5 | 3.2-5.3 |
| | 21-30 | M | 57.0 | 1 | - | - | 3.5 | 1 | - | - |
| | | F | 57.0 | 1 | - | - | 4.5 | 1 | - | - |
| 1964 | | | | | | | | | | |
| March | 1-10 | M | 33.7 | 15 | 0.1 | 29.0-40.0 | 1.0 | 15 | 3.7 | 0.5-1.3 |
| | | F | 30.0 | 11 | 0.1 | 20.0-35.0 | 0.8 | 11 | 2.4 | 0.4-1.0 |
| | 11-20 | M | 36.4 | 11 | 0.1 | 32.0-42.0 | 1.3 | 11 | 4.1 | 1.0-1.7 |
| | | F | 35.7 | 13 | 0.1 | 28.0-42.0 | 1.5 | 13 | 5.4 | 0.8-6.0 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|---------------------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1964 (continued) | | | | | | | | | | |
| March | 21-30 | M | 40.4 | 44 | 0.3 | 32.0-47.0 | 1.5 | 44 | 10.1 | 1.0-2.0 |
| | | F | 38.7 | 47 | 0.3 | 32.0-45.0 | 1.4 | 47 | 9.5 | 1.0-2.2 |
| April | 1-10 | M | 41.7 | 3 | - | 40.0-45.0 | 1.7 | 3 | - | 1.4-1.8 |
| | | F | 40.5 | 2 | - | 40.0-41.0 | 1.5 | 2 | - | 1.5-1.6 |
| | 11-20 | M | 46.7 | 6 | - | 40.0-55.0 | 2.2 | 6 | - | 1.7-2.8 |
| | | F | 45.0 | 14 | 0.2 | 37.0-50.0 | 2.0 | 14 | 7.4 | 1.3-2.6 |
| May | 21-30 | M | 50.0 | 46 | 0.3 | 20.0-60.0 | 2.6 | 46 | 17.3 | 1.9-3.5 |
| | | F | 48.2 | 41 | 0.3 | 39.0-55.0 | 2.4 | 41 | 15.1 | 1.7-3.5 |
| | 1-10 | M | 51.6 | 24 | 0.2 | 40.0-60.0 | 3.1 | 24 | 15.3 | 2.5-4.0 |
| | | F | 50.6 | 27 | 0.3 | 45.0-67.0 | 2.9 | 27 | 14.9 | 1.8-4.0 |
| | 11-20 | M | 54.8 | 65 | 0.4 | 45.0-60.0 | 3.7 | 65 | 30.0 | 2.7-4.7 |
| | | F | 52.8 | 84 | 0.5 | 42.0-66.0 | 3.3 | 84 | 30.6 | 2.5-4.5 |
| June | 1-10 | M | 57.9 | 10 | 0.2 | 50.0-65.0 | 5.0 | 10 | 15.9 | 3.4-6.5 |
| | | F | 55.3 | 10 | 0.2 | 51.0-60.0 | 4.1 | 10 | 12.9 | 3.5-5.5 |
| | 11-20 | M | 58.3 | 7 | - | 55.0-65.0 | 5.1 | 7 | - | 4.5-5.7 |
| | | F | 54.8 | 6 | - | 48.0-58.0 | 5.0 | 6 | - | 3.8-6.0 |
| 1965 | | | | | | | | | | |
| March | 1-10 | M | 32.3 | 4 | - | 28.0-36.0 | 0.9 | 4 | - | 0.5-1.2 |
| | | F | 30.5 | 4 | - | 28.0-33.0 | 0.8 | 4 | - | 0.6-1.2 |
| | 11-20 | M | 35.0 | 1 | - | - | 1.0 | 1 | - | - |
| | 21-30 | M | 40.0 | 1 | - | - | 1.6 | 1 | - | - |
| April | 1-10 | F | 44.0 | 1 | - | - | 1.6 | 1 | - | - |
| | | F | 43.0 | 1 | - | - | 1.9 | 1 | - | - |
| | 21-30 | M | 48.0 | 1 | - | - | 2.6 | 1 | - | - |
| | | F | 46.5 | 2 | - | 45.0-48.0 | 2.1 | 2 | - | 1.7-2.5 |
| May | 1-10 | M | 51.4 | 20 | 0.2 | 42.0-58.0 | 2.9 | 20 | 12.8 | 1.5-3.6 |
| | | F | 48.2 | 14 | 0.2 | 38.0-52.0 | 2.5 | 14 | 9.5 | 2.0-3.5 |
| | 11-20 | M | 53.6 | 43 | 0.3 | 42.0-60.0 | 3.7 | 43 | 24.4 | 2.9-4.8 |
| | | F | 51.2 | 47 | 0.3 | 35.0-59.0 | 3.2 | 47 | 21.7 | 1.5-4.3 |
| | 21-30 | M | 55.8 | 20 | 0.2 | 50.0-61.0 | 4.3 | 20 | 19.3 | 3.5-5.2 |
| | | F | 53.8 | 23 | 0.3 | 40.0-60.0 | 3.7 | 23 | 17.8 | 2.5-4.8 |
| June | 1-10 | M | 58.0 | 14 | 0.2 | 52.0-68.0 | 4.7 | 14 | 17.6 | 4.0-6.3 |
| | | F | 54.5 | 16 | 0.2 | 50.0-60.0 | 4.3 | 16 | 17.2 | 3.5-5.0 |
| | 11-20 | M | 59.2 | 25 | 0.3 | 50.0-69.0 | 5.1 | 25 | 25.6 | 3.0-7.0 |
| | | F | 57.0 | 36 | 0.3 | 46.0-65.0 | 4.5 | 36 | 27.3 | 3.3-6.0 |
| | 21-30 | M | 61.0 | 5 | - | 57.0-65.0 | 6.2 | 5 | - | 5.3-7.0 |
| | | F | 58.0 | 7 | - | 50.0-62.0 | 5.2 | 7 | - | 4.5-6.5 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | | |
|-------|----------------|-------|-------------|------|-----|-----------|-------------|-----|------|---------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range | |
| 1966 | | | | | | | | | | | |
| March | 1-10 | M | 36.0 | 1 | - | - | 1.1 | 1 | - | - | |
| | | F | 31.8 | 9 | - | 29.5-37.0 | 0.7 | 9 | - | 0.5-1.0 | |
| | 11-20 | M | 36.2 | 9 | - | 34.0-38.0 | 1.2 | 9 | - | 1.1-1.3 | |
| | | F | 34.4 | 8 | - | 32.0-37.0 | 1.0 | 8 | - | 0.9-1.1 | |
| | 21-30 | M | 40.4 | 8 | - | 37.0-50.0 | 1.6 | 8 | - | 1.1-2.7 | |
| April | 1-10 | F | 37.7 | 11 | 0.1 | 32.0-40.5 | 1.2 | 11 | 4.0 | 0.8-1.5 | |
| | | M | 42.7 | 15 | 0.2 | 37.5-47.5 | 1.7 | 15 | 6.6 | 1.2-2.2 | |
| | 11-20 | F | 41.0 | 13 | 0.1 | 39.0-46.5 | 1.5 | 13 | 5.2 | 1.3-1.7 | |
| | | M | 45.6 | 25 | 0.2 | 39.6-51.0 | 2.1 | 25 | 10.7 | 1.4-2.9 | |
| | 21-30 | F | 42.6 | 28 | 0.2 | 36.8-47.4 | 1.8 | 28 | 9.4 | 1.3-2.3 | |
| | | M | 50.2 | 7 | - | 47.3-52.7 | 2.9 | 7 | - | 2.4-3.2 | |
| May | 1-10 | F | 47.6 | 8 | - | 43.2-54.0 | 2.4 | 8 | - | 1.8-3.4 | |
| | | M | 52.6 | 27 | 0.3 | 48.2-62.8 | 3.0 | 27 | 15.9 | 2.1-5.3 | |
| | 11-20 | F | 50.5 | 25 | 0.2 | 46.9-57.5 | 2.8 | 25 | 13.9 | 2.1-4.5 | |
| | | M | 55.1 | 35 | 0.3 | 45.0-60.8 | 3.6 | 35 | 21.4 | 2.8-5.3 | |
| | 21-30 | F | 52.7 | 23 | 0.2 | 47.8-58.9 | 3.1 | 23 | 14.8 | 2.2-3.9 | |
| | | M | 57.1 | 10 | 0.2 | 53.6-61.0 | 4.0 | 10 | 12.6 | 3.2-4.9 | |
| June | 1-10 | F | 54.0 | 10 | 0.2 | 48.7-59.1 | 3.4 | 10 | 10.8 | 2.8-3.8 | |
| | | M | 57.0 | 1 | - | - | 4.0 | 1 | - | - | |
| | 11-20 | F | 56.2 | 5 | - | 53.3-58.2 | 4.2 | 5 | - | 3.8-4.5 | |
| | | M | 62.7 | 5 | - | 59.7-64.7 | 5.4 | 5 | - | 4.5-6.2 | |
| | 21-30 | F | 59.1 | 5 | - | 57.6-63.0 | 4.3 | 5 | - | 3.8-4.8 | |
| 1967 | January | 11-20 | M | 13.3 | 3 | - | 11.5-16.5 | 0.9 | 3 | - | 0.4-1.6 |
| | | | F | 16.4 | 2 | - | 15.3-17.5 | 0.6 | 2 | - | 0.1-1.2 |
| | | 21-30 | M | 18.4 | 30 | 0.1 | 11.4-24.6 | 0.3 | 30 | 1.4 | 0.1-1.2 |
| | | | F | 17.9 | 31 | 0.1 | 13.2-21.5 | 0.2 | 31 | 1.2 | 0.1-0.4 |
| | Feb. | 1-10 | M | 22.1 | 16 | 0.1 | 17.4-27.4 | 0.4 | 16 | 1.6 | 0.2-0.6 |
| | | | F | 19.1 | 27 | 0.1 | 15.8-22.7 | 0.3 | 27 | 1.4 | 0.1-0.5 |
| | | 11-20 | M | 24.4 | 25 | 0.1 | 20.1-28.1 | 0.5 | 25 | 2.6 | 0.4-0.7 |
| | | | F | 23.4 | 31 | 0.1 | 16.9-28.5 | 0.8 | 31 | 4.3 | * |
| | March | 21-30 | M | 26.7 | 38 | 0.2 | 21.1-30.9 | 0.9 | 38 | 5.4 | * |
| | | | F | 25.1 | 32 | 0.1 | 20.8-29.0 | 0.5 | 32 | 3.0 | 0.3-0.8 |
| | | 1-10 | M | 30.0 | 12 | 0.1 | 24.4-33.4 | 0.9 | 12 | 3.2 | 0.5-1.1 |
| | | | F | 28.8 | 13 | 0.1 | 24.5-31.2 | 0.8 | 13 | 2.8 | 0.5-1.0 |
| | 21-30 | 11-20 | M | 31.7 | 23 | 0.1 | 24.0-36.0 | 1.1 | 23 | 5.2 | 0.5-1.9 |
| | | | F | 31.2 | 23 | 0.1 | 26.2-34.3 | 1.0 | 23 | 4.8 | 0.6-1.3 |
| | | 21-30 | M | 36.9 | 5 | - | 32.5-40.0 | 1.2 | 5 | - | 1.1-1.4 |
| | | | F | 35.8 | 7 | - | 30.0-41.0 | 1.2 | 7 | - | 0.9-1.5 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------|----------------|-----|-------------|---|---|-------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |

1967
(continued)

| | | | | | | | | | | |
|-------|-------|---|------|----|-----|-----------|-----|----|------|---------|
| April | 1-10 | M | 42.9 | 17 | 0.2 | 36.0-48.0 | 1.8 | 17 | 7.6 | 1.0-2.5 |
| | | F | 39.8 | 17 | 0.2 | 34.0-42.8 | 1.5 | 17 | 6.2 | 1.0-1.9 |
| | 11-20 | M | 46.1 | 5 | - | 43.0-48.2 | 2.4 | 5 | - | 1.8-2.8 |
| | | F | 42.8 | 14 | 0.2 | 35.0-47.0 | 1.9 | 14 | 7.2 | 1.6-2.3 |
| | 21-30 | M | 50.4 | 16 | 0.2 | 45.0-55.0 | 2.7 | 16 | 10.9 | 2.0-3.3 |
| | | F | 45.8 | 12 | 0.2 | 35.5-50.5 | 2.2 | 12 | 7.4 | 1.8-2.6 |
| May | 1-10 | M | 51.1 | 32 | 0.3 | 44.0-57.0 | 3.0 | 32 | 17.1 | 2.2-3.9 |
| | | F | 49.7 | 26 | 0.2 | 45.0-55.0 | 2.7 | 26 | 13.9 | 2.1-3.9 |
| | 11-20 | M | 54.4 | 5 | - | 52.5-55.5 | 3.3 | 5 | - | 2.9-3.6 |
| | | F | 53.3 | 3 | - | 52.0-54.5 | 3.0 | 3 | - | 2.9-3.2 |
| | 21-30 | M | 56.4 | 9 | - | 55.0-63.0 | 4.0 | 9 | - | 3.3-5.1 |
| | | F | 55.3 | 10 | 0.2 | 52.0-59.0 | 3.8 | 10 | 12.1 | 2.9-4.6 |

1968

| | | | | | | | | | | |
|---------|-------|---|------|----|-----|-----------|-----|----|-----|---------|
| January | 21-30 | M | 21.6 | 12 | 0.1 | 19.5-26.0 | 0.3 | 12 | 0.8 | 0.2-0.4 |
| | | F | 20.0 | 8 | - | 18.0-23.0 | 0.2 | 8 | - | 0.2-0.4 |
| Feb. | 1-10 | M | 23.6 | 5 | - | 22.5-24.5 | 0.3 | 5 | - | 0.3-0.4 |
| | | F | 22.0 | 2 | - | 20.0-24.0 | 0.3 | 2 | - | 0.2-0.4 |
| | 11-20 | M | 26.7 | 5 | - | 22.5-32.0 | 0.5 | 5 | - | 0.3-0.7 |
| | | F | 24.6 | 11 | 0.1 | 20.5-30.0 | 0.4 | 11 | 1.4 | 0.2-0.6 |
| | 21-30 | M | 29.2 | 6 | - | 26.5-31.5 | 0.7 | 6 | - | 0.5-0.8 |
| | | F | 27.3 | 10 | 0.1 | 23.3-30.5 | 0.5 | 10 | 1.6 | 0.3-0.9 |
| March | 11-20 | M | 36.1 | 5 | - | 34.0-39.0 | 1.3 | 5 | - | 1.1-1.5 |
| | | F | 34.5 | 6 | - | 26.5-38.5 | 1.1 | 6 | - | 0.5-1.3 |
| | 21-30 | M | 36.9 | 5 | - | 35.0-39.5 | 1.4 | 5 | - | 1.2-1.5 |
| | | F | 36.0 | 3 | - | 35.0-37.0 | 1.1 | 3 | - | 0.9-1.3 |
| April | 1-10 | M | 42.3 | 3 | - | 39.0-47.0 | 1.9 | 3 | - | 1.6-2.5 |
| | | F | 41.0 | 4 | - | 37.0-45.0 | 1.5 | 4 | - | 1.3-1.7 |
| | 11-20 | M | 45.1 | 8 | - | 43.0-48.0 | 2.1 | 8 | - | 1.9-2.6 |
| | | F | 44.8 | 4 | - | 42.0-46.0 | 2.0 | 4 | - | 1.8-2.3 |

1969

| | | | | | | | | | | |
|---------|-------|---|------|----|-----|-----------|-----|----|-----|---------|
| January | 21-30 | M | 21.3 | 8 | - | 18.0-24.5 | 0.2 | 8 | - | 0.2-0.3 |
| | | F | 20.8 | 5 | - | 15.0-23.0 | 0.2 | 5 | - | 0.1-0.3 |
| Feb. | 1-10 | M | 25.9 | 14 | 0.1 | 21.0-28.5 | 0.4 | 14 | 1.6 | 0.2-0.6 |
| | | F | 23.0 | 15 | 0.1 | 19.5-28.0 | 0.3 | 15 | 1.2 | 0.2-0.5 |
| | 11-20 | M | 27.9 | 12 | 0.1 | 21.5-30.5 | 0.5 | 12 | 1.7 | 0.2-0.7 |
| | | F | 27.6 | 8 | - | 23.0-31.0 | 0.5 | 8 | - | 0.3-0.7 |
| | 21-30 | M | 31.3 | 15 | 0.1 | 26.5-34.0 | 0.7 | 15 | 2.7 | 0.4-1.1 |
| | | F | 30.8 | 11 | 0.1 | 28.0-33.5 | 0.7 | 11 | 2.2 | 0.5-0.9 |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|----------------------------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1969</u> (continued) | | | | | | | | | | |
| March | 1-10 | M | 34.6 | 20 | 0.2 | 30.0-37.8 | 1.1 | 20 | 4.7 | 0.7-1.5 |
| | | F | 32.5 | 20 | 0.1 | 27.5-36.0 | 0.8 | 20 | 3.7 | 0.4-1.1 |
| | 11-20 | M | 36.3 | 8 | - | 33.5-39.0 | 1.2 | 8 | - | 0.9-1.4 |
| | | F | 34.4 | 5 | - | 32.0-38.0 | 1.1 | 5 | - | 0.8-1.3 |
| | 21-30 | M | 41.8 | 14 | 0.2 | 38.0-47.0 | 1.6 | 14 | 6.1 | 1.3-2.3 |
| | | F | 39.0 | 12 | 0.1 | 35.0-42.0 | 1.5 | 12 | 5.0 | 1.3-1.7 |
| April | 1-10 | M | 41.3 | 3 | - | 40.0-42.0 | 2.0 | 3 | - | 1.7-2.3 |
| | | F | 41.0 | 1 | - | - | 1.7 | 1 | - | - |
| | 11-20 | M | 46.6 | 6 | - | 44.0-49.0 | 2.7 | 6 | - | 2.5-2.8 |
| | | F | 42.7 | 6 | - | 38.0-45.4 | 2.0 | 6 | - | 1.5-2.4 |
| <u>1970</u> | | | | | | | | | | |
| January | 11-20 | M | 15.9 | 5 | - | 11.5-19.5 | 0.1 | 5 | - | 0.1-0.2 |
| | | F | 16.7 | 9 | - | 10.5-20.0 | 0.1 | 9 | - | 0.0-0.2 |
| | 21-30 | M | 19.4 | 14 | 0.1 | 15.0-22.5 | 0.2 | 14 | 0.8 | 0.1-0.3 |
| | | F | 20.1 | 16 | 0.1 | 16.5-25.0 | 0.2 | 16 | 0.9 | 0.1-0.4 |
| Feb. | 1-10 | M | 22.9 | 10 | 0.1 | 19.5-27.5 | 0.4 | 10 | 1.0 | 0.2-0.5 |
| | | F | 23.0 | 1 | - | - | 0.4 | 1 | - | - |
| | 11-20 | M | 28.4 | 38 | 0.2 | 21.0-33.0 | 0.6 | 38 | 3.5 | 0.2-0.9 |
| | | F | 26.2 | 35 | 0.2 | 21.5-31.0 | 0.5 | 35 | 2.9 | 0.2-0.7 |
| | 21-30 | M | 30.8 | 9 | - | 25.0-33.0 | 0.7 | 9 | - | 0.5-0.9 |
| | | F | 28.8 | 8 | - | 25.0-32.0 | 0.7 | 8 | - | 0.5-0.8 |
| March | 1-10 | M | 35.2 | 3 | - | 32.0-38.5 | 1.0 | 3 | - | 0.8-1.3 |
| | | F | 35.5 | 2 | - | 35.0-36.0 | 1.0 | 2 | - | 0.9-1.0 |
| | 11-20 | M | 36.0 | 1 | - | - | 1.0 | 1 | - | - |
| <u>1971</u> | | | | | | | | | | |
| Feb. | 1-10 | M | 23.7 | 12 | 0.1 | 20.0-29.5 | 0.3 | 12 | 1.1 | 0.2-0.6 |
| | | F | 22.7 | 9 | - | 18.5-25.0 | 0.3 | 9 | - | 0.2-0.4 |
| | 11-20 | M | 28.2 | 9 | - | 26.0-31.5 | 0.6 | 9 | - | 0.4-0.8 |
| | | F | 26.1 | 17 | 0.1 | 20.5-33.0 | 0.5 | 17 | 1.8 | 0.2-0.7 |
| | 21-30 | M | 31.6 | 8 | - | 27.0-35.0 | 0.8 | 8 | - | 0.5-1.2 |
| | | F | 27.8 | 6 | - | 25.0-30.0 | 0.6 | 6 | - | 0.4-0.7 |
| March | 1-10 | M | 35.0 | 1 | - | - | 1.0 | 1 | - | - |
| | | F | 32.5 | 2 | - | 31.0-34.0 | 1.0 | 2 | - | 0.9-1.0 |
| | 21-30 | F | 41.0 | 1 | - | - | 1.5 | 1 | - | - |
| May | 1-10 | M | 54.8 | 10 | 0.2 | 52.0-59.0 | 3.4 | 10 | 10.6 | 2.6-4.0 |
| | | F | 51.8 | 15 | 0.2 | 46.0-60.0 | 2.9 | 15 | 11.3 | 2.2-3.7 |
| | 11-20 | M | 59.0 | 1 | - | - | 3.6 | 1 | - | - |
| | | F | 55.5 | 1 | - | - | 3.4 | 1 | - | - |

Sanriku
(continued)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|----------------------------|----------------|-----|-------------|----|-----|-----------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1971</u> (continued) | | | | | | | | | | |
| June | 1-10 | M | 57.5 | 1 | - | - | 3.6 | 1 | - | - |
| | | F | 58.6 | 5 | - | 57.0-63.0 | 4.1 | 5 | - | 3.6-5.6 |
| <u>1972</u> | | | | | | | | | | |
| Feb. | 21-30 | M | 30.4 | 8 | - | 26.0-36.5 | 0.7 | 8 | - | 0.4-1.0 |
| | | F | 28.5 | 4 | - | 24.0-31.0 | 0.7 | 4 | - | 0.4-0.9 |
| March | 1-10 | M | 33.0 | 42 | 0.2 | 28.0-39.5 | 0.9 | 42 | 6.0 | 0.5-1.4 |
| | | F | 31.8 | 37 | 0.2 | 24.0-37.5 | 0.9 | 37 | 5.3 | 0.4-1.3 |
| | 11-20 | M | 35.9 | 18 | 0.1 | 30.0-41.0 | 1.2 | 18 | 5.3 | 0.8-1.6 |
| | | F | 34.2 | 14 | 0.1 | 28.5-39.0 | 1.0 | 14 | 3.7 | 0.6-1.5 |
| | 21-30 | M | 38.9 | 10 | 0.1 | 35.5-41.0 | 1.4 | 10 | 4.6 | 1.0-1.7 |
| | | F | 38.5 | 5 | - | 36.0-43.0 | 1.3 | 5 | - | 1.0-1.7 |
| April | 1-10 | F | 41.3 | 6 | - | 37.0-45.0 | 1.5 | 6 | - | 1.1-1.7 |
| May | 21-30 | M | 57.5 | 2 | - | 57.0-58.0 | 4.1 | 2 | - | 3.8-4.3 |
| | | F | 56.5 | 3 | - | 53.5-61.0 | 3.8 | 3 | - | 3.5-4.2 |
| <u>1973</u> | | | | | | | | | | |
| May | 1-10 | F | 52.0 | 1 | - | - | 3.1 | 1 | - | - |
| | 11-20 | M | 47.0 | 1 | - | - | 2.6 | 1 | - | - |
| | | F | 53.0 | 12 | 0.2 | 49.5-59.0 | 3.4 | 12 | 11.6 | 2.5-4.5 |
| | 21-30 | M | 57.1 | 25 | 0.3 | 52.5-63.0 | 4.3 | 25 | 21.8 | 3.4-5.3 |
| | | F | 54.5 | 18 | 0.2 | 50.0-59.0 | 3.9 | 18 | 16.4 | 2.7-4.9 |
| June | 1-10 | M | 56.7 | 15 | 0.2 | 49.0-61.0 | 4.4 | 15 | 16.9 | 3.1-5.2 |
| | | F | 55.8 | 23 | 0.3 | 49.0-61.0 | 4.3 | 23 | 20.7 | 3.4-5.4 |
| | 11-20 | M | 61.2 | 6 | - | 58.0-64.0 | 5.2 | 6 | - | 4.0-6.3 |
| | | F | 57.1 | 6 | - | 50.0-62.5 | 4.4 | 6 | - | 3.7-5.2 |
| | 21-30 | M | 65.8 | 2 | - | 64.5-67.0 | 5.9 | 2 | - | 5.6-6.2 |
| | | F | 62.0 | 1 | - | - | 5.1 | 1 | - | - |
| <u>1978</u> | | | | | | | | | | |
| May | 21-30 | M | 56.5 | 3 | - | 56.0-57.0 | 4.7 | 3 | - | 4.2-5.0 |
| | | F | 55.1 | 7 | - | 52.0-59.0 | 3.4 | 7 | - | 2.5-4.0 |
| June | 1-10 | M | 59.1 | 29 | 0.3 | 54.0-66.0 | 4.7 | 29 | 25.3 | 3.5-5.5 |
| | | F | 56.0 | 36 | 0.3 | 45.0-62.0 | 4.0 | 36 | 24.1 | 2.0-5.3 |
| | 11-20 | M | 61.4 | 19 | 0.3 | 56.3-66.0 | 5.5 | 19 | 24.1 | 4.0-7.0 |
| | | F | 59.2 | 17 | 0.2 | 55.0-63.0 | 4.9 | 17 | 20.4 | 4.1-5.7 |

*

Table 27

Length and weight of fur seal fetuses, by sex (M = male,
F = female), collected off Doto.

(X = mean, n = sample size, and s = standard deviation for n > 10)

| Month | Ten-day period | Sex | Length (cm) | | | | Weight (kg) | | | |
|-------------|----------------|-----|-------------|---|---|-----------|-------------|---|---|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| <u>1958</u> | | | | | | | | | | |
| June | 1-10 | M | 55.0 | 1 | - | - | 5.2 | 1 | - | - |
| | | F | 57.5 | 2 | - | 55.0-60.0 | 4.8 | 2 | - | 3.8-5.8 |
| | 11-20 | M | 57.4 | 5 | - | 55.0-60.0 | 6.3 | 5 | - | 5.8-6.8 |
| | | F | 53.8 | 4 | - | 50.0-56.0 | 5.4 | 4 | - | 4.8-5.9 |
| <u>1959</u> | | | | | | | | | | |
| June | 1-10 | M | 55.0 | 1 | - | - | 4.0 | 1 | - | - |
| | | F | 55.0 | 1 | - | - | 4.2 | 1 | - | - |
| | 11-20 | M | 55.0 | 1 | - | - | 4.2 | 1 | - | - |
| | | F | 55.0 | 2 | - | - | 4.7 | 2 | - | 4.0-5.5 |
| <u>1961</u> | | | | | | | | | | |
| June | 1-10 | M | 60.0 | 2 | - | 55.0-65.0 | 5.6 | 2 | - | 5.3-6.0 |
| | | F | 56.3 | 4 | - | 52.0-60.0 | 4.2 | 4 | - | 3.5-4.5 |
| <u>1965</u> | | | | | | | | | | |
| June | 21-30 | M | 60.0 | 1 | - | - | 5.8 | 1 | - | - |
| | | F | 62.0 | 1 | - | - | 6.4 | 1 | - | - |
| <u>1972</u> | | | | | | | | | | |
| May | 21-30 | F | 55.0 | 1 | - | - | 4.8 | 1 | - | - |
| June | 1-10 | M | 57.0 | 1 | - | - | 5.0 | 1 | - | - |
| <u>1973</u> | | | | | | | | | | |
| June | 21-30 | M | 62.0 | 1 | - | - | 6.0 | 1 | - | - |
| <u>1977</u> | | | | | | | | | | |
| Dec. | 1-10 | F | 3.7 | 1 | - | - | * | 1 | - | * |
| | 11-20 | M | 3.1 | 1 | - | - | 0.0 | 1 | - | - |
| | | F | 6.0 | 2 | - | 5.5- 6.5 | 0.1 | 2 | - | - |
| <u>1978</u> | | | | | | | | | | |
| January | 1-10 | M | 13.5 | 1 | - | - | * | 1 | - | * |
| | | F | 11.9 | 1 | - | - | * | 1 | - | * |

*

Table 28
Monthly mean length and weight of nonpregnant fur seals.
(\bar{x} = mean, n = sample size, s = standard deviation for $n > 10$)

Sea of Okhotsk

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|--------|-----|------------|-----|-----|---------|------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1961 | July | 2 | 93.5 | 2 | - | 87-100 | 15.5 | 2 | - | 15-16 |
| | | 3 | 113.4 | 5 | - | 107-118 | 25.9 | 5 | - | 23-30 |
| | | 4 | 112.9 | 14 | 4.2 | 105-118 | 26.8 | 14 | 3.2 | 21-36 |
| | | 5 | 118.6 | 7 | - | 105-130 | 31.7 | 7 | - | 25-37 |
| | | 6 | 121.6 | 11 | 5.9 | 110-132 | 35.2 | 11 | 4.0 | 30-43 |
| | | 7 | 126.2 | 9 | - | 114-134 | 35.3 | 9 | - | 29-45 |
| | | 8 | 124.0 | 16 | 4.2 | 117-133 | 36.6 | 16 | 3.4 | 29-43 |
| | | 9 | 126.1 | 9 | - | 120-136 | 37.2 | 9 | - | 34-43 |
| | | 11 | 119.5 | 2 | - | 115-124 | 34.0 | 2 | - | 32-36 |
| | | 12 | 127.5 | 6 | - | 120-135 | 38.1 | 6 | - | 35-42 |
| | | 13 | 123.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 14 | 127.8 | 4 | - | 125-132 | 39.0 | 4 | - | 37-40 |
| | | 15 | 126.7 | 3 | - | 120-132 | 37.3 | 3 | - | 32-45 |
| | | 16 | 129.0 | 6 | - | 120-137 | 39.3 | 6 | - | 32-43 |
| | | 17 | 125.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 18 | 123.5 | 2 | - | 115-132 | 34.5 | 2 | - | 31-38 |
| | | 23 | 133.0 | 2 | - | 122-144 | 47.0 | 2 | - | 40-54 |
| | | 24 | 122.0 | 1 | - | - | 46.0 | 1 | - | - |
| | August | 2 | 110.0 | 1 | - | - | 22.5 | 1 | - | - |
| | | 3 | 105.7 | 3 | - | 102-110 | 29.3 | 3 | - | 24-33 |
| | | 4 | 112.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 5 | 121.0 | 3 | - | 118-126 | 31.2 | 3 | - | 30-32 |
| | | 6 | 122.0 | 3 | - | 115-126 | 31.7 | 3 | - | 25-36 |
| | | 7 | 128.0 | 4 | - | 120-132 | 35.1 | 4 | - | 31-37 |
| | | 10 | 124.5 | 2 | - | 122-127 | 38.8 | 2 | - | 38-39 |
| | | 11 | 119.0 | 3 | - | 115-122 | 33.3 | 3 | - | 31-36 |
| | | 12 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 13 | 120.0 | 1 | - | - | 38.5 | 1 | - | - |
| 1972 | July | 14 | 130.0 | 1 | - | - | 37.5 | 1 | - | - |
| | | 15 | 117.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 18 | 120.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 2 | 96.5 | 1 | - | - | 17.0 | 1 | - | - |
| | | 5 | 124.0 | 1 | - | - | 36.8 | 1 | - | - |
| | | 6 | 123.0 | 2 | - | 117-129 | 35.2 | 2 | - | 31-40 |
| | | 7 | 124.0 | 2 | - | 123-125 | 36.9 | 2 | - | 35-39 |
| | | 8 | 137.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 9 | 122.0 | 3 | - | 117-127 | 40.3 | 3 | - | 37-43 |
| | | 10 | 125.7 | 3 | - | 120-129 | 37.5 | 3 | - | 35-42 |
| | | 11 | 123.5 | 2 | - | 120-127 | 33.5 | 2 | - | 33-34 |
| | | 13 | 135.0 | 1 | - | - | 39.8 | 1 | - | - |
| | | 14 | 127.6 | 4 | - | 122-133 | 40.5 | 4 | - | 35-45 |
| | | 16 | 117.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 18 | 119.5 | 2 | - | 117-122 | 37.3 | 2 | - | 36-38 |
| | | 19 | 133.0 | 3 | - | 126-139 | 43.5 | 3 | - | 40-49 |
| | | 20 | 128.0 | 2 | - | 120-136 | 43.3 | 2 | - | 33-53 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1972 | August | 2 | 100.6 | 4 | - | 95-104 | 18.0 | 4 | - | 16-20 |
| | | 3 | 110.7 | 8 | - | 102-118 | 24.2 | 8 | - | 18-27 |
| | | 4 | 114.7 | 11 | 3.2 | 109-121 | 27.1 | 11 | 3.2 | 21-32 |
| | | 5 | 119.6 | 5 | - | 113-125 | 30.1 | 5 | - | 23-35 |
| | | 6 | 125.0 | 1 | - | - | 31.6 | 1 | - | - |
| | | 7 | 133.0 | 1 | - | - | 41.2 | 1 | - | - |
| | | 8 | 124.3 | 4 | - | 119-133 | 34.0 | 4 | - | 31-37 |
| | | 9 | 124.0 | 2 | - | 122-126 | 33.8 | 2 | - | 32-36 |
| | | 10 | 130.4 | 5 | - | 126-137 | 37.1 | 5 | - | 31-43 |
| | | 11 | 124.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 12 | 125.8 | 6 | - | 104-134 | 36.0 | 6 | - | 25-42 |
| | | 13 | 128.7 | 3 | - | 122-138 | 39.5 | 3 | - | 37-43 |
| | | 14 | 125.0 | 2 | - | 124-126 | 31.9 | 2 | - | 31-33 |
| | | 15 | 133.5 | 2 | - | 128-139 | 42.9 | 2 | - | 34-52 |
| | | 16 | 133.9 | 4 | - | 131-139 | 42.9 | 4 | - | 37-49 |
| | | 17 | 129.5 | 2 | - | 129-130 | 38.0 | 2 | - | 34-42 |
| | | 18 | 132.1 | 4 | - | 130-134 | 42.8 | 4 | - | 40-47 |
| | | 20 | 133.0 | 2 | - | 131-135 | 45.3 | 2 | - | 41-49 |
| | | 21 | 133.2 | 4 | - | 129-141 | 43.3 | 4 | - | 41-45 |
| | | 22 | 135.0 | 1 | - | - | 48.5 | 1 | - | - |
| 1973 | July | 3 | 110.4 | 4 | - | 108-113 | 26.0 | 4 | - | 25-28 |
| | | 4 | 112.0 | 4 | - | 105-116 | 26.5 | 4 | - | 25-28 |
| | | 5 | 118.3 | 2 | - | - | 30.1 | 2 | - | 29-31 |
| | | 6 | 118.0 | 1 | - | - | 29.6 | 1 | - | - |
| | | 8 | 132.5 | 1 | - | - | 43.0 | 1 | - | - |
| | | 9 | 119.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 126.0 | 1 | - | - | 38.6 | 1 | - | - |
| | | 11 | 125.8 | 3 | - | 123-129 | 44.6 | 3 | - | 43-46 |
| | | 12 | 126.8 | 2 | - | 125-128 | 38.9 | 2 | - | 38-40 |
| | | 13 | 131.0 | 3 | - | 125-134 | 45.1 | 3 | - | 36-49 |
| | | 14 | 121.2 | 3 | - | 118-127 | 37.9 | 3 | - | 34-41 |
| | | 15 | 129.5 | 2 | - | 129-130 | 43.6 | 2 | - | 43-44 |
| | | 16 | 127.2 | 6 | - | 124-131 | 43.6 | 6 | - | 39-52 |
| | | 17 | 131.4 | 4 | - | 127-136 | 46.3 | 4 | - | 40-57 |
| 1974 | July | 18 | 130.3 | 4 | - | 122-138 | 46.2 | 4 | - | 40-50 |
| | | 19 | 134.0 | 3 | - | 131-137 | 48.1 | 3 | - | 44-50 |
| | | 20 | 118.0 | 1 | - | - | 37.8 | 1 | - | - |
| | | 21 | 140.0 | 2 | - | 136-144 | 51.8 | 2 | - | 46-57 |
| | | 22 | 134.5 | 1 | - | - | 50.0 | 1 | - | - |
| | | 2 | 110.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 111.3 | 6 | - | 103-124 | 25.8 | 6 | - | 23-28 |
| | | 4 | 110.7 | 7 | - | 102-114 | 31.0 | 7 | - | 26-48 |
| | | 5 | 123.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 6 | 127.5 | 2 | - | 121-134 | 38.5 | 2 | - | 35-42 |
| | | 7 | 123.5 | 6 | - | 119-133 | 34.8 | 6 | - | 33-38 |
| | | 8 | 123.5 | 2 | - | 120-127 | 37.8 | 2 | - | 36-39 |
| | | 9 | 121.9 | 4 | - | 116-130 | 36.5 | 4 | - | 33-42 |
| | | 10 | 118.0 | 1 | - | - | 35.3 | 1 | - | - |
| | | 11 | 124.8 | 5 | - | 115-132 | 38.5 | 5 | - | 33-45 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|---------------------|-----|------------|----|-----|---------|------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1974 | July (continued) | 12 | 131.7 | 3 | - | 125-135 | 42.3 | 3 | - | 35-47 |
| | | 13 | 118.2 | 5 | - | 110-129 | 42.8 | 5 | - | 40-52 |
| | | 14 | 126.3 | 3 | - | 124-131 | 41.0 | 3 | - | 40-42 |
| | | 15 | 128.2 | 6 | - | 118-133 | 40.9 | 6 | - | 37-47 |
| | | 16 | 128.2 | 5 | - | 123-137 | 46.0 | 5 | - | 38-52 |
| | | 17 | 126.0 | 2 | - | 118-134 | 39.0 | 2 | - | - |
| | | 18 | 131.5 | 2 | - | 124-139 | 43.3 | 2 | - | 39-47 |
| | | 19 | 126.4 | 5 | - | 117-136 | 42.4 | 5 | - | 36-48 |
| | | 20 | 128.0 | 1 | - | - | 48.5 | 1 | - | - |
| | | 21 | 127.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 22 | 112.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 23 | 144.0 | 1 | - | - | 57.0 | 1 | - | - |
| | August | 2 | 102.7 | 6 | - | 94-111 | 20.7 | 6 | - | 17-23 |
| | | 3 | 107.4 | 12 | 5.0 | 100-115 | 24.4 | 12 | 2.2 | 20-27 |
| | | 4 | 113.3 | 11 | 5.4 | 102-121 | 27.6 | 11 | 4.3 | 20-34 |
| | | 5 | 124.0 | 4 | - | 114-136 | 30.4 | 4 | - | 27-34 |
| | | 6 | 119.9 | 7 | - | 113-132 | 32.9 | 7 | - | 29-39 |
| | | 7 | 123.7 | 7 | - | 116-132 | 36.4 | 7 | - | 32-40 |
| | | 8 | 117.3 | 3 | - | 112-124 | 33.7 | 3 | - | 32-35 |
| | | 9 | 127.5 | 2 | - | 125-130 | 40.0 | 2 | - | - |
| | | 10 | 127.8 | 3 | - | 123-130 | 37.0 | 3 | - | 35-38 |
| | | 11 | 122.8 | 6 | - | 110-133 | 37.7 | 6 | - | 32-47 |
| | | 12 | 126.3 | 5 | - | 118-133 | 40.8 | 5 | - | 34-50 |
| | | 13 | 124.9 | 7 | - | 113-132 | 39.4 | 7 | - | 35-43 |
| | | 14 | 126.4 | 4 | - | 113-132 | 43.8 | 4 | - | 40-47 |
| | | 15 | 126.3 | 5 | - | 112-138 | 39.8 | 5 | - | 33-45 |
| | | 16 | 132.7 | 3 | - | 126-138 | 45.7 | 3 | - | 43-49 |
| | | 17 | 122.0 | 3 | - | 118-125 | 40.7 | 3 | - | 38-44 |
| | | 18 | 130.5 | 3 | - | 122-140 | 44.3 | 3 | - | 38-50 |
| | | 20 | 133.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 21 | 121.2 | 3 | - | 113-125 | 50.7 | 3 | - | 49-53 |
| | | 24 | 130.0 | 1 | - | - | 42.0 | 1 | - | - |
| | Sept. | 0 | 75.3 | 3 | - | 73-78 | 10.2 | 3 | - | 9-11 |
| | | 2 | 99.8 | 14 | 2.1 | 96-103 | 21.7 | 14 | 4.0 | 18-29 |
| | | 3 | 108.5 | 12 | 4.9 | 99-119 | 24.5 | 12 | 2.5 | 21-28 |
| | | 4 | 112.5 | 10 | 5.5 | 104-122 | 28.2 | 10 | 3.5 | 24-37 |
| | | 5 | 120.0 | 4 | - | 115-125 | 30.9 | 4 | - | 25-36 |
| | | 6 | 120.5 | 4 | - | 113-128 | 29.8 | 4 | - | 26-35 |
| | | 7 | 121.8 | 4 | - | 116-126 | 33.9 | 4 | - | 29-38 |
| | | 8 | 130.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 11 | 127.3 | 3 | - | 125-131 | 41.3 | 3 | - | 39-45 |
| | | 12 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 13 | 117.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 15 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 131.3 | 3 | - | 126-137 | 44.3 | 3 | - | 38-54 |
| | | 17 | 127.0 | 1 | - | - | 34.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1974 | Sept. (continued) | 18 | 123.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 19 | 127.5 | 2 | - | 123-132 | 48.0 | 2 | - | 47-49 |
| | | 20 | 122.5 | 2 | - | 120-125 | 37.8 | 2 | - | 33-42 |
| | | 21 | 127.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 23 | 121.0 | 1 | - | - | 43.0 | 1 | - | - |
| 1975 | July | 3 | 106.7 | 3 | - | 104-110 | 27.0 | 3 | - | 22-34 |
| | | 4 | 115.4 | 9 | - | 105-122 | 30.3 | 9 | - | 22-38 |
| | | 5 | 115.9 | 8 | - | 109-122 | 33.1 | 8 | - | 30-40 |
| | | 6 | 117.7 | 5 | - | 112-124 | 35.2 | 5 | - | 30-40 |
| | | 7 | 115.0 | 2 | - | 112-118 | 31.0 | 2 | - | 27-35 |
| | | 8 | 124.3 | 4 | - | 119-129 | 39.8 | 4 | - | 32-45 |
| | | 9 | 130.0 | 4 | - | 123-135 | 39.5 | 4 | - | 32-45 |
| | | 10 | 112.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 11 | 128.5 | 4 | - | 121-140 | 41.8 | 4 | - | 37-47 |
| | | 12 | 125.7 | 3 | - | 120-136 | 48.0 | 3 | - | 40-56 |
| | | 13 | 126.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 14 | 124.7 | 6 | - | 120-131 | 40.0 | 6 | - | 36-43 |
| | | 15 | 130.3 | 4 | - | 125-132 | 48.5 | 4 | - | 45-55 |
| | | 16 | 123.5 | 6 | - | 110-133 | 41.5 | 6 | - | 35-48 |
| | | 17 | 126.9 | 5 | - | 117-134 | 46.4 | 5 | - | 43-50 |
| | | 18 | 127.3 | 3 | - | 120-136 | 47.7 | 3 | - | 45-53 |
| | | 19 | 118.7 | 3 | - | 105-127 | 39.3 | 3 | - | 35-42 |
| | | 21 | 129.5 | 2 | - | 127-132 | 44.5 | 2 | - | 42-47 |
| | | 22 | 106.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 24 | 133.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 25 | 129.0 | 2 | - | 128-130 | 45.5 | 2 | - | 42-49 |
| | August | 2 | 101.0 | 6 | - | 93-106 | 20.5 | 6 | - | 15-32 |
| | | 3 | 107.5 | 21 | 5.1 | 96-120 | 25.7 | 21 | 3.8 | 18-34 |
| | | 4 | 113.4 | 17 | 4.7 | 101-119 | 30.2 | 17 | 3.9 | 22-35 |
| | | 5 | 117.7 | 6 | - | 109-126 | 31.3 | 6 | - | 27-36 |
| | | 6 | 123.4 | 11 | 2.8 | 118-127 | 37.3 | 11 | 3.8 | 31-45 |
| | | 7 | 120.6 | 4 | - | 118-122 | 38.5 | 4 | - | 33-46 |
| | | 8 | 127.0 | 5 | - | 124-131 | 38.5 | 5 | - | 30-45 |
| | | 9 | 122.8 | 4 | - | 118-126 | 40.0 | 4 | - | 35-44 |
| | | 10 | 131.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 11 | 122.6 | 5 | - | 117-126 | 37.0 | 5 | - | 32-46 |
| | | 12 | 131.0 | 2 | - | 130-132 | 43.5 | 2 | - | 42-45 |
| | | 13 | 128.4 | 7 | - | 119-135 | 44.3 | 7 | - | 38-56 |
| | | 14 | 128.5 | 4 | - | 124-135 | 47.3 | 4 | - | 38-56 |
| | | 15 | 119.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 17 | 125.3 | 4 | - | 115-132 | 43.0 | 4 | - | 36-50 |
| | | 18 | 123.9 | 7 | - | 118-134 | 43.1 | 7 | - | 34-56 |
| | | 19 | 129.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 20 | 131.7 | 3 | - | 120-144 | 46.0 | 3 | - | 42-51 |
| | | 21 | 126.0 | 2 | - | - | 42.5 | 2 | - | 38-47 |
| | | 22 | 128.0 | 1 | - | - | 45.5 | 1 | - | - |
| | | 24 | 131.0 | 1 | - | - | 40.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1975 | Sept. | 1 | 94.5 | 1 | - | - | 15.0 | 1 | - | - |
| | | 2 | 99.5 | 21 | 7.0 | 87-117 | 19.0 | 21 | 2.0 | 15-24 |
| | | 3 | 111.1 | 18 | 5.2 | 98-117 | 25.6 | 18 | 3.4 | 20-37 |
| | | 4 | 113.1 | 14 | 7.7 | 103-133 | 26.4 | 14 | 4.6 | 21-39 |
| | | 5 | 120.9 | 9 | - | 111-131 | 31.4 | 9 | - | 25-37 |
| | | 6 | 127.4 | 4 | - | 125-131 | 35.0 | 4 | - | 29-38 |
| | | 8 | 125.0 | 2 | - | 123-127 | 36.8 | 2 | - | 33-40 |
| | | 9 | 122.5 | 1 | - | - | 30.5 | 1 | - | - |
| | | 10 | 127.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 12 | 128.8 | 2 | - | 120-137 | 38.5 | 2 | - | 31-45 |
| | | 14 | 129.5 | 2 | - | 129-130 | 38.5 | 2 | - | 38-39 |
| | | 16 | 117.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 17 | 127.5 | 2 | - | 127-128 | 40.5 | 2 | - | 37-44 |
| | | 18 | 130.0 | 1 | - | - | 38.5 | 1 | - | - |
| | | 19 | 124.8 | 2 | - | 122-127 | 36.0 | 2 | - | 34-38 |
| | | 20 | 128.3 | 3 | - | 125-135 | 48.5 | 3 | - | 38-62 |
| | | 21 | 131.0 | 1 | - | - | 45.0 | 1 | - | - |
| | October | 0 | 78.7 | 3 | - | 69-85 | 9.7 | 3 | - | 8-12 |
| | | 1 | 92.0 | 2 | - | 90-94 | 17.3 | 2 | - | - |
| | | 2 | 100.9 | 11 | 5.6 | 90-108 | 19.2 | 11 | 2.0 | 15-22 |
| | | 3 | 103.5 | 2 | - | 96-111 | 21.0 | 2 | - | 18-23 |
| | | 4 | 114.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 5 | 115.5 | 2 | - | 115-116 | 27.0 | 2 | - | 24-29 |
| | | 6 | 125.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 7 | 121.0 | 2 | - | 120-122 | 29.5 | 2 | - | 27-31 |
| | | 9 | 134.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 13 | 135.5 | 2 | - | 135-136 | 44.0 | 2 | - | 43-45 |
| | | 14 | 126.3 | 4 | - | 117-134 | 42.6 | 4 | - | 40-45 |
| | | 15 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 135.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 17 | 125.0 | 2 | - | 124-126 | 39.3 | 2 | - | 37-41 |
| | | 18 | 137.0 | 1 | - | - | 48.0 | 1 | - | - |
| 1976 | August | 2 | 103.4 | 9 | - | 99-106 | 20.5 | 9 | - | 18-23 |
| | | 3 | 110.5 | 16 | 3.9 | 104-115 | 25.2 | 16 | 3.4 | 15-29 |
| | | 4 | 116.5 | 11 | 5.2 | 102-123 | 30.2 | 11 | 2.8 | 26-35 |
| | | 5 | 118.0 | 3 | - | 115-120 | 33.0 | 3 | - | 32-34 |
| | | 6 | 118.8 | 6 | - | 110-130 | 30.9 | 6 | - | 24-42 |
| | | 7 | 121.0 | 5 | - | 116-126 | 34.4 | 5 | - | 32-35 |
| | | 8 | 125.5 | 4 | - | 115-131 | 35.8 | 4 | - | 31-43 |
| | | 9 | 127.5 | 2 | - | 125-130 | 36.0 | 2 | - | 34-38 |
| | | 11 | 123.5 | 2 | - | 121-126 | 37.8 | 2 | - | 35-40 |
| | | 12 | 132.3 | 3 | - | 125-137 | 43.3 | 3 | - | 40-47 |
| | | 13 | 122.5 | 4 | - | 117-129 | 38.4 | 4 | - | 34-44 |
| | | 14 | 128.4 | 4 | - | 119-132 | 41.3 | 4 | - | 39-44 |
| | | 15 | 127.3 | 3 | - | 122-135 | 34.2 | 3 | - | 25-45 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1976 | August (continued) | 16 | 127.9 | 4 | - | 123-133 | 41.9 | 4 | - | 36-52 |
| | | 17 | 123.3 | 3 | - | 121-126 | 42.3 | 3 | - | 39-45 |
| | | 18 | 131.2 | 3 | - | 129-133 | 40.3 | 3 | - | 36-45 |
| | | 19 | 128.1 | 3 | - | 125-130 | 37.0 | 3 | - | 33-41 |
| | | 21 | 130.0 | 3 | - | 126-134 | 48.5 | 3 | - | 44-51 |
| | Sept. | 0 | 73.7 | 3 | - | 73-74 | 8.7 | 3 | - | 7-10 |
| | | 1 | 94.0 | 1 | - | - | 13.5 | 1 | - | - |
| | | 2 | 102.2 | 10 | 3.0 | 95-105 | 21.2 | 10 | 2.5 | 18-28 |
| | | 3 | 110.4 | 15 | 5.4 | 104-120 | 26.5 | 15 | 3.8 | 20-35 |
| | | 4 | 115.9 | 5 | - | 112-122 | 30.0 | 5 | - | 25-32 |
| | | 5 | 119.8 | 3 | - | 109-129 | 32.0 | 3 | - | 22-39 |
| | | 6 | 122.0 | 2 | - | 121-123 | 32.0 | 2 | - | - |
| | | 7 | 126.3 | 2 | - | 123-129 | 38.8 | 2 | - | 35-42 |
| | | 10 | 127.0 | 2 | - | 122-132 | 39.0 | 2 | - | 38-40 |
| | | 11 | 129.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 129.8 | 2 | - | 123-136 | 41.3 | 2 | - | 37-45 |
| | | 14 | 121.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 15 | 139.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 16 | 138.5 | 1 | - | - | 50.0 | 1 | - | - |
| | | 20 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 21 | 136.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 22 | 134.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 23 | 120.0 | 1 | - | - | 39.0 | 1 | - | - |
| | October | 2 | 100.2 | 2 | - | 97-103 | 19.0 | 2 | - | 17-21 |
| | | 3 | 115.7 | 1 | - | - | 30.0 | 1 | - | - |
| | | 7 | 110.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 15 | 125.3 | 1 | - | - | 40.0 | 1 | - | - |
| | | 21 | 136.0 | 1 | - | - | 46.0 | 1 | - | - |
| | Nov. | 0 | 71.5 | 3 | - | 70-74 | 8.7 | 3 | - | 7-11 |
| | | 1 | 96.5 | 1 | - | - | 17.0 | 1 | - | - |
| | | 2 | 101.8 | 3 | - | 99-105 | 20.3 | 3 | - | 16-24 |
| | | 15 | 124.2 | 1 | - | - | 39.5 | 1 | - | - |
| | | 17 | 137.5 | 3 | - | 132-142 | 49.8 | 3 | - | 48-51 |
| | | 18 | 133.8 | 2 | - | 132-135 | 50.0 | 2 | - | - |
| | | 19 | 137.5 | 2 | - | 134-141 | 50.3 | 2 | - | - |
| | | 20 | 128.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 21 | 132.0 | 2 | - | 130-134 | 46.8 | 2 | - | 40-53 |
| | | 1 | 90.0 | 1 | - | - | 14.5 | 1 | - | - |
| 1977 | Nov. | 3 | 111.2 | 3 | - | 105-114 | 25.2 | 3 | - | 24-26 |
| 1978 | July | 4 | 119.1 | 4 | - | 113-125 | 28.3 | 4 | - | 23-35 |
| | | 5 | 121.7 | 3 | - | 117-125 | 28.3 | 3 | - | 23-32 |
| | | 6 | 123.5 | 5 | - | 116-130 | 38.0 | 5 | - | 35-43 |
| | | 8 | 126.3 | 3 | - | 122-131 | 35.2 | 3 | - | 34-36 |
| | | 9 | 126.9 | 5 | - | 120-134 | 37.6 | 5 | - | 30-45 |
| | | 11 | 130.5 | 1 | - | - | 43.5 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------------------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1978 | July (continued) | 12 | 128.5 | 2 | - | 125-131 | 44.3 | 2 | - | 43-45 |
| | | 13 | 132.1 | 2 | - | 128-136 | 44.5 | 2 | - | 41-47 |
| | | 14 | 130.0 | 4 | - | 121-139 | 41.0 | 4 | - | 33-48 |
| | | 15 | 128.9 | 2 | - | 118-139 | 41.5 | 2 | - | 37-46 |
| | | 16 | 132.3 | 8 | - | 124-138 | 45.7 | 8 | - | 36-53 |
| | | 17 | 132.0 | 8 | - | 125-143 | 44.7 | 8 | - | 37-56 |
| | | 18 | 134.7 | 7 | - | 126-140 | 48.7 | 7 | - | 42-60 |
| | | 19 | 137.4 | 6 | - | 132-144 | 46.9 | 6 | - | 44-49 |
| | | 20 | 128.6 | 6 | - | 119-140 | 43.1 | 6 | - | 35-52 |
| | | 21 | 139.0 | 1 | - | - | 44.5 | 1 | - | - |
| | | 23 | 131.0 | 1 | - | - | 39.0 | 1 | - | - |
| | August | 2 | 101.5 | 2 | - | 99-104 | 17.5 | 2 | - | 17-18 |
| | | 3 | 110.2 | 3 | - | 105-116 | 24.8 | 3 | - | 21-27 |
| | | 4 | 113.4 | 4 | - | 111-118 | 28.5 | 4 | - | 26-31 |
| | | 5 | 119.3 | 3 | - | 111-124 | 32.7 | 3 | - | 30-37 |
| | | 6 | 122.8 | 2 | - | 119-126 | 34.3 | 2 | - | 33-35 |
| | | 8 | 135.8 | 2 | - | 134-137 | 41.5 | 2 | - | 41-42 |
| | | 9 | 127.2 | 3 | - | 122-135 | 35.5 | 3 | - | 34-36 |
| | | 11 | 135.3 | 2 | - | 132-138 | 44.3 | 2 | - | 42-46 |
| | | 12 | 128.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 13 | 129.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 14 | 132.3 | 2 | - | 131-133 | 42.0 | 2 | - | - |
| | | 15 | 132.5 | 1 | - | - | 44.5 | 1 | - | - |
| | | 16 | 132.1 | 5 | - | 130-134 | 47.6 | 5 | - | 41-52 |
| | | 17 | 120.8 | 2 | - | 115-126 | 35.8 | 2 | - | 31-40 |
| | | 18 | 133.0 | 1 | - | - | 48.5 | 1 | - | - |
| | | 19 | 131.3 | 3 | - | 130-133 | 44.3 | 3 | - | 41-49 |
| | | 20 | 131.5 | 2 | - | 130-133 | 46.0 | 2 | - | 44-48 |
| | | 21 | 132.5 | 1 | - | - | 48.0 | 1 | - | - |

Table 29

Monthly mean length and weight of nonpregnant fur seals.
(\bar{x} = mean, n = sample size, s = standard deviation for $n > 10$)

Joban

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|-----|-----|---------|-------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | March | 2 | 92.6 | 9 | - | 85-100 | 14.2 | 9 | - | 12-16 |
| | | 3 | 107.9 | 21 | 6.1 | 100-125 | 20.0 | 21 | 2.1 | 16-25 |
| | | 4 | 117.2 | 5 | - | 115-120 | 25.2 | 5 | - | 22-28 |
| | | 5 | 120.0 | 1 | - | - | 24.4 | 1 | - | - |
| | April | 1 | 80.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 94.3 | 10 | 4.0 | 90-100 | 16.0 | 10 | 2.1 | 13-19 |
| | | 3 | 103.2 | 39 | 4.8 | 93-118 | 19.3 | 39 | 2.5 | 15-29 |
| | | 4 | 106.7 | 11 | 5.0 | 100-115 | 21.3 | 11 | 3.1 | 17-27 |
| | | 5 | 115.0 | 4 | - | 110-120 | 25.1 | 4 | - | 21-31 |
| | | 7 | 119.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | | | | | | | | | |
| 1959 | March | 1 | 77.0 | 1 | - | - | 8.5 | 1 | - | - |
| | | 2 | 94.2 | 11 | 3.0 | 90-100 | 14.5 | 11 | 1.0 | 13-16 |
| | | 3 | 102.7 | 23 | 4.3 | 93-115 | 19.1 | 23 | 2.3 | 16-24 |
| | | 4 | 111.0 | 4 | - | 110-113 | 25.3 | 4 | - | 21-30 |
| | | 5 | 118.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 6 | 120.0 | 2 | - | 115-125 | 28.8 | 2 | - | 26-31 |
| | | 7 | 121.0 | 1 | - | - | 31.5 | 1 | - | - |
| | | 9 | 128.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 11 | 122.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 130.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 14 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 15 | 130.0 | 1 | - | - | 42.5 | 1 | - | - |
| | | 16 | 128.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 25 | 125.0 | 1 | - | - | 32.0 | 1 | - | - |
| | April | 1 | 76.0 | 3 | - | 75-78 | 9.7 | 3 | - | 9-10 |
| | | 2 | 93.2 | 29 | 5.7 | 81-107 | 14.4 | 29 | 1.5 | 10-18 |
| | | 3 | 103.5 | 31 | 5.6 | 95-125 | 19.6 | 31 | 3.4 | 13-34 |
| | | 4 | 109.2 | 11 | 7.4 | 98-122 | 23.4 | 11 | 3.2 | 20-30 |
| | | 5 | 113.3 | 3 | - | 107-121 | 28.0 | 3 | - | 25-30 |
| | | 6 | 118.0 | 3 | - | 110-130 | 34.0 | 3 | - | 31-40 |
| | | 7 | 121.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 8 | 120.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 11 | 128.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 13 | 128.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | | | | | | | | | |
| 1962 | Feb. | 4 | 110.0 | 1 | - | - | 26.0 | 1 | - | - |
| | March | 1 | 80.5 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 88.1 | 7 | - | 77-100 | 15.4 | 7 | - | 13-17 |
| | | 3 | 100.2 | 19 | 5.5 | 90-115 | 19.8 | 19 | 2.4 | 16-26 |
| | | 4 | 105.6 | 9 | - | 95-120 | 23.8 | 9 | - | 20-30 |
| | | 5 | 116.3 | 4 | - | 100-130 | 28.5 | 4 | - | 25-32 |
| | | 6 | 110.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 10 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1962 | April | 1 | 79.6 | 7 | - | 71-89 | 10.4 | 7 | - | 8-11 |
| | | 2 | 93.8 | 32 | 4.6 | 83-102 | 15.2 | 32 | 1.9 | 12-20 |
| | | 3 | 104.0 | 35 | 5.4 | 90-115 | 19.8 | 35 | 2.8 | 15-31 |
| | | 4 | 112.7 | 15 | 2.9 | 106-116 | 23.8 | 15 | 2.2 | 20-29 |
| | | 5 | 114.3 | 4 | - | 110-120 | 27.8 | 4 | - | 25-31 |
| | | 8 | 131.0 | 1 | - | - | 38.5 | 1 | - | - |
| | May | 2 | 100.0 | 1 | - | - | 15.0 | 1 | - | - |
| | | 3 | 101.0 | 2 | - | 100-102 | 18.0 | 2 | - | - |
| 1963 | March | 1 | 78.0 | 3 | - | 75-80 | 10.5 | 3 | - | 9-12 |
| | | 2 | 94.0 | 6 | - | 89-100 | 15.2 | 6 | - | 12-20 |
| | | 3 | 106.5 | 8 | - | 100-113 | 21.3 | 8 | - | 19-24 |
| | | 4 | 112.0 | 6 | - | 100-122 | 25.3 | 6 | - | 20-29 |
| | | 5 | 121.7 | 3 | - | 120-123 | 28.7 | 3 | - | 26-30 |
| | | 6 | 120.0 | 1 | - | - | 32.0 | 1 | - | - |
| | April | 15 | 125.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 2 | 98.7 | 3 | - | 96-100 | 15.3 | 3 | - | 15-16 |
| | | 4 | 113.3 | 3 | - | 110-115 | 24.7 | 3 | - | 23-26 |
| | | | | | | | | | | |
| 1964 | March | 2 | 93.3 | 3 | - | 90-100 | 14.7 | 3 | - | 12-17 |
| | | 3 | 107.5 | 2 | - | 100-115 | 22.0 | 2 | - | 21-23 |
| 1965 | March | 1 | 70.0 | 1 | - | - | 8.0 | 1 | - | - |
| | | 2 | 90.0 | 1 | - | - | 15.0 | 1 | - | - |
| | | 3 | 101.4 | 10 | 3.0 | 95-105 | 21.0 | 10 | 1.8 | 19-24 |
| | | 4 | 111.0 | 8 | - | 107-118 | 23.1 | 8 | - | 19-26 |
| | | 5 | 119.0 | 3 | - | 110-125 | 28.8 | 3 | - | 23-34 |
| | | 6 | 122.5 | 4 | - | 105-140 | 30.1 | 4 | - | 24-35 |
| | | 7 | 115.0 | 1 | - | - | 31.5 | 1 | - | - |
| | | 8 | 117.0 | 2 | - | 110-124 | 30.3 | 2 | - | 25-35 |
| | | 11 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 13 | 105.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 14 | 120.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 16 | 129.0 | 1 | - | - | 37.0 | 1 | - | - |
| | April | 1 | 72.0 | 1 | - | - | 9.0 | 1 | - | - |
| | | 2 | 93.5 | 4 | - | 88-98 | 14.8 | 4 | - | 13-16 |
| | | 3 | 102.7 | 3 | - | 100-105 | 18.3 | 3 | - | 18-19 |
| | | 4 | 108.0 | 2 | - | 103-113 | 22.0 | 2 | - | 20-24 |
| | | 5 | 115.0 | 1 | - | - | 26.5 | 1 | - | - |
| | | 7 | 125.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 126.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 9 | 122.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 20 | 126.0 | 1 | - | - | 39.0 | 1 | - | - |
| | May | 1 | 76.5 | 2 | - | 75-78 | 9.3 | 2 | - | - |
| | | 2 | 92.2 | 5 | - | 85-100 | 14.5 | 5 | - | 12-16 |
| | | 3 | 100.0 | 3 | - | - | 18.3 | 3 | - | 17-20 |
| | | 4 | 115.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 7 | 121.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 9 | 122.0 | 1 | - | - | 35.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1966 | March | 3 | 105.0 | 1 | - | - | 19.0 | 1 | - | - |
| | April | 4 | 105.0 | 1 | - | - | 23.0 | 1 | - | - |
| 1968 | Feb. | 2 | 95.0 | 1 | - | - | 15.0 | 1 | - | - |
| | | 4 | 109.5 | 2 | - | 102-117 | 25.3 | 2 | - | 24-26 |
| | | 8 | 121.5 | 2 | - | 119-124 | 30.5 | 2 | - | 29-32 |
| | | 13 | 119.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 19 | 135.0 | 1 | - | - | 40.0 | 1 | - | - |
| | March | 2 | 108.3 | 2 | - | 99-117 | 21.5 | 2 | - | 16-27 |
| | | 3 | 106.0 | 2 | - | 103-109 | 19.0 | 2 | - | - |
| | | 4 | 110.3 | 4 | - | 102-115 | 22.8 | 4 | - | 22-24 |
| | | 6 | 120.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 9 | 125.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 10 | 125.0 | 1 | - | - | 31.0 | 1 | - | - |
| | April | 21 | 126.0 | 1 | - | - | 42.0 | 1 | - | - |
| 1970 | Feb. | 3 | 101.0 | 2 | - | 100-102 | 19.5 | 2 | - | 17-22 |
| | | 4 | 113.0 | 1 | - | - | 26.5 | 1 | - | - |
| | | 5 | 118.0 | 2 | - | 116-120 | 29.0 | 2 | - | - |
| | | 6 | 114.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 119.0 | 3 | - | 117-120 | 34.0 | 3 | - | 32-37 |
| | | 8 | 124.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 12 | 126.5 | 2 | - | 125-128 | 34.8 | 2 | - | 34-35 |
| | | 13 | 120.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 14 | 131.5 | 2 | - | 128-135 | 42.0 | 2 | - | 38-46 |
| | March | 2 | 90.5 | 5 | - | 80-95 | 12.9 | 5 | - | 11-15 |
| | | 3 | 100.3 | 15 | 3.3 | 94-107 | 18.2 | 15 | 1.3 | 15-21 |
| | | 4 | 110.4 | 14 | 5.4 | 101-118 | 22.8 | 14 | 1.7 | 20-27 |
| | | 5 | 118.4 | 5 | - | 115-120 | 28.6 | 5 | - | 26-33 |
| | | 6 | 122.4 | 8 | - | 117-127 | 31.7 | 8 | - | 29-35 |
| | | 7 | 124.7 | 6 | - | 116-137 | 33.2 | 6 | - | 28-46 |
| | | 8 | 126.0 | 2 | - | 125-127 | 31.0 | 2 | - | 30-32 |
| | | 9 | 123.8 | 4 | - | 121-126 | 33.6 | 4 | - | 32-35 |
| | | 10 | 130.5 | 2 | - | 125-136 | 31.5 | 2 | - | 28-35 |
| | | 11 | 133.5 | 2 | - | 133-134 | 37.8 | 2 | - | 37-38 |
| | | 13 | 124.0 | 1 | - | - | 35.0 | 1 | - | -35 |
| | | 14 | 131.0 | 3 | - | 130-132 | 41.2 | 3 | - | 38-44 |
| | | 15 | 140.0 | 2 | - | 138-142 | 47.5 | 2 | - | 45-50 |
| | | 17 | 143.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 18 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 19 | 132.0 | 1 | - | - | 46.5 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-------|-------------|-------|---------|---------|-------------|------|-------|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | March | 1 | 75.0 | 1 | - | - | 9.0 | 1 | - | - |
| | | 2 | 94.1 | 14 | 4.7 | 85-105 | 14.6 | 14 | 1.6 | 12-18 |
| | | 3 | 103.6 | 24 | 5.4 | 94-113 | 19.2 | 24 | 2.2 | 14-24 |
| | | 4 | 112.4 | 25 | 4.8 | 102-122 | 24.3 | 25 | 2.3 | 21-29 |
| | | 5 | 115.5 | 4 | - | 114-118 | 30.8 | 4 | - | 26-36 |
| | | 6 | 126.7 | 3 | - | 123-130 | 31.3 | 3 | - | 26-34 |
| | | 7 | 125.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 119.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 10 | 132.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 11 | 123.0 | 1 | - | - | 35.5 | 1 | - | - |
| | | April | 3 | 103.3 | 3 | - | 100-108 | 19.7 | 3 | - |
| 4 | 114.0 | | 3 | - | 112-116 | 24.3 | 3 | - | 21-27 | |
| 5 | 116.0 | | 1 | - | - | 22.0 | 1 | - | - | |
| 11 | 135.0 | | 1 | - | - | 35.0 | 1 | - | - | |
| 1972 | Feb. | 3 | 107.0 | 2 | - | 106-108 | 21.8 | 2 | - | 21-22 |
| | | 5 | 119.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 17 | 130.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 20 | 130.0 | 1 | - | - | 44.5 | 1 | - | - |
| | March | 2 | 93.5 | 2 | - | 92-95 | 16.0 | 2 | - | 15-17 |
| | | 3 | 104.1 | 7 | - | 98-110 | 19.8 | 7 | - | 17-25 |
| | | 4 | 113.3 | 4 | - | 99-120 | 25.9 | 4 | - | 21-28 |
| | | 5 | 117.7 | 3 | - | 112-121 | 26.8 | 3 | - | 21-31 |
| | | 11 | 141.0 | 1 | - | - | 48.0 | 1 | - | - |
| | April | 2 | 94.1 | 4 | - | 90-104 | 14.5 | 4 | - | 13-16 |
| | | 3 | 108.8 | 6 | - | 104-116 | 21.0 | 6 | - | 20-22 |
| | | 4 | 114.6 | 8 | - | 104-125 | 24.9 | 8 | - | 22-28 |
| | | 5 | 120.4 | 5 | - | 111-127 | 28.8 | 5 | - | 22-31 |
| | | 6 | 116.5 | 3 | - | 110-128 | 29.8 | 3 | - | 26-35 |
| | | 7 | 125.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 8 | 132.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 9 | 126.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 11 | 130.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 13 | 132.5 | 2 | - | 128-137 | 35.5 | 2 | - | 35-36 |
| | | 14 | 133.5 | 1 | - | - | 40.0 | 1 | - | - |
| | | 15 | 130.0 | 1 | - | - | 32.0 | 1 | - | - |
| May | 2 | 96.0 | 1 | - | - | 17.0 | 1 | - | - | |
| | 3 | 98.5 | 2 | - | 95-101 | 19.0 | 2 | - | 18-20 | |
| | 7 | 118.8 | 2 | - | 118-119 | 30.8 | 2 | - | 30-31 | |
| | 13 | 123.0 | 1 | - | - | 35.0 | 1 | - | - | |

Table 30

Monthly mean length and weight of nonpregnant fur seals.
(x = mean, n = sample size, s = standard deviation for n > 10)

Sanriku

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|-----|------|---------|-------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Feb. | 1 | 81.7 | 3 | - | 77-87 | 10.2 | 3 | - | 9-11 |
| | | 2 | 94.3 | 9 | - | 88-100 | 16.6 | 9 | - | 13-28 |
| | | 3 | 103.9 | 20 | 4.1 | 98-114 | 20.7 | 20 | 2.6 | 16-27 |
| | | 4 | 112.2 | 5 | - | 109-115 | 25.8 | 5 | - | 23-28 |
| | | 5 | 118.0 | 4 | - | 110-126 | 30.0 | 4 | - | 24-36 |
| | | 6 | 125.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 7 | 132.0 | 1 | - | - | 33.5 | 1 | - | - |
| | March | 1 | 78.0 | 6 | - | 70-87 | 10.6 | 6 | - | 7-13 |
| | | 2 | 94.3 | 16 | 6.7 | 80-112 | 15.2 | 16 | 2.0 | 13-21 |
| | | 3 | 106.1 | 19 | 4.4 | 95-114 | 20.2 | 19 | 1.6 | 16-23 |
| | | 4 | 116.0 | 6 | - | 106-125 | 24.7 | 6 | - | 20-29 |
| | | 6 | 119.0 | 2 | - | 117-121 | 31.3 | 2 | - | 30-32 |
| | | 7 | 127.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 9 | 125.0 | 1 | - | - | 37.0 | 1 | - | - |
| | April | 12 | 124.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 13 | 127.0 | 2 | - | 117-137 | 37.8 | 2 | - | 32-43 |
| | | 15 | 135.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 1 | 84.4 | 14 | 5.7 | 75-95 | 11.6 | 14 | 3.0 | 8-17 |
| | | 2 | 95.3 | 94 | 5.4 | 81-110 | 15.4 | 94 | 2.2 | 11-25 |
| | | 3 | 104.5 | 183 | 5.4 | 81-118 | 19.2 | 183 | 2.6 | 11-31 |
| | | 4 | 110.9 | 56 | 6.1 | 93-124 | 23.6 | 56 | 3.0 | 16-30 |
| | May | 5 | 112.4 | 11 | 7.6 | 100-126 | 25.5 | 11 | 4.2 | 17-31 |
| | | 6 | 115.8 | 9 | - | 100-130 | 27.2 | 9 | - | 20-35 |
| | | 7 | 123.3 | 4 | - | 118-130 | 35.5 | 4 | - | 33-38 |
| | | 8 | 120.0 | 3 | - | 115-125 | 30.3 | 3 | - | 27-33 |
| | | 9 | 122.0 | 2 | - | 115-129 | 30.3 | 2 | - | 28-32 |
| | | 10 | 128.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 11 | 137.0 | 1 | - | - | 38.0 | 1 | - | - |
| | May | 14 | 125.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 15 | 112.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 20 | 112.0 | 1 | - | - | 32.3 | 1 | - | - |
| | | 1 | 89.9 | 11 | 10.7 | 75-117 | 14.1 | 11 | 3.9 | 10-21 |
| | | 2 | 95.1 | 90 | 5.2 | 77-107 | 15.2 | 90 | 1.7 | 7-18 |
| | | 3 | 105.0 | 210 | 4.8 | 90-120 | 19.7 | 210 | 2.3 | 10-28 |
| | | 4 | 112.2 | 45 | 5.6 | 100-123 | 23.7 | 45 | 3.3 | 16-33 |
| | May | 5 | 119.7 | 14 | 7.3 | 110-135 | 26.8 | 14 | 4.0 | 21-35 |
| | | 6 | 119.3 | 7 | - | 108-132 | 27.7 | 7 | - | 23-37 |
| | | 7 | 120.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 8 | 123.3 | 3 | - | 115-130 | 33.2 | 3 | - | 25-42 |
| | | 10 | 139.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 11 | 135.0 | 1 | - | - | 40.5 | 1 | - | - |
| | | 13 | 131.5 | 2 | - | 123-140 | 34.8 | 2 | - | 31-38 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | May (continued) | 15 | 130.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 16 | 123.7 | 7 | - | 120-130 | 38.2 | 7 | - | 34-45 |
| | | 17 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 20 | 135.7 | 3 | - | 130-140 | 39.8 | 3 | - | 31-45 |
| | June | 1 | 88.5 | 2 | - | 87-90 | 14.3 | 2 | - | 10-18 |
| | | 2 | 96.6 | 12 | 3.6 | 90-100 | 15.8 | 12 | .9 | 14-17 |
| | | 3 | 105.0 | 31 | 5.2 | 85-112 | 20.0 | 31 | 2.2 | 11-23 |
| | | 4 | 114.3 | 12 | 3.8 | 105-123 | 25.2 | 12 | 1.9 | 22-29 |
| | | 5 | 122.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 120.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 7 | 122.0 | 1 | - | - | 40.1 | 1 | - | - |
| | Feb. | 1 | 77.0 | 8 | - | 70-82 | 10.5 | 8 | - | 7-13 |
| | | 2 | 93.6 | 22 | 5.3 | 83-100 | 15.4 | 22 | 1.3 | 14-18 |
| | | 3 | 105.9 | 18 | 6.6 | 95-120 | 20.7 | 18 | 2.1 | 17-24 |
| | | 4 | 110.6 | 8 | - | 90-125 | 23.1 | 8 | - | 17-27 |
| | | 5 | 115.0 | 1 | - | - | 28.5 | 1 | - | - |
| | | 7 | 135.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10 | 123.0 | 1 | - | - | 35.0 | 1 | - | - |
| 1959 | March | 15 | 127.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 16 | 140.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 17 | 136.0 | 2 | - | 134-138 | 42.8 | 2 | - | 35-50 |
| | | 18 | 138.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 19 | 125.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 20 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 21 | 131.0 | 2 | - | 130-132 | 41.5 | 2 | - | 38-45 |
| | | 23 | 132.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 1 | 80.0 | 16 | 7.3 | 72-100 | 11.1 | 16 | 1.9 | 8-16 |
| | | 2 | 95.6 | 36 | 4.6 | 85-105 | 15.8 | 36 | 1.7 | 13-20 |
| | | 3 | 104.3 | 57 | 5.5 | 90-120 | 19.4 | 57 | 3.0 | 10-29 |
| | | 4 | 110.3 | 14 | 4.9 | 100-120 | 24.1 | 14 | 3.5 | 17-30 |
| | | 5 | 116.4 | 5 | - | 110-124 | 28.6 | 5 | - | 27-30 |
| | | 6 | 118.8 | 6 | - | 111-132 | 29.8 | 6 | - | 25-37 |
| | March | 7 | 124.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 8 | 135.0 | 2 | - | 130-140 | 59.5 | 2 | - | 34-85 |
| | | 12 | 122.5 | 2 | - | 120-125 | 35.0 | 2 | - | - |
| | | 13 | 145.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 14 | 132.7 | 3 | - | 130-135 | 38.2 | 3 | - | 36-40 |
| | | 15 | 122.0 | 2 | - | 118-126 | 30.8 | 2 | - | 30-31 |
| | | 16 | 135.0 | 2 | - | - | 45.5 | 2 | - | 41-50 |
| | | 17 | 127.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 18 | 121.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 20 | 133.4 | 5 | - | 127-141 | 37.3 | 5 | - | 37-38 |
| | | 22 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 23 | 137.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 26 | 130.0 | 1 | - | - | 35.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|-----|-----|---------|------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1959 | April | 1 | 80.0 | 26 | 4.5 | 70-87 | 9.9 | 26 | 1.2 | 7-12 |
| | | 2 | 96.0 | 115 | 5.5 | 80-110 | 14.9 | 115 | 1.8 | 11-22 |
| | | 3 | 104.0 | 188 | 5.4 | 87-118 | 18.9 | 188 | 2.1 | 12-25 |
| | | 4 | 111.5 | 70 | 5.8 | 95-126 | 23.3 | 70 | 2.8 | 14-32 |
| | | 5 | 118.1 | 10 | 6.8 | 107-130 | 28.1 | 10 | 2.4 | 25-33 |
| | | 6 | 119.1 | 7 | - | 112-130 | 30.7 | 7 | - | 27-37 |
| | | 7 | 123.5 | 6 | - | 115-130 | 32.2 | 6 | - | 29-36 |
| | | 8 | 123.0 | 3 | - | 117-130 | 30.7 | 3 | - | 28-36 |
| | | 9 | 125.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 10 | 130.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 13 | 137.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 19 | 125.0 | 1 | - | - | 37.5 | 1 | - | - |
| | | 22 | 123.0 | 2 | - | 115-131 | 39.0 | 2 | - | 36-42 |
| | | 23 | 145.0 | 1 | - | - | 48.0 | 1 | - | - |
| | May | 1 | 83.6 | 8 | - | 77-100 | 10.8 | 8 | - | 9-13 |
| | | 2 | 95.5 | 41 | 6.5 | 68-111 | 15.4 | 41 | 1.8 | 11-19 |
| | | 3 | 105.5 | 56 | 4.9 | 91-115 | 19.5 | 56 | 2.3 | 15-30 |
| | | 4 | 112.2 | 21 | 4.0 | 105-119 | 23.9 | 21 | 2.9 | 19-29 |
| | | 5 | 120.6 | 7 | - | 115-125 | 28.7 | 7 | - | 26-32 |
| | | 6 | 125.0 | 2 | - | - | 31.0 | 2 | - | 30-32 |
| | | 7 | 124.0 | 2 | - | 118-130 | 38.3 | 2 | - | 35-41 |
| | June | 1 | 82.5 | 4 | - | 80-85 | 12.3 | 4 | - | 11-14 |
| | | 2 | 98.7 | 12 | 5.2 | 90-108 | 16.3 | 12 | 1.4 | 13-18 |
| | | 3 | 111.4 | 11 | 6.9 | 100-123 | 20.0 | 11 | 2.7 | 16-24 |
| | | 4 | 110.2 | 5 | - | 105-115 | 24.1 | 5 | 0 | 20-31 |
| | | 5 | 123.3 | 4 | - | 119-129 | 30.3 | 4 | - | 22-38 |
| | | 6 | 115.0 | 1 | - | - | 28.0 | 1 | - | - |
| 1960 | March | 12 | 133.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 2 | 97.0 | 2 | - | 95-99 | 15.0 | 2 | - | - |
| | | 3 | 103.0 | 6 | - | 98-107 | 20.1 | 6 | - | 18-23 |
| | | 4 | 108.0 | 3 | - | 101-113 | 25.0 | 3 | - | 23-27 |
| | | 5 | 114.0 | 1 | - | - | 27.5 | 1 | - | - |
| | April | 1 | 82.5 | 4 | - | 80-85 | 11.0 | 4 | - | 8-15 |
| | | 2 | 95.2 | 78 | 4.8 | 80-108 | 14.9 | 78 | 1.3 | 12-19 |
| | | 3 | 104.5 | 88 | 4.9 | 95-115 | 18.8 | 88 | 2.2 | 13-25 |
| | | 4 | 110.8 | 43 | 7.8 | 100-135 | 23.3 | 43 | 3.2 | 18-37 |
| | | 5 | 118.6 | 13 | 6.1 | 107-128 | 25.8 | 13 | 1.5 | 22-28 |
| | | 6 | 111.7 | 3 | - | 108-115 | 29.3 | 3 | - | 22-38 |
| | | 7 | 117.5 | 2 | - | 117-118 | 30.5 | 2 | - | 28-33 |
| | | 8 | 121.0 | 2 | - | 115-127 | 31.0 | 2 | - | 26-36 |
| | | 9 | 130.0 | 2 | - | - | 34.0 | 2 | - | 33-35 |
| | | 12 | 127.0 | 1 | - | - | 28.5 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|----|-----|----------|------------|----|-----|--------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | May | 1 | 85.8 | 5 | - | 80-90 | 22.6* | 5 | - | 10-65* |
| | | 2 | 96.8 | 50 | 5.5 | 82-107 | 15.6 | 50 | 1.4 | 12-19 |
| | | 3 | 104.9 | 64 | 5.5 | 90-120 | 19.9 | 64 | 2.1 | 15-25 |
| | | 4 | 112.0 | 30 | 5.8 | 100-127 | 24.1 | 30 | 2.5 | 20-30 |
| | | 5 | 118.2 | 16 | 7.6 | 96-130 | 27.1 | 16 | 4.6 | 14-33 |
| | | 6 | 120.4 | 8 | - | 111-128 | 28.0 | 8 | - | 20-36 |
| | | 7 | 121.8 | 4 | - | 115-126 | 30.6 | 4 | - | 29-32 |
| | | 9 | 125.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 16 | 135.0 | 1 | - | - | 38.5 | 1 | - | - |
| | June | 2 | 94.4 | 7 | - | 88-104 | 15.1 | 7 | - | 14-16 |
| | | 3 | 107.0 | 5 | - | 100-113 | 20.4 | 5 | - | 18-22 |
| | | 4 | 115.8 | 4 | - | 113-120 | 24.3 | 4 | - | 22-27 |
| | | 5 | 116.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 6 | 121.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 11 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| 1961 | March | 1 | 80.0 | 1 | - | - | 12.0 | 1 | - | - |
| | | 2 | 97.5 | 2 | - | 95-100 | 15.3 | 2 | - | 14-16 |
| | | 3 | 107.5 | 6 | - | 102-110 | 20.0 | 6 | - | 17-21 |
| | | 4 | 112.5 | 4 | - | 106-117 | 22.3 | 4 | - | 20-24 |
| | | 5 | 114.5 | 2 | - | 113-116 | 20.8 | 2 | - | 19-22 |
| | | 7 | 120.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 15 | 125.0 | 1 | - | - | 31.0 | 1 | - | - |
| | April | 1 | 81.3 | 3 | - | 79-85 | 10.7 | 3 | - | 10-11 |
| | | 2 | 93.3 | 53 | 8.2 | 78-140 * | 14.5 | 53 | 1.6 | 9-18 |
| | | 3 | 102.5 | 81 | 5.5 | 90-115 | 18.9 | 81 | 2.0 | 15-23 |
| | | 4 | 111.2 | 33 | 6.2 | 100-126 | 23.7 | 33 | 2.7 | 17-31 |
| | | 5 | 116.0 | 5 | - | 105-127 | 25.1 | 5 | - | 21-28 |
| | | 6 | 120.0 | 3 | - | 115-125 | 30.0 | 3 | - | 27-33 |
| | | 7 | 121.2 | 5 | - | 115-130 | 30.6 | 5 | - | 20-35 |
| | | 9 | 122.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 11 | 122.5 | 2 | - | 115-130 | 33.8 | 2 | - | 28-39 |
| | | 12 | 133.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 15* | 106.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 16 | 125.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 17 | 126.5 | 2 | - | 123-130 | 30.0 | 2 | - | 28-32 |
| | | 19 | 130.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 23 | 120.0 | 1 | - | - | 39.0 | 1 | - | - |
| | May | 1 | 84.5 | 2 | - | 79-90 | 12.0 | 2 | - | 11-13 |
| | | 2 | 93.9 | 57 | 6.0 | 80-105 | 15.2 | 57 | 1.9 | 12-22 |
| | | 3 | 104.0 | 74 | 5.0 | 90-115 | 19.1 | 74 | 2.2 | 13-29 |
| | | 4 | 108.5 | 33 | 6.4 | 95-120 | 22.3 | 33 | 2.9 | 14-28 |
| | | 5 | 116.7 | 13 | 7.2 | 105-127 | 27.0 | 13 | 4.5 | 19-38 |
| | | 6 | 118.6 | 12 | 5.3 | 113-132 | 29.0 | 12 | 4.1 | 21-38 |
| | | 7 | 112.7 | 3 | - | 103-120 | 25.3 | 3 | - | 17-32 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|------|--------------------|------|-------------|-------|-----|---------|-------------|------|-----|--------|---|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range | |
| 1961 | May (continued) | 8 | 121.5 | 2 | - | 118-125 | 32.0 | 2 | - | 30-34 | |
| | | 9 | 125.0 | 1 | - | - | 28.0 | 1 | - | - | |
| | | 10 | 115.0 | 1 | - | - | 31.0 | 1 | - | - | |
| | | 11 | 122.7 | 3 | - | 119-129 | 35.3 | 3 | - | 32-39 | |
| | | 12 | 127.0 | 1 | - | - | 43.0 | 1 | - | - | |
| | | 13 | 137.0 | 1 | - | - | 38.0 | 1 | - | - | |
| | | 14 | 125.8 | 2 | - | 125-126 | 41.5 | 2 | - | 38-45 | |
| | | 17 | 120.0 | 1 | - | - | 40.0 | 1 | - | - | |
| | | June | 3 | 109.0 | 2 | - | 103-115 | 19.0 | 2 | - | - |
| | | | 4 | 117.0 | 1 | - | - | 17.0 | 1 | - | - |
| | July | 3 | 100.0 | 1 | - | - | 22.0 | 1 | - | - | |
| 1962 | March | 1 | 70.0 | 1 | - | - | 9.5 | 1 | - | - | |
| | | 2 | 85.0 | 1 | - | - | 14.0 | 1 | - | - | |
| | | 4 | 105.0 | 1 | - | - | 25.0 | 1 | - | - | |
| | April | 1 | 81.6 | 5 | - | 75-87 | 10.5 | 5 | - | 9-12 | |
| | | 2 | 93.0 | 49 | 5.2 | 80-105 | 15.1 | 49 | 2.1 | 11-24 | |
| | | 3 | 102.7 | 78 | 6.2 | 88-117 | 19.3 | 78 | 2.1 | 14-24 | |
| | | 4 | 111.7 | 29 | 7.8 | 100-128 | 24.9 | 29 | 2.8 | 20-32 | |
| | | 5 | 118.2 | 6 | - | 112-125 | 29.3 | 6 | - | 25-38 | |
| | | 6 | 117.8 | 4 | - | 100-128 | 27.1 | 4 | - | 25-29 | |
| | | 7 | 122.0 | 5 | - | 115-133 | 29.6 | 5 | - | 28-31 | |
| | | 8 | 120.0 | 1 | - | - | 37.0 | 1 | - | - | |
| | | 9 | 124.0 | 2 | - | 123-125 | 34.5 | 2 | - | 33-36 | |
| | | 12 | 132.0 | 1 | - | - | 33.5 | 1 | - | - | |
| | | 17 | 125.0 | 1 | - | - | 34.0 | 1 | - | - | |
| | | 18 | 122.0 | 1 | - | - | 34.0 | 1 | - | - | |
| | May | 1 | 78.5 | 4 | - | 70-89 | 10.6 | 4 | - | 9-14 | |
| | | 2 | 96.1 | 41 | 5.0 | 85-111 | 16.7 | 41 | 4.1 | 13-36* | |
| | | 3 | 103.4 | 36 | 6.1 | 85-115 | 20.1 | 36 | 2.7 | 16-30 | |
| | | 4 | 111.1 | 18 | 7.1 | 93-128 | 23.9 | 18 | 4.4 | 17-32 | |
| | | 5 | 110.8 | 4 | - | 100-118 | 25.8 | 4 | - | 19-30 | |
| | | 6 | 116.5 | 4 | - | 111-125 | 28.3 | 4 | - | 26-32 | |
| | | 7 | 123.5 | 2 | - | 122-125 | 31.0 | 2 | - | 28-34 | |
| | | 8 | 123.0 | 1 | - | - | 41.0 | 1 | - | - | |
| | | 13 | 125.0 | 1 | - | - | 22.0 | 1 | - | - | |
| | | 15 | 115.0 | 1 | - | - | 35.0 | 1 | - | - | |
| | June | 1 | 84.1 | 7 | - | 80-90 | 11.9 | 7 | - | 11-13 | |
| | | 2 | 98.2 | 11 | 4.7 | 90-105 | 17.3 | 11 | 1.5 | 14-20 | |
| | | 3 | 106.2 | 23 | 6.0 | 90-117 | 20.5 | 23 | 1.9 | 16-24 | |
| | | 4 | 112.8 | 6 | - | 109-119 | 24.5 | 6 | - | 19-27 | |
| | | 5 | 125.0 | 1 | - | - | 27.5 | 1 | - | - | |
| | | 6 | 120.0 | 1 | - | - | 26.0 | 1 | - | - | |
| | | 8 | 125.0 | 1 | - | - | 26.0 | 1 | - | - | |
| | | 9 | 120.0 | 1 | - | - | 32.0 | 1 | - | - | |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1963 | March | 2 | 86.5 | 2 | - | 85-88 | 15.0 | 2 | - | 14-16 |
| | | 3 | 105.0 | 2 | - | 103-107 | 21.3 | 2 | - | 19-23 |
| | | 7 | 125.0 | 1 | - | - | 30.0 | 1 | - | - |
| | April | 1 | 78.0 | 4 | - | 75-82 | 10.4 | 4 | - | 9-11 |
| | | 2 | 94.2 | 23 | 5.1 | 85-104 | 15.4 | 23 | 1.4 | 12-18 |
| | | 3 | 101.5 | 34 | 6.8 | 85-120 | 19.3 | 34 | 2.5 | 15-25 |
| | | 4 | 111.2 | 13 | 5.2 | 105-123 | 24.7 | 13 | 3.0 | 21-32 |
| | | 5 | 119.0 | 4 | - | 110-125 | 30.0 | 4 | - | 28-32 |
| | | 6 | 120.2 | 5 | - | 115-125 | 33.6 | 5 | - | 28-38 |
| | | 7 | 125.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 131.0 | 3 | - | 120-143 | 35.8 | 3 | - | 32-40 |
| | | 11 | 131.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 16 | 130.0 | 1 | - | - | 44.0 | 1 | - | - |
| | May | 1 | 82.2 | 9 | - | 75-87 | 10.7 | 9 | - | 9-12 |
| | | 2 | 93.4 | 46 | 5.3 | 85-104 | 14.8 | 46 | 1.6 | 11-19 |
| | | 3 | 104.8 | 60 | 5.8 | 90-120 | 20.4 | 60 | 3.5 | 14-37 |
| | | 4 | 112.3 | 46 | 6.4 | 100-130 | 24.5 | 46 | 3.2 | 19-34 |
| | | 5 | 117.9 | 14 | 4.3 | 110-125 | 29.7 | 14 | 3.1 | 25-36 |
| | | 6 | 126.1 | 7 | - | 110-136 | 35.4 | 7 | - | 27-47 |
| | | 7 | 125.5 | 2 | - | 123-128 | 30.5 | 2 | - | 29-32 |
| | | 8 | 124.7 | 3 | - | 117-130 | 34.3 | 3 | - | 33-36 |
| | | 10 | 123.0 | 1 | - | - | 29.5 | 1 | - | - |
| | | 11 | 125.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 14 | 120.0 | 1 | - | - | 33.0 | 1 | - | - |
| | June | 17 | 135.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 18 | 130.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 1 | 85.8 | 4 | - | 80-92 | 11.8 | 4 | - | 10-13 |
| | | 2 | 97.2 | 37 | 5.6 | 85-110 | 16.0 | 37 | 2.4 | 11-24 |
| | | 3 | 106.4 | 74 | 5.4 | 95-120 | 21.9 | 74 | 3.0 | 14-30 |
| | | 4 | 112.5 | 32 | 5.1 | 100-120 | 24.9 | 32 | 3.7 | 16-35 |
| | | 5 | 120.3 | 24 | 5.3 | 105-131 | 31.6 | 24 | 4.5 | 25-40 |
| | | 6 | 121.8 | 6 | - | 115-135 | 31.4 | 6 | - | 19-51 |
| | | 7 | 126.0 | 2 | - | 120-132 | 32.8 | 2 | - | 28-37 |
| | | 8 | 131.5 | 2 | - | 130-133 | 34.3 | 2 | - | - |
| | | 9 | 130.0 | 1 | - | - | 34.0 | 1 | - | - |
| | July | 10 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 118.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 2 | 102.5 | 2 | - | 100-105 | 21.3 | 2 | - | 18-24 |
| 1964 | March | 3 | 118.0 | 1 | - | - | 26.5 | 1 | - | - |
| | | 1 | 70.0 | 1 | - | - | 9.5 | 1 | - | - |
| | | 2 | 94.0 | 12 | 3.7 | 86-98 | 15.8 | 12 | 1.3 | 13-18 |
| | | 3 | 103.9 | 34 | 5.1 | 93-113 | 20.0 | 34 | 3.0 | 15-32 |
| | | 4 | 113.3 | 12 | 4.0 | 105-122 | 25.2 | 12 | 2.0 | 22-29 |
| | | 5 | 116.8 | 5 | - | 111-120 | 28.6 | 5 | - | 23-37 |
| | | 6 | 123.7 | 3 | - | 120-128 | 33.0 | 3 | - | 29-37 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1964 | March (continued) | 7 | 124.5 | 2 | - | 124-125 | 33.5 | 2 | - | 32-35 |
| | | 9 | 123.5 | 2 | - | 115-132 | 33.0 | 2 | - | 30-36 |
| | | 11 | 132.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 13 | 137.0 | 1 | - | - | 45.5 | 1 | - | - |
| | | 16 | 130.0 | 1 | - | - | 51.0 | 1 | - | - |
| | | 20 | 126.3 | 3 | - | 120-135 | 36.7 | 3 | - | 27-50 |
| | | 21 | 133.0 | 1 | - | - | 44.0 | 1 | - | - |
| | April | 1 | 78.2 | 11 | 2.4 | 75-82 | 10.5 | 11 | 1.5 | 9-15 |
| | | 2 | 95.5 | 21 | 6.3 | 85-110 | 15.0 | 21 | 2.3 | 11-22 |
| | | 3 | 105.4 | 38 | 5.7 | 85-115 | 19.7 | 38 | 2.7 | 12-27 |
| | | 4 | 111.5 | 11 | 7.7 | 92-120 | 24.6 | 11 | 4.5 | 13-30 |
| | | 5 | 117.0 | 3 | - | 105-126 | 28.7 | 3 | - | 26-30 |
| | | 6 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 8 | 123.0 | 2 | - | 121-125 | 40.0 | 2 | - | 38-42 |
| | | 9 | 131.5 | 2 | - | 130-133 | 41.5 | 2 | - | 38-45 |
| | | 12 | 130.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 15 | 127.5 | 2 | - | 127-128 | 32.8 | 2 | - | 31-34 |
| | | 16 | 130.0 | 2 | - | 125-135 | 43.3 | 2 | - | 40-46 |
| | | 17 | 125.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 125.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 20 | 132.5 | 2 | - | 130-135 | 40.5 | 2 | - | 36-45 |
| | | 22 | 143.0 | 1 | - | - | 50.0 | 1 | - | - |
| | May | 1 | 82.0 | 11 | 5.8 | 74-95 | 11.1 | 11 | 1.4 | 8-14 |
| | | 2 | 95.8 | 34 | 4.9 | 90-112 | 15.2 | 34 | 1.3 | 12-18 |
| | | 3 | 105.7 | 59 | 5.8 | 95-120 | 20.4 | 59 | 2.4 | 14-29 |
| | | 4 | 110.8 | 27 | 6.8 | 95-123 | 24.1 | 27 | 3.3 | 18-31 |
| | | 5 | 114.7 | 8 | - | 101-121 | 26.1 | 8 | - | 18-31 |
| | | 6 | 119.0 | 7 | - | 110-125 | 30.6 | 7 | - | 28-37 |
| | | 9 | 125.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 11 | 122.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 14 | 127.0 | 2 | - | 126-128 | 39.0 | 2 | - | 37-41 |
| | | 15 | 135.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 16 | 123.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 19 | 135.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 20 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | June | 2 | 102.4 | 11 | 7.8 | 95-125 | 16.7 | 11 | 1.2 | 15-19 |
| | | 3 | 107.6 | 14 | 4.8 | 100-118 | 20.5 | 14 | 1.6 | 17-23 |
| | | 4 | 112.6 | 9 | - | 107-118 | 24.7 | 9 | - | 21-29 |
| | | 5 | 122.0 | 4 | - | 115-135 | 29.0 | 4 | - | 26-34 |
| | | 6 | 124.0 | 2 | - | 123-125 | 28.3 | 2 | - | - |
| | | 8 | 123.0 | 2 | - | 120-126 | 33.0 | 2 | - | - |
| 1965 | March | 1 | 76.7 | 3 | - | 73-80 | 9.2 | 3 | - | - |
| | | 2 | 92.7 | 3 | - | 90-95 | 13.2 | 3 | - | - |
| | | 3 | 105.5 | 4 | - | 102-110 | 19.8 | 4 | - | 18-21 |
| | | 4 | 111.3 | 3 | - | 105-120 | 24.8 | 3 | - | 21-28 |
| | | 5 | 109.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 113.0 | 1 | - | - | 26.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1965 | April | 1 | 75.0 | 2 | - | - | 9.5 | 2 | - | 9-10 |
| | | 2 | 90.0 | 1 | - | - | 14.0 | 1 | - | - |
| | | 3 | 102.3 | 4 | - | 95-112 | 18.3 | 4 | - | 16-21 |
| | | 4 | 125.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 8 | 125.0 | 1 | - | - | 30.0 | 1 | - | - |
| | May | 1 | 72.5 | 2 | - | 70-75 | 9.0 | 2 | - | - |
| | | 2 | 93.0 | 12 | 4.1 | 85-100 | 13.6 | 12 | 1.5 | 12-16 |
| | | 3 | 102.9 | 36 | 5.3 | 95-118 | 18.6 | 36 | 2.0 | 12-23 |
| | | 4 | 111.0 | 26 | 5.2 | 100-120 | 23.2 | 26 | 2.5 | 18-28 |
| | | 5 | 121.6 | 13 | 5.6 | 117-135 | 29.0 | 13 | 4.2 | 25-40 |
| | | 6 | 118.7 | 6 | - | 110-123 | 31.8 | 6 | - | 30-35 |
| | | 7 | 117.5 | 2 | - | 115-120 | 29.0 | 2 | - | - |
| | | 8 | 125.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 9 | 127.0 | 2 | - | 124-130 | 31.5 | 2 | - | 30-33 |
| | | 11 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 13 | 137.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 15 | 131.0 | 2 | - | 122-140 | 38.3 | 2 | - | 31-45 |
| | | 16 | 130.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 18 | 132.0 | 1 | - | - | 39.0 | 1 | - | - |
| | June | 1 | 84.1 | 9 | - | 80-87 | 10.9 | 9 | - | 10-12 |
| | | 2 | 93.8 | 26 | 5.2 | 80-100 | 15.8 | 26 | 1.8 | 12-18 |
| | | 3 | 106.1 | 50 | 6.6 | 90-125 | 20.2 | 50 | 2.5 | 11-26 |
| | | 4 | 113.4 | 35 | 6.4 | 100-125 | 24.7 | 35 | 2.7 | 18-28 |
| | | 5 | 117.9 | 17 | 5.6 | 105-126 | 28.3 | 17 | 2.6 | 23-33 |
| | | 6 | 118.7 | 3 | - | 111-125 | 28.2 | 3 | - | 24-31 |
| | | 7 | 125.0 | 7 | - | 120-135 | 31.7 | 7 | - | 27-37 |
| | | 8 | 121.0 | 5 | - | 120-125 | 30.8 | 5 | - | 26-35 |
| | | 9 | 123.5 | 2 | - | 122-125 | 31.5 | 2 | - | 29-34 |
| | | 13 | 127.0 | 1 | - | - | 38.0 | 1 | - | - |
| | July | 14 | 130.0 | 2 | - | 125-135 | 40.5 | 2 | - | 36-45 |
| | | 1 | 85.0 | 1 | - | - | 12.5 | 1 | - | - |
| | | 2 | 100.7 | 3 | - | 97-105 | 16.3 | 3 | - | 15-18 |
| | | 3 | 102.5 | 2 | - | 100-105 | 21.0 | 2 | - | 19-23 |
| | | 4 | 121.0 | 2 | - | 117-125 | 28.8 | 2 | - | 28-29 |
| 1966 | March | 2 | 94.7 | 6 | - | 90-100 | 15.3 | 6 | - | 12-16 |
| | | 3 | 106.3 | 31 | 6.7 | 98-130 | 19.4 | 31 | 1.5 | 16-22 |
| | | 4 | 111.3 | 16 | 3.5 | 105-119 | 23.8 | 16 | 1.8 | 21-27 |
| | | 5 | 117.0 | 3 | - | 111-125 | 27.0 | 3 | - | 24-32 |
| | | 6 | 123.0 | 2 | - | 115-131 | 32.0 | 2 | - | 30-34 |
| | | 7 | 123.0 | 2 | - | 121-125 | 32.5 | 2 | - | 32-33 |
| | | 8 | 127.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 11 | 122.5 | 2 | - | 120-125 | 34.3 | 2 | - | 30-38 |
| | April | 2 | 96.4 | 9 | - | 90-103 | 14.4 | 9 | - | 11-17 |
| | | 3 | 105.2 | 18 | 4.5 | 96-113 | 19.3 | 18 | 1.7 | 16-22 |
| | | 4 | 110.9 | 13 | 4.0 | 105-118 | 23.0 | 13 | 2.0 | 19-26 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1966 | April (continued) | 5 | 119.0 | 3 | - | 117-120 | 31.8 | 3 | - | 28-37 |
| | | 6 | 117.5 | 1 | - | - | 28.0 | 1 | - | - |
| | | 7 | 124.0 | 3 | - | 121-127 | 31.2 | 3 | - | 29-33 |
| | | 8 | 129.0 | 2 | - | 125-133 | 34.3 | 2 | - | - |
| | | 11 | 128.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 12 | 130.5 | 2 | - | 130-131 | 37.3 | 2 | - | 36-38 |
| | May | 16 | 127.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 1 | 83.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 96.2 | 17 | 4.7 | 90-105 | 15.1 | 17 | 1.4 | 13-18 |
| | | 3 | 106.8 | 32 | 4.8 | 97-120 | 20.2 | 32 | 2.7 | 15-28 |
| | | 4 | 112.5 | 21 | 4.4 | 102-121 | 23.8 | 21 | 2.5 | 20-31 |
| | | 5 | 121.5 | 8 | - | 116-128 | 25.8 | 8 | - | 21-30 |
| | | 6 | 119.4 | 5 | - | 113-124 | 27.0 | 5 | - | 23-31 |
| | | 7 | 127.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 8 | 123.5 | 2 | - | 122-125 | 32.5 | 2 | - | 26-38 |
| | | 9 | 117.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 11 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 12 | 125.7 | 3 | - | 120-129 | 39.5 | 3 | - | 36-44 |
| | | 13 | 122.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 18 | 128.0 | 1 | - | - | 39.0 | 1 | - | - |
| | June | 2 | 100.4 | 6 | - | 90-106 | 16.3 | 6 | - | 14-19 |
| | | 3 | 108.3 | 8 | - | 104-112 | 19.4 | 8 | - | 15-25 |
| | | 4 | 117.5 | 10 | 3.7 | 112-125 | 26.4 | 10 | 1.9 | 23-29 |
| | | 5 | 118.5 | 4 | - | 113-122 | 25.5 | 4 | - | 22-29 |
| | | 6 | 123.2 | 5 | - | 117-132 | 30.8 | 5 | - | 26-35 |
| | | 7 | 127.3 | 3 | - | 118-132 | 32.5 | 3 | - | 27-37 |
| | | 8 | 123.5 | 2 | - | 120-127 | 31.5 | 2 | - | 30-33 |
| | | 11 | 125.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 13 | 133.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 15 | 141.0 | 1 | - | - | 47.0 | 1 | - | - |
| 1967 | January | 4 | 114.7 | 3 | - | 110-119 | 26.0 | 3 | - | 23-31 |
| | | 5 | 125.0 | 2 | - | 122-128 | 31.8 | 2 | - | 29-34 |
| | | 8 | 130.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 9 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 11 | 134.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 12 | 128.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 14 | 121.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 16 | 131.0 | 1 | - | - | 42.0 | 1 | - | - |
| | Feb. | 1 | 84.0 | 3 | - | 80-89 | 10.7 | 3 | - | 9-11 |
| | | 2 | 94.0 | 6 | - | 88-102 | 15.8 | 6 | - | 14-17 |
| | | 3 | 104.7 | 17 | 5.0 | 96-115 | 20.2 | 17 | 1.9 | 15-23 |
| | | 4 | 111.2 | 9 | - | 101-122 | 23.3 | 9 | - | 19-28 |
| | | 5 | 122.0 | 1 | - | - | 26.5 | 1 | - | - |
| | | 6 | 133.0 | 2 | - | 130-136 | 41.5 | 2 | - | 40-43 |
| | | 7 | 123.8 | 4 | - | 118-127 | 32.3 | 4 | - | 29-37 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1967 | Feb. (continued) | 9 | 130.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 11 | 123.0 | 2 | - | 115-131 | 34.3 | 2 | - | 29-39 |
| | | 13 | 123.0 | 2 | - | 117-129 | 36.8 | 2 | - | 35-38 |
| | | 15 | 135.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 16 | 125.0 | 2 | - | - | 38.3 | 2 | - | 34-42 |
| | | 17 | 129.7 | 3 | - | 123-136 | 43.8 | 3 | - | 42-45 |
| | | 18 | 130.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 23 | 126.0 | 1 | - | - | 40.0 | 1 | - | - |
| | March | 1 | 77.7 | 3 | - | 75-82 | 10.7 | 3 | - | 9-11 |
| | | 2 | 92.5 | 2 | - | 87-98 | 14.8 | 2 | - | 14-15 |
| | | 3 | 103.5 | 13 | 5.0 | 95-116 | 20.0 | 13 | 1.8 | 17-24 |
| | | 4 | 112.2 | 10 | 3.2 | 108-118 | 24.4 | 10 | 2.2 | 21-29 |
| | | 5 | 117.8 | 5 | - | 115-121 | 28.3 | 5 | - | 27-29 |
| | | 6 | 115.5 | 2 | - | 111-120 | 28.5 | 2 | - | 26-31 |
| | | 7 | 122.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 127.0 | 1 | - | - | 32.5 | 1 | - | - |
| | | 9 | 126.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | 11 | 128.7 | 3 | - | 121-135 | 41.0 | 3 | - | 39-45 |
| | | 13 | 133.0 | 2 | - | 128-138 | 40.3 | 2 | - | 39-41 |
| | | 14 | 134.0 | 1 | - | - | 37.5 | 1 | - | - |
| | April | 15 | 131.0 | 2 | - | 129-133 | 42.8 | 2 | - | 42-43 |
| | | 19 | 140.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 1 | 93.5 | 2 | - | 76-111 | 10.5 | 2 | - | 8-12 |
| | | 2 | 93.9 | 10 | 3.9 | 87-100 | 14.8 | 10 | 1.5 | 12-17 |
| | | 3 | 105.4 | 21 | 3.3 | 99-110 | 19.3 | 21 | 1.7 | 17-22 |
| | | 4 | 112.0 | 14 | 5.0 | 105-122 | 23.8 | 14 | 2.2 | 20-29 |
| | | 5 | 120.2 | 5 | - | 110-127 | 28.2 | 5 | - | 25-30 |
| | | 6 | 123.0 | 2 | - | 122-124 | 27.5 | 2 | - | 27-28 |
| | | 7 | 123.0 | 2 | - | 121-125 | 31.5 | 2 | - | 30-33 |
| | | 8 | 114.0 | 2 | - | 107-121 | 25.8 | 2 | - | 18-33 |
| | | 9 | 128.5 | 2 | - | 127-130 | 32.3 | 2 | - | - |
| | | 10 | 125.0 | 1 | - | - | 36.0 | 1 | - | - |
| | May | 12 | 124.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 15 | 133.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 18 | 138.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 1 | 82.5 | 2 | - | 80-85 | 10.3 | 2 | - | 9-11 |
| | | 2 | 94.8 | 12 | 4.7 | 89-108 | 15.3 | 12 | 1.4 | 13-17 |
| | | 3 | 107.4 | 29 | 4.0 | 100-116 | 19.7 | 29 | 2.0 | 16-24 |
| | | 4 | 114.2 | 9 | - | 106-118 | 25.3 | 9 | - | 21-29 |
| | | 5 | 118.4 | 7 | - | 115-125 | 27.8 | 7 | - | 23-31 |
| | | 6 | 126.5 | 2 | - | 125-128 | 29.0 | 2 | - | 27-31 |
| | | 7 | 122.8 | 6 | - | 118-127 | 28.9 | 6 | - | 25-32 |
| | | 8 | 127.5 | 2 | - | 125-130 | 33.8 | 2 | - | 33-34 |
| | | 9 | 131.0 | 1 | - | - | 31.5 | 1 | - | - |
| | | 10 | 115.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 20 | 125.5 | 1 | - | - | 41.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1968 | January | 3 | 106.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 11 | 133.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 18 | 125.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 22 | 121.0 | 1 | - | - | 48.0 | 1 | - | - |
| | Feb. | 4 | 117.7 | 3 | - | 114-124 | 24.5 | 3 | - | 23-27 |
| | | 7 | 123.0 | 1 | - | - | 30.0 | 1 | - | - |
| | March | 2 | 99.7 | 3 | - | 76-118 | 17.0 | 3 | - | 9-25 |
| | | 4 | 124.0 | 1 | - | - | 26.0 | 1 | - | - |
| | April | 11 | 132.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 4 | 114.3 | 3 | - | 110-117 | 24.3 | 3 | - | 22-25 |
| | | 5 | 121.0 | 3 | - | 117-126 | 26.5 | 3 | - | 25-27 |
| | | 7 | 127.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 126.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 10 | 126.0 | 1 | - | - | 30.0 | 1 | - | - |
| 1969 | January | 3 | 110.5 | 2 | - | 110-111 | 24.3 | 2 | - | 23-25 |
| | | 4 | 113.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 5 | 122.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | Feb. | 2 | 97.5 | 2 | - | 95-100 | 15.5 | 2 | - | 15-16 |
| | | 3 | 103.1 | 9 | - | 94-109 | 20.1 | 9 | - | 15-25 |
| | | 4 | 112.3 | 6 | - | 105-119 | 24.9 | 6 | - | 21-27 |
| | | 5 | 111.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 6 | 122.0 | 2 | - | 120-124 | 31.8 | 2 | - | 31-32 |
| | | 8 | 124.5 | 1 | - | - | 32.5 | 1 | - | - |
| | | 20 | 134.5 | 2 | - | 131-138 | 51.0 | 2 | - | 44-58 |
| | March | 2 | 95.6 | 7 | - | 90-102 | 14.0 | 7 | - | 12-15 |
| | | 3 | 106.8 | 14 | 7.9 | 100-129 | 19.5 | 14 | 2.2 | 16-24 |
| | | 4 | 109.8 | 4 | - | 105-115 | 24.4 | 4 | - | 21-27 |
| | | 5 | 123.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 6 | 122.0 | 2 | - | 119-125 | 29.0 | 2 | - | 27-30 |
| | | 7 | 119.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 8 | 124.0 | 1 | - | - | 84.0* | 1 | - | - |
| | | 9 | 127.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 13 | 131.0 | 2 | - | - | 38.3 | 2 | - | 37-39 |
| | | 18 | 125.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 19 | 129.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 20 | 127.0 | 1 | - | - | 48.0 | 1 | - | - |
| | April | 21 | 131.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 22 | 122.8 | 2 | - | 122-123 | 42.0 | 2 | - | 35-49 |
| | | 1 | 75.0 | 1 | - | - | 9.0 | 1 | - | - |
| | | 3 | 101.7 | 3 | - | 99-105 | 18.5 | 3 | - | 17-20 |
| | | 4 | 112.5 | 2 | - | 110-115 | 23.8 | 2 | - | 23-24 |
| | | 5 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 12 | 128.0 | 1 | - | - | 39.5 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1970 | January | 2 | 96.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 105.0 | 1 | - | - | 23.5 | 1 | - | - |
| | | 4 | 111.8 | 6 | - | 102-125 | 25.3 | 6 | - | 23-27 |
| | | 5 | 120.0 | 2 | - | 117-123 | 30.8 | 2 | - | 29-32 |
| | | 8 | 125.5 | 2 | - | 121-130 | 37.8 | 2 | - | 33-42 |
| | | 9 | 118.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 13 | 126.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 17 | 126.0 | 1 | - | - | 36.5 | 1 | - | - |
| | Feb. | 3 | 95.3 | 4 | - | 86-106 | 17.9 | 4 | - | 15-21 |
| | | 4 | 110.4 | 5 | - | 103-116 | 25.3 | 5 | - | 23-27 |
| | | 5 | 117.0 | 2 | - | 113-121 | 30.5 | 2 | - | 27-34 |
| | | 6 | 119.5 | 2 | - | 117-122 | 33.5 | 2 | - | 33-34 |
| | | 7 | 126.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 8 | 130.0 | 2 | - | - | 37.5 | 2 | - | 37-38 |
| | | 10 | 127.3 | 4 | - | 122-134 | 35.8 | 4 | - | 33-41 |
| | | 11 | 124.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 12 | 128.5 | 2 | - | 125-132 | 42.5 | 2 | - | 40-45 |
| | | 15 | 146.0 | 1 | - | - | 57.0 | 1 | - | - |
| | | 16 | 130.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 17 | 136.3 | 3 | - | 130-141 | 53.3 | 3 | - | 45-59 |
| | | 19 | 130.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 20 | 133.5 | 2 | - | 127-140 | 48.0 | 2 | - | 46-50 |
| | | 23 | 135.0 | 1 | - | - | 47.0 | 1 | - | - |
| | March | 1 | 72.0 | 2 | - | 70-74 | 7.8 | 2 | - | 7-8 |
| | | 3 | 105.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 7 | 126.0 | 1 | - | - | 35.5 | 1 | - | - |
| | May | 3 | 110.5 | 1 | - | - | 23.0 | 1 | - | - |
| | | 5 | 128.0 | 1 | - | - | 34.0 | 1 | - | - |
| 1971 | Feb. | 1 | 84.0 | 1 | - | - | 15.0 | 1 | - | - |
| | | 2 | 94.7 | 7 | - | 86-107 | 16.6 | 7 | - | 13-20 |
| | | 3 | 106.0 | 15 | 4.1 | 98-115 | 22.2 | 15 | 2.7 | 18-30 |
| | | 4 | 114.5 | 22 | 4.9 | 106-127 | 26.7 | 22 | 2.6 | 22-34 |
| | | 5 | 115.0 | 10 | 6.6 | 105-126 | 28.6 | 10 | 3.3 | 23-35 |
| | | 6 | 118.0 | 2 | - | 113-123 | 29.0 | 2 | - | 26-32 |
| | | 7 | 125.8 | 3 | - | 119-130 | 33.5 | 3 | - | 28-39 |
| | | 9 | 134.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 11 | 120.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 14 | 127.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 15 | 124.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 18 | 125.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 19 | 132.0 | 1 | - | - | 58.0 | 1 | - | - |
| | March | 1 | 75.0 | 1 | - | - | 13.0 | 1 | - | - |
| | | 2 | 98.1 | 4 | - | 96-101 | 16.4 | 4 | - | 15-17 |
| | | 3 | 106.3 | 14 | 5.7 | 97-117 | 20.9 | 14 | 2.0 | 17-25 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-------------|-------------|-------|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | March | 4 | 109.7 | 6 | - | 105-115 | 22.8 | 6 | - | 18-28 |
| | | (continued) | 6 | 128.0 | 1 | - | 32.0 | 1 | - | - |
| | | 14 | 139.5 | 1 | - | - | 50.0 | 1 | - | - |
| | April | 3 | 102.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 4 | 115.0 | 1 | - | - | 20.0 | 1 | - | - |
| | May | 2 | 92.0 | 2 | - | 90-94 | 14.0 | 2 | - | 13-14 |
| | | 3 | 104.2 | 9 | - | 98-107 | 19.6 | 9 | - | 18-20 |
| | | 4 | 113.8 | 5 | - | 107-123 | 23.8 | 5 | - | 19-26 |
| | | 5 | 123.5 | 4 | - | 117-128 | 29.6 | 4 | - | 27-32 |
| | | 6 | 123.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 9 | 126.0 | 2 | - | 125-127 | 30.0 | 2 | - | 28-32 |
| | | 10 | 137.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 12 | 133.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 15 | 129.0 | 1 | - | - | 35.0 | 1 | - | - |
| | June | 3 | 104.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 7 | 116.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 12 | 128.0 | 1 | - | - | 37.0 | 1 | - | - |
| 1972 | Feb. | 3 | 103.5 | 2 | - | 100-107 | 19.0 | 2 | - | 18-20 |
| | | 4 | 112.0 | 1 | - | - | 24.0 | 1 | - | - |
| | | 5 | 118.0 | 1 | - | - | 31.0 | 1 | - | - |
| | March | 2 | 95.2 | 7 | - | 88-100 | 15.6 | 7 | - | 13-17 |
| | | 3 | 104.2 | 17 | 5.7 | 92-113 | 20.0 | 17 | 1.4 | 17-22 |
| | | 4 | 113.0 | 25 | 5.3 | 101-122 | 24.6 | 25 | 3.0 | 19-34 |
| | | 5 | 118.5 | 16 | 6.1 | 110-130 | 28.8 | 16 | 3.5 | 23-37 |
| | | 6 | 118.8 | 8 | - | 107-125 | 30.4 | 8 | - | 25-34 |
| | | 7 | 130.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 8 | 126.3 | 4 | - | 118-133 | 35.1 | 4 | - | 27-42 |
| | | 9 | 131.6 | 4 | - | 127-134 | 35.8 | 4 | - | 34-38 |
| | | 10 | 124.7 | 3 | - | 120-130 | 33.7 | 3 | - | 24-39 |
| | | 11 | 126.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 13 | 129.5 | 2 | - | 128-131 | 42.5 | 2 | - | 42-43 |
| | | 14 | 129.3 | 2 | - | - | 36.0 | 2 | - | 35-37 |
| | | 15 | 133.0 | 2 | - | 130-136 | 41.8 | 2 | - | 40-43 |
| | | 16 | 123.3 | 3 | - | 119-128 | 39.0 | 3 | - | 36-43 |
| | | 18 | 124.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 19 | 122.5 | 2 | - | 121-124 | 38.5 | 2 | - | 35-42 |
| | | 21 | 140.0 | 1 | - | - | 50.0 | 1 | - | - |
| | April | 4 | 117.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 5 | 118.7 | 3 | - | 117-120 | 26.2 | 3 | - | 25-28 |
| | | 6 | 123.0 | 1 | - | - | 27.0 | 1 | - | - |
| | May | 16 | 140.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 3 | 107.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 4 | 120.0 | 2 | - | 116-124 | 26.5 | 2 | - | 24-28 |
| | | 5 | 114.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 7 | 131.5 | 1 | - | - | 33.5 | 1 | - | - |
| | | 21 | 135.0 | 1 | - | - | 44.5 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1973 | May | 1 | 84.8 | 2 | - | 83-86 | 12.3 | 2 | - | 10-14 |
| | | 2 | 97.3 | 8 | - | 87-102 | 14.9 | 8 | - | 12-17 |
| | | 3 | 106.7 | 11 | 5.9 | 97-115 | 20.3 | 11 | 1.6 | 18-24 |
| | | 4 | 117.4 | 4 | - | 110-126 | 23.7 | 4 | - | 20-27 |
| | | 5 | 112.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 6 | 111.0 | 1 | - | - | 23.4 | 1 | - | - |
| | | 7 | 118.5 | 2 | - | 112-125 | 28.7 | 2 | - | 26-31 |
| | | 10 | 135.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 11 | 130.8 | 2 | - | 130-131 | 35.9 | 2 | - | - |
| | | 12 | 126.3 | 2 | - | 122-130 | 34.6 | 2 | - | 33-36 |
| | | 14 | 128.0 | 1 | - | - | 36.2 | 1 | - | - |
| | | 15 | 133.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 16 | 135.0 | 1 | - | - | 40.1 | 1 | - | - |
| | June | 1 | 87.4 | 4 | - | 85-90 | 12.8 | 4 | - | 12-13 |
| | | 2 | 99.0 | 15 | 4.4 | 91-107 | 17.3 | 15 | 2.0 | 14-22 |
| | | 3 | 105.7 | 32 | 4.1 | 96-115 | 20.6 | 32 | 1.8 | 18-25 |
| | | 4 | 111.3 | 26 | 4.6 | 101-119 | 25.8 | 26 | 3.5 | 20-38 |
| | | 5 | 119.8 | 6 | - | 112-129 | 30.1 | 6 | - | 24-34 |
| | | 6 | 117.3 | 8 | - | 106-129 | 29.7 | 8 | - | 24-35 |
| | | 7 | 124.6 | 7 | - | 112-134 | 35.6 | 7 | - | 28-45 |
| | | 8 | 124.0 | 2 | - | 121-127 | 32.9 | 2 | - | 32-34 |
| | | 9 | 125.5 | 2 | - | 121-130 | 32.4 | 2 | - | 29-36 |
| | | 10 | 124.6 | 9 | - | 118-132 | 36.0 | 9 | - | 33-43 |
| | | 11 | 124.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 12 | 126.8 | 3 | - | 126-127 | 36.8 | 3 | - | 33-39 |
| | | 13 | 129.8 | 3 | - | 127-132 | 39.4 | 3 | - | 37-41 |
| | | 14 | 126.5 | 2 | - | 122-131 | 36.7 | 2 | - | 31-42 |
| | | 15 | 127.0 | 2 | - | 126-128 | 38.1 | 2 | - | 35-41 |
| | | 16 | 134.3 | 2 | - | 132-136 | 38.5 | 2 | - | 37-40 |
| | | 18 | 132.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 130.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 20 | 132.0 | 1 | - | - | 39.0 | 1 | - | - |
| 1978 | May | 3 | 98.8 | 2 | - | 97-100 | 16.0 | 2 | - | 14-17 |
| | | 6 | 111.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 8 | 122.0 | 1 | - | - | 32.5 | 1 | - | - |
| | | 16 | 122.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 17 | 123.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 22 | 133.5 | 1 | - | - | 35.5 | 1 | - | - |
| | June | 1 | 84.2 | 3 | - | 82-85 | 11.2 | 3 | - | 9-12 |
| | | 2 | 96.3 | 6 | - | 88-105 | 15.4 | 6 | - | 13-18 |
| | | 3 | 105.7 | 8 | - | 98-118 | 19.4 | 8 | - | 16-25 |
| | | 4 | 114.1 | 7 | - | 109-120 | 26.1 | 7 | - | 24-28 |
| | | 5 | 118.3 | 3 | - | 115-121 | 27.8 | 3 | - | 26-31 |
| | | 6 | 118.8 | 4 | - | 113-121 | 29.3 | 4 | - | 25-31 |
| | | 7 | 125.6 | 4 | - | 121-130 | 33.8 | 4 | - | 30-37 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|---------------------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1978 (continued) | June | 8 | 131.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 9 | 123.3 | 3 | - | 121-125 | 33.2 | 3 | - | 32-34 |
| | | 15 | 125.6 | 4 | - | 122-134 | 37.8 | 4 | - | 34-42 |
| | | 17 | 128.3 | 2 | - | 124-132 | 43.5 | 2 | - | 35-52 |
| | | 19 | 124.2 | 3 | - | 119-132 | 35.3 | 3 | - | 31-42 |
| | | 20 | 120.0 | 1 | - | - | 38.5 | 1 | - | - |

Table 31

Monthly mean length and weight of nonpregnant fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Doto

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|------|-------------|-------|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | June | 2 | 95.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 107.0 | 5 | - | 100-117 | 21.0 | 5 | - | 18-22 |
| | | 5 | 120.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 120.0 | 1 | - | - | 28.9 | 1 | - | - |
| 1959 | June | 2 | 95.0 | 1 | - | - | 16.0 | 1 | - | - |
| | | 3 | 110.0 | 2 | - | 105-115 | 22.3 | 2 | - | 20-24 |
| | | 4 | 113.0 | 2 | - | 108-118 | 30.8 | 2 | - | 30-31 |
| | | 8 | 131.0 | 1 | - | - | 35.5 | 1 | - | - |
| 1961 | June | 15 | 125.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 3 | 113.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 4 | 130.0 | 1 | - | - | 24.5 | 1 | - | - |
| | | 5 | 120.0 | 1 | - | - | 25.0 | 1 | - | - |
| 1963 | July | 1 | 91.0 | 2 | - | 90-92 | 14.5 | 2 | - | 14-15 |
| | | 2 | 96.3 | 4 | - | 90-105 | 16.3 | 4 | - | 14-19 |
| | | 3 | 112.1 | 12 | 6.7 | 105-127 | 22.8 | 12 | 2.6 | 20-28 |
| | | 4 | 113.8 | 4 | - | 105-120 | 26.3 | 4 | - | 25-27 |
| 1965 | June | 6 | 120.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 3 | 106.5 | 2 | - | 106-107 | 20.0 | 2 | - | 19-21 |
| | | July | 3 | 107.0 | 1 | - | 21.0 | 1 | - | - |
| | | May | 7 | 121.0 | 1 | - | 30.0 | 1 | - | - |
| 1972 | June | 3 | 106.1 | 4 | - | 100-112 | 18.9 | 4 | - | 16-20 |
| | | 13 | 134.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 2 | 101.5 | 1 | - | - | 18.0 | 1 | - | - |
| | | 4 | 109.0 | 3 | - | 102-113 | 24.0 | 3 | - | 23-25 |
| 1973 | June | 11 | 126.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 0 | 73.5 | 8 | - | 68-82 | 10.8 | 8 | - | 8-12 |
| | | 2 | 103.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 3 | 119.0 | 1 | - | - | 30.0 | 1 | - | - |
| 1977 | | 8 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 18 | 120.3 | 2 | - | 117-123 | 41.5 | 2 | - | 40-43 |
| | | 22 | 126.0 | 1 | - | - | 42.5 | 1 | - | - |
| | | 1 | 73.0 | 2 | - | 72-74 | 10.3 | 2 | - | 9-11 |
| 1978 | January | 2 | 96.0 | 1 | - | - | 19.0 | 1 | - | - |

Table 32

Monthly mean length and weight of nonpregnant fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Western Bering Sea

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | July | 4 | 117.0 | 1 | - | - | 23.5 | 1 | - | - |
| | | 5 | 117.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 12 | 125.0 | 1 | - | - | 37.0 | 1 | - | - |
| | August | 4 | 115.0 | 2 | - | 113-117 | 24.0 | 2 | - | 23-25 |
| | | 5 | 121.5 | 2 | - | 120-123 | 32.8 | 2 | - | 29-36 |
| | | 8 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |

Table 33

Monthly mean length and weight of pregnant fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Sea of Japan

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|-------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | May | 15 | 136.0 | 1 | - | - | 60.0 | 1 | - | - |
| | | 20 | 147.0 | 1 | - | - | 68.0 | 1 | - | - |

Table 34

Monthly mean length and weight of pregnant fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Sea of Okhotsk

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|---|---|---------|------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1961 | July | 4 | 110.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 7 | 126.0 | 1 | - | - | 34.0 | 1 | - | - |
| 1972 | July | 5 | 122.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 7 | 118.0 | 2 | - | 113-123 | 46.1 | 2 | - | 44-48 |
| | | 9 | 130.0 | 2 | - | - | 54.5 | 2 | - | 51-58 |
| | | 12 | 127.0 | 1 | - | - | 37.0 | 1 | - | - |
| 1973 | July | 12 | 129.0 | 2 | - | 125-133 | 53.8 | 2 | - | 50-57 |
| 1974 | July | 12 | 126.0 | 1 | - | - | 54.5 | 1 | - | - |
| | | 14 | 140.0 | 1 | - | - | 69.0 | 1 | - | - |
| | | 15 | 122.0 | 1 | - | - | 54.0 | 1 | - | - |
| | | 19 | 124.0 | 1 | - | - | 60.0 | 1 | - | - |
| 1975 | July | 5 | 125.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 6 | 122.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 8 | 121.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 10 | 128.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 12 | 131.0 | 2 | - | 121-141 | 49.5 | 2 | - | 48-51 |
| | | 14 | 127.0 | 1 | - | - | 53.0 | 1 | - | - |
| 1977 | Nov. | 16 | 130.5 | 1 | - | - | 37.0 | 1 | - | - |
| 1978 | July | 4 | 116.6 | 2 | - | 110-123 | 35.3 | 2 | - | 28-42 |
| | | 5 | 123.5 | 1 | - | - | 46.0 | 1 | - | - |

Table 35

Monthly mean length and weight of pregnant fur seals.
(\bar{x} = mean, n = sample size, s = standard deviation for $n > 10$)

Joban

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|-----|-----|---------|-------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Feb. | 4 | 109.0 | 1 | - | - | 25.0 | 1 | - | - |
| | March | 4 | 117.0 | 3 | - | 115-120 | 27.0 | 3 | - | 24-29 |
| | | 5 | 119.3 | 4 | - | 115-122 | 30.6 | 4 | - | 28-33 |
| | | 8 | 130.0 | 2 | - | - | 35.3 | 2 | - | 33-37 |
| | | 9 | 132.5 | 2 | - | 125-140 | 40.5 | 2 | - | 38-43 |
| | | 13 | 130.0 | 1 | - | - | 35.0 | 1 | - | - |
| | April | 3 | 99.0 | 3 | - | 90-107 | 20.0 | 3 | - | 16-24 |
| | | 4 | 109.5 | 11 | 4.7 | 100-117 | 27.4 | 11 | 3.4 | 19-32 |
| | | 5 | 119.1 | 19 | 6.7 | 110-130 | 30.4 | 19 | 3.2 | 23-36 |
| | | 6 | 119.0 | 8 | - | 115-127 | 31.3 | 8 | - | 25-38 |
| | | 7 | 113.1 | 4 | - | 111-115 | 32.5 | 4 | - | 31-33 |
| | | 8 | 119.0 | 4 | - | 113-125 | 31.3 | 4 | - | 27-35 |
| | | 9 | 130.5 | 4 | - | 123-146 | 31.8 | 4 | - | 28-35 |
| | | 10 | 127.0 | 1 | - | - | 38.5 | 1 | - | - |
| | | 11 | 129.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 12 | 122.5 | 2 | - | 121-124 | 35.8 | 2 | - | 35-36 |
| | | 13 | 127.5 | 2 | - | 121-134 | 35.0 | 2 | - | 32-37 |
| | | 14 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 16 | 111.0 | 1 | - | - | 35.0 | 1 | - | - |
| 1959 | March | 4 | 117.4 | 9 | - | 112-125 | 28.3 | 9 | - | 23-33 |
| | | 5 | 118.4 | 7 | - | 105-124 | 29.7 | 7 | - | 28-32 |
| | | 6 | 121.0 | 2 | - | 116-126 | 32.8 | 2 | - | 27-38 |
| | | 7 | 120.0 | 3 | - | 112-124 | 30.7 | 3 | - | 30-31 |
| | | 8 | 126.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 9 | 125.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 10 | 135.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 11 | 130.0 | 2 | - | - | 39.0 | 2 | - | 38-40 |
| | | 13 | 121.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | April | 3 | 116.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 4 | 112.0 | 15 | 7.1 | 100-130 | 26.9 | 15 | 2.3 | 22-31 |
| | | 5 | 117.7 | 13 | 4.3 | 110-125 | 30.1 | 13 | 2.5 | 25-34 |
| | | 6 | 118.5 | 11 | 4.8 | 110-125 | 33.2 | 11 | 4.9 | 26-44 |
| | | 7 | 123.3 | 6 | - | 110-130 | 31.1 | 6 | - | 20-35 |
| | | 8 | 124.8 | 4 | - | 120-131 | 34.1 | 4 | - | 32-36 |
| | | 9 | 124.4 | 5 | - | 112-135 | 35.7 | 5 | - | 33-38 |
| | | 10 | 124.5 | 2 | - | 111-138 | 31.5 | 2 | - | 24-39 |
| | | 12 | 123.5 | 2 | - | 122-125 | 36.0 | 2 | - | 29-43 |
| | | 13 | 118.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 17 | 122.5 | 2 | - | 110-135 | 33.3 | 2 | - | - |
| | | 18 | 125.0 | 1 | - | - | 42.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|----|-----|---------|------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1962 | Feb. | 6 | 115.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 8 | 130.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 9 | 130.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 11 | 120.0 | 1 | - | - | 38.0 | 1 | - | - |
| | March | 4 | 112.3 | 11 | 5.3 | 105-120 | 28.2 | 11 | 3.3 | 22-32 |
| | | 5 | 112.7 | 6 | - | 105-125 | 28.8 | 6 | - | 25-32 |
| | | 6 | 120.0 | 6 | - | 115-127 | 33.4 | 6 | - | 28-40 |
| | | 7 | 125.0 | 4 | - | 120-135 | 33.4 | 4 | - | 30-37 |
| | | 8 | 120.0 | 5 | - | 115-123 | 32.8 | 5 | - | 30-35 |
| | | 9 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 10 | 120.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 13 | 125.0 | 1 | - | - | 45.0 | 1 | - | - |
| | April | 4 | 114.8 | 17 | 6.6 | 105-127 | 28.1 | 17 | 2.4 | 24-32 |
| | | 5 | 118.2 | 18 | 5.6 | 109-131 | 31.3 | 18 | 4.4 | 24-43 |
| | | 6 | 119.6 | 13 | 5.1 | 110-128 | 31.8 | 13 | 2.6 | 26-36 |
| | | 7 | 123.6 | 11 | 5.5 | 115-138 | 34.9 | 11 | 4.2 | 29-45 |
| | | 8 | 123.3 | 7 | - | 120-130 | 33.9 | 7 | - | 31-37 |
| | | 9 | 127.6 | 7 | - | 117-140 | 38.4 | 7 | - | 33-47 |
| | | 10 | 129.8 | 4 | - | 125-135 | 39.6 | 4 | - | 34-45 |
| | | 11 | 122.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 12 | 135.0 | 1 | - | - | 35.5 | 1 | - | - |
| | | 13 | 128.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 15 | 125.0 | 1 | - | - | 40.0 | 1 | - | - |
| 1963 | March | 4 | 115.7 | 3 | - | 113-119 | 29.0 | 3 | - | 28-30 |
| | | 5 | 116.4 | 5 | - | 110-120 | 31.0 | 5 | - | 28-34 |
| | | 6 | 120.0 | 4 | - | 110-130 | 32.6 | 4 | - | 31-35 |
| | | 7 | 123.5 | 2 | - | 122-125 | 36.0 | 2 | - | 31-41 |
| | | 9 | 125.0 | 1 | - | - | 35.0 | 1 | - | - |
| | April | 4 | 124.3 | 3 | - | 120-128 | 33.7 | 3 | - | 30-39 |
| | | 5 | 123.5 | 6 | - | 117-130 | 33.8 | 6 | - | 30-38 |
| | | 6 | 126.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 7 | 126.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 10 | 140.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 11 | 135.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 12 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 20 | 130.0 | 1 | - | - | 41.0 | 1 | - | - |
| 1964 | March | 5 | 130.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 7 | 125.0 | 1 | - | - | 32.0 | 1 | - | - |
| 1965 | March | 4 | 110.6 | 10 | 5.3 | 100-120 | 26.0 | 10 | 1.8 | 23-28 |
| | | 5 | 118.8 | 6 | - | 110-127 | 33.5 | 6 | - | 30-39 |
| | | 6 | 119.4 | 10 | 3.4 | 112-125 | 31.7 | 10 | 2.5 | 28-38 |
| | | 7 | 121.9 | 12 | 5.9 | 110-130 | 36.5 | 12 | 3.4 | 30-41 |
| | | 8 | 128.1 | 7 | - | 120-134 | 35.6 | 7 | - | 28-41 |
| | | 9 | 120.7 | 3 | - | 119-123 | 36.3 | 3 | - | 32-39 |
| | | 10 | 124.7 | 6 | - | 120-133 | 35.8 | 6 | - | 31-38 |
| | | 11 | 125.7 | 3 | - | 120-135 | 38.7 | 3 | - | 34-43 |
| | | 12 | 123.0 | 3 | - | 115-129 | 35.8 | 3 | - | 31-42 |
| | | 13 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|-------------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1965 | March | 15 | 120.0 | 1 | - | - | 41.0 | 1 | - | - |
| (continued) | | 16 | 127.5 | 2 | - | 125-130 | 38.0 | 2 | - | 37-39 |
| | | 17 | 122.5 | 2 | - | 120-125 | 36.8 | 2 | - | 34-39 |
| | April | 4 | 115.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 5 | 120.7 | 6 | - | 110-130 | 34.6 | 6 | - | 32-37 |
| | | 6 | 128.4 | 7 | - | 122-135 | 36.7 | 7 | - | 33-40 |
| | | 7 | 123.7 | 6 | - | 119-126 | 37.0 | 6 | - | 32-40 |
| | | 8 | 123.5 | 2 | - | 122-125 | 32.8 | 2 | - | 32-33 |
| | | 9 | 131.5 | 4 | - | 130-134 | 42.3 | 4 | - | 38-45 |
| | | 10 | 125.0 | 2 | - | 120-130 | 39.3 | 2 | - | 35-43 |
| | | 11 | 129.3 | 3 | - | 123-135 | 37.5 | 3 | - | 32-40 |
| | | 12 | 135.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 13 | 128.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 15 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 19 | 125.0 | 1 | - | - | 36.0 | 1 | - | - |
| | May | 4 | 110.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 5 | 120.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 6 | 120.0 | 7 | - | 115-125 | 34.2 | 7 | - | 28-39 |
| | | 7 | 127.0 | 4 | - | 122-131 | 38.0 | 4 | - | 32-41 |
| | | 8 | 123.0 | 2 | - | 115-131 | 34.5 | 2 | - | 34-35 |
| | | 9 | 142.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 12 | 128.0 | 1 | - | - | 45.0 | 1 | - | - |
| 1966 | March | 5 | 120.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 10 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 13 | 125.0 | 1 | - | - | 39.0 | 1 | - | - |
| 1967 | January | 6 | 120.0 | 1 | - | - | 29.5 | 1 | - | - |
| | | 14 | 128.0 | 1 | - | - | 41.0 | 1 | - | - |
| | March | 13 | 135.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 14 | 129.0 | 1 | - | - | 43.0 | 1 | - | - |
| 1968 | Feb. | 5 | 121.0 | 4 | - | 116-129 | 30.9 | 4 | - | 27-39 |
| | | 6 | 119.1 | 11 | 5.3 | 111-126 | 29.4 | 11 | 3.6 | 24-38 |
| | | 7 | 129.0 | 4 | - | 124-136 | 36.6 | 4 | - | 31-41 |
| | | 8 | 127.0 | 7 | - | 118-135 | 33.5 | 7 | - | 27-39 |
| | | 9 | 130.4 | 5 | - | 120-146 | 39.0 | 5 | - | 33-50 |
| | | 10 | 126.4 | 4 | - | 119-134 | 36.9 | 4 | - | 31-45 |
| | | 11 | 127.0 | 3 | - | 125-128 | 36.7 | 3 | - | 34-40 |
| | | 12 | 128.4 | 4 | - | 125-133 | 37.5 | 4 | - | 36-38 |
| | | 13 | 131.0 | 2 | - | 126-136 | 37.0 | 2 | - | 31-43 |
| | | 14 | 134.8 | 2 | - | 122-147 | 44.0 | 2 | - | 37-51 |
| | | 15 | 131.5 | 2 | - | 127-136 | 40.0 | 2 | - | 38-42 |
| | | 16 | 126.8 | 4 | - | 123-129 | 35.0 | 4 | - | 32-36 |
| | | 18 | 137.0 | 2 | - | - | 52.0 | 2 | - | 50-54 |
| | | 21 | 135.0 | 1 | - | - | 42.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1968 | March | 5 | 121.3 | 3 | - | 117-124 | 30.3 | 3 | - | 29-32 |
| | | 6 | 123.5 | 6 | - | 113-131 | 33.6 | 6 | - | 28-36 |
| | | 7 | 125.3 | 3 | - | 122-129 | 32.3 | 3 | - | - |
| | | 8 | 128.2 | 5 | - | 122-139 | 37.1 | 5 | - | 34-43 |
| | | 10 | 130.5 | 6 | - | 125-139 | 40.0 | 6 | - | 37-43 |
| | | 11 | 135.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 12 | 129.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 13 | 136.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 14 | 132.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 15 | 125.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 16 | 129.5 | 2 | - | 127-132 | 39.5 | 2 | - | 37-41 |
| | April | 5 | 121.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 8 | 132.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 11 | 121.0 | 1 | - | - | 36.0 | 1 | - | - |
| 1970 | Feb. | 17 | 125.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 4 | 112.5 | 2 | - | 112-113 | 27.5 | 2 | - | 27-28 |
| | | 6 | 124.3 | 4 | - | 120-127 | 35.4 | 4 | - | 32-38 |
| | | 7 | 121.6 | 5 | - | 112-131 | 34.8 | 5 | - | 32-38 |
| | | 8 | 123.0 | 5 | - | 120-128 | 37.2 | 5 | - | 32-41 |
| | | 9 | 122.8 | 4 | - | 119-127 | 34.5 | 4 | - | 30-36 |
| | | 10 | 124.0 | 2 | - | 120-128 | 39.5 | 2 | - | 38-41 |
| | | 11 | 128.5 | 4 | - | 118-138 | 38.3 | 4 | - | 32-42 |
| | | 12 | 125.4 | 9 | - | 115-133 | 39.3 | 9 | - | 33-44 |
| | | 13 | 127.7 | 6 | - | 123-135 | 40.3 | 6 | - | 33-44 |
| | | 14 | 129.2 | 5 | - | 120-142 | 45.0 | 5 | - | 39-51 |
| | | 15 | 122.0 | 2 | - | 117-127 | 37.5 | 2 | - | 35-40 |
| | | 16 | 125.5 | 2 | - | 120-131 | 41.3 | 2 | - | 40-42 |
| | | 17 | 130.3 | 6 | - | 124-140 | 44.7 | 6 | - | 39-50 |
| | | 18 | 131.0 | 2 | - | 130-132 | 44.5 | 2 | - | 43-46 |
| | | 19 | 127.0 | 1 | - | - | 45.5 | 1 | - | - |
| | | 20 | 127.0 | 1 | - | - | 50.0 | 1 | - | - |
| | March | 4 | 112.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 5 | 122.8 | 6 | - | 117-128 | 30.5 | 6 | - | 27-34 |
| | | 6 | 123.0 | 16 | 6.8 | 114-138 | 31.9 | 16 | 3.3 | 27-37 |
| | | 7 | 124.3 | 15 | 6.4 | 105-135 | 33.5 | 15 | 3.9 | 24-40 |
| | | 8 | 125.1 | 16 | 5.6 | 115-133 | 34.8 | 16 | 2.8 | 28-39 |
| | | 9 | 126.4 | 22 | 7.6 | 108-138 | 35.0 | 22 | 3.8 | 25-40 |
| | | 10 | 127.8 | 23 | 6.3 | 116-140 | 37.0 | 23 | 4.3 | 30-46 |
| | | 11 | 131.0 | 13 | 6.3 | 120-141 | 41.6 | 13 | 4.9 | 35-51 |
| | | 12 | 125.3 | 9 | - | 118-132 | 36.6 | 9 | - | 32-43 |
| | | 13 | 128.0 | 11 | 8.3 | 115-142 | 41.1 | 11 | 5.7 | 31-47 |
| | | 14 | 131.6 | 15 | 5.0 | 120-140 | 42.5 | 15 | 5.1 | 33-55 |
| | | 15 | 131.1 | 8 | - | 124-140 | 42.1 | 8 | - | 37-45 |
| | | 16 | 132.5 | 6 | - | 120-138 | 41.6 | 6 | - | 32-53 |
| | | 17 | 134.1 | 10 | 8.0 | 126-154 | 43.9 | 10 | 7.2 | 35-58 |
| | | 19 | 125.5 | 2 | - | 120-131 | 37.3 | 2 | - | 36-38 |
| | | 20 | 140.0 | 1 | - | - | 48.0 | 1 | - | - |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1970 | April | 12 | 122.0 | 1 | - | - | 33.5 | 1 | - | - |
| | | 17 | 142.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 18 | 120.0 | 1 | - | - | 38.0 | 1 | - | - |
| 1971 | March | 4 | 115.5 | 3 | - | 112-117 | 26.0 | 3 | - | 25-27 |
| | | 5 | 120.2 | 18 | 7.2 | 105-131 | 30.8 | 18 | 2.6 | 26-35 |
| | | 6 | 118.4 | 5 | - | 110-124 | 33.4 | 5 | - | 30-35 |
| | | 7 | 125.0 | 1 | - | - | 32.5 | 1 | - | - |
| | | 8 | 124.3 | 7 | - | 116-133 | 35.5 | 7 | - | 32-39 |
| | | 10 | 124.5 | 5 | - | 120-132 | 36.2 | 5 | - | 35-39 |
| | | 11 | 125.3 | 3 | - | 118-130 | 41.0 | 3 | - | 40-42 |
| | | 12 | 132.2 | 5 | - | 126-135 | 40.0 | 5 | - | 35-45 |
| | | 13 | 130.3 | 8 | - | 122-139 | 42.9 | 8 | - | 38-50 |
| | | 14 | 130.0 | 3 | - | 120-136 | 41.5 | 3 | - | 33-46 |
| | | 15 | 123.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 16 | 135.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 17 | 129.5 | 2 | - | 125-134 | 41.0 | 2 | - | 37-45 |
| | | 18 | 131.9 | 4 | - | 128-134 | 48.8 | 4 | - | 45-52 |
| | April | 4 | 121.0 | 2 | - | 117-125 | 29.3 | 2 | - | 26-32 |
| | | 5 | 115.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 6 | 122.8 | 2 | - | 122-123 | 32.8 | 2 | - | 32-33 |
| | | 7 | 122.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 8 | 129.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 9 | 130.0 | 1 | - | - | 37.0 | 1 | - | - |
| 1972 | Feb. | 12 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 4 | 119.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 10 | 116.0 | 1 | - | - | 34.0 | 1 | - | - |
| | March | 4 | 122.5 | 2 | - | 121-124 | 30.0 | 2 | - | 28-32 |
| | | 5 | 123.8 | 2 | - | 122-125 | 34.5 | 2 | - | 34-35 |
| | | 7 | 126.5 | 2 | - | 120-133 | 32.5 | 2 | - | 29-36 |
| | | 8 | 129.3 | 3 | - | 120-134 | 39.2 | 3 | - | 35-42 |
| | | 9 | 127.0 | 2 | - | 125-129 | 35.5 | 2 | - | 33-38 |
| | | 10 | 130.0 | 2 | - | 128-132 | 41.5 | 2 | - | 41-42 |
| | | 11 | 126.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 14 | 133.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 16 | 122.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 134.0 | 1 | - | - | 43.5 | 1 | - | - |
| | April | 4 | 118.8 | 2 | - | 111-126 | 31.3 | 2 | - | 27-35 |
| | | 5 | 124.6 | 7 | - | 115-131 | 33.2 | 7 | - | 29-36 |
| | | 6 | 126.5 | 3 | - | 122-132 | 36.3 | 3 | - | 32-40 |
| | | 7 | 129.3 | 4 | - | 127-135 | 37.0 | 4 | - | 33-41 |
| | | 8 | 133.3 | 5 | - | 129-138 | 38.2 | 5 | - | 35-43 |
| | | 9 | 125.2 | 5 | - | 118-141 | 36.7 | 5 | - | 33-41 |
| | | 10 | 134.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 11 | 133.3 | 7 | - | 124-141 | 41.4 | 7 | - | 35-51 |
| | | 12 | 128.0 | 2 | - | 125-131 | 37.5 | 2 | - | 36-39 |
| | | 13 | 133.5 | 2 | - | 131-136 | 40.0 | 2 | - | 37-43 |
| | | 15 | 132.8 | 4 | - | 120-140 | 44.3 | 4 | - | 40-49 |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1972 | April | 16 | 132.5 | 2 | - | 131-134 | 42.0 | 2 | - | 41-43 |
| | | 17 | 129.0 | 2 | - | 126-132 | 41.3 | 2 | - | 37-45 |
| | | 18 | 135.5 | 2 | - | 134-137 | 44.5 | 2 | - | 41-48 |
| | | 19 | 130.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 20 | 129.0 | 1 | - | - | 47.0 | 1 | - | - |

Table 36

Monthly mean length and weight of pregnant fur seals.
(\bar{x} = mean, n = sample size, s = standard deviation for $n > 10$)

Sanriku

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|-----|-----|---------|------------|-----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Feb. | 4 | 117.5 | 2 | - | 113-122 | 25.8 | 2 | - | 25-26 |
| | | 5 | 120.6 | 5 | - | 114-127 | 30.0 | 5 | - | 22-34 |
| | | 6 | 119.0 | 4 | - | 116-120 | 30.2 | 4 | - | 26-34 |
| | | 7 | 122.0 | 2 | - | 118-126 | 32.8 | 2 | - | 30-35 |
| | | 11 | 122.0 | 1 | - | - | 32.6 | 1 | - | - |
| | | 12 | 125.0 | 1 | - | - | 36.5 | 1 | - | - |
| | | 18 | 134.0 | 1 | - | - | 47.5 | 1 | - | - |
| | March | 4 | 115.9 | 8 | - | 112-124 | 27.7 | 8 | - | 26-30 |
| | | 5 | 121.1 | 7 | - | 112-130 | 30.6 | 7 | - | 27-34 |
| | | 6 | 124.7 | 3 | - | 124-125 | 30.8 | 3 | - | 28-32 |
| | | 8 | 127.0 | 1 | - | - | 33.0 | 1 | - | - |
| | April | 16 | 127.5 | 2 | - | 122-133 | 36.4 | 2 | - | 35-37 |
| | | 3 | 107.3 | 3 | - | 101-112 | 25.7 | 3 | - | 25-27 |
| | | 4 | 115.4 | 55 | 4.5 | 103-125 | 28.3 | 55 | 2.5 | 24-36 |
| | | 5 | 118.8 | 70 | 5.5 | 105-131 | 31.0 | 70 | 2.8 | 24-38 |
| | | 6 | 119.4 | 47 | 6.2 | 105-135 | 32.5 | 47 | 3.2 | 26-40 |
| | | 7 | 122.3 | 27 | 5.7 | 110-136 | 34.2 | 27 | 4.1 | 22-41 |
| | | 8 | 122.6 | 9 | - | 114-135 | 35.3 | 9 | - | 27-43 |
| | | 9 | 124.7 | 7 | - | 113-135 | 36.0 | 7 | - | 30-40 |
| | | 10 | 125.6 | 5 | - | 120-138 | 35.0 | 5 | - | 25-45 |
| | | 11 | 126.5 | 4 | - | 120-131 | 37.4 | 4 | - | 33-42 |
| | | 12 | 123.6 | 7 | - | 113-134 | 37.4 | 7 | - | 28-46 |
| | | 13 | 132.8 | 4 | - | 129-141 | 38.0 | 4 | - | 35-40 |
| | | 14 | 126.0 | 4 | - | 120-133 | 40.9 | 4 | - | 33-45 |
| | | 15 | 128.3 | 4 | - | 125-132 | 38.0 | 4 | - | 24-49 |
| | | 16 | 136.5 | 2 | - | 123-150 | 48.0 | 2 | - | 35-61 |
| | May | 3 | 112.5 | 2 | - | 105-120 | 28.3 | 2 | - | 23-33 |
| | | 4 | 117.6 | 46 | 6.3 | 102-130 | 30.1 | 46 | 3.4 | 22-36 |
| | | 5 | 118.6 | 77 | 6.0 | 96-135 | 32.4 | 77 | 3.6 | 23-42 |
| | | 6 | 122.2 | 30 | 5.7 | 112-135 | 35.0 | 30 | 3.9 | 28-45 |
| | | 7 | 122.1 | 18 | 7.0 | 108-136 | 34.3 | 18 | 3.5 | 25-39 |
| | | 8 | 123.8 | 14 | 5.1 | 112-130 | 36.5 | 14 | 4.5 | 30-45 |
| | | 9 | 123.8 | 12 | 6.2 | 113-133 | 37.4 | 12 | 2.5 | 33-43 |
| | | 10 | 125.0 | 8 | - | 117-132 | 38.5 | 8 | - | 31-47 |
| | | 11 | 126.5 | 10 | 6.2 | 115-135 | 41.3 | 10 | 3.7 | 35-46 |
| | | 12 | 120.0 | 3 | - | 110-130 | 35.3 | 3 | - | 30-40 |
| | | 13 | 128.8 | 4 | - | 123-135 | 39.1 | 4 | - | 30-46 |
| | | 14 | 126.9 | 7 | - | 117-140 | 40.0 | 7 | - | 30-48 |
| | | 15 | 123.8 | 4 | - | 110-130 | 38.5 | 4 | - | 34-44 |
| | | 16 | 126.6 | 5 | - | 120-138 | 40.8 | 5 | - | 29-52 |
| | | 17 | 124.0 | 2 | - | 123-125 | 39.0 | 2 | - | 36-42 |
| | | 18 | 136.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 19 | 138.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 21 | 115.0 | 1 | - | - | 30.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | June | 4 | 113.2 | 5 | - | 112-114 | 31.0 | 5 | - | 28-35 |
| | | 5 | 120.1 | 8 | - | 115-128 | 35.4 | 8 | - | 32-38 |
| | | 6 | 123.6 | 5 | - | 115-132 | 36.1 | 5 | - | 30-42 |
| | | 7 | 126.0 | 4 | - | 120-135 | 37.4 | 4 | - | 33-42 |
| | | 8 | 121.0 | 2 | - | 112-130 | 36.0 | 2 | - | 32-40 |
| | | 9 | 128.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 10 | 121.3 | 3 | - | 111-129 | 39.9 | 3 | - | 38-41 |
| | | 11 | 123.0 | 2 | - | 118-128 | 40.2 | 2 | - | 34-46 |
| | | 14 | 135.0 | 1 | - | - | 44.0 | 1 | - | - |
| 1959 | Feb. | 4 | 114.0 | 8 | - | 100-125 | 29.7 | 8 | - | 24-49 |
| | | 5 | 120.3 | 4 | - | 116-125 | 42.3 | 4 | - | 26-60 |
| | | 6 | 122.5 | 4 | - | 110-130 | 32.4 | 4 | - | 28-36 |
| | | 7 | 122.0 | 5 | - | 115-135 | 35.0 | 5 | - | 24-48 |
| | | 8 | 139.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 9 | 120.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 11 | 127.0 | 2 | - | 125-129 | 34.0 | 2 | - | 33-35 |
| | | 14 | 124.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 15 | 141.0 | 2 | - | 137-145 | 46.8 | 2 | - | 45-48 |
| | | 16 | 125.0 | 3 | - | 123-127 | 38.0 | 3 | - | 34-45 |
| | | 17 | 128.8 | 5 | - | 125-134 | 51.0 | 5 | - | 43-67 |
| | | 18 | 127.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 132.5 | 2 | - | 130-135 | 42.5 | 2 | - | 40-45 |
| | | 20 | 121.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 22 | 139.0 | 1 | - | - | 53.0 | 1 | - | - |
| | March | 4 | 115.6 | 26 | 6.2 | 100-130 | 28.2 | 26 | 3.0 | 22-35 |
| | | 5 | 117.2 | 25 | 6.7 | 100-130 | 30.7 | 25 | 2.9 | 24-35 |
| | | 6 | 120.2 | 16 | 5.2 | 110-128 | 31.9 | 16 | 3.3 | 25-37 |
| | | 7 | 123.5 | 12 | 7.0 | 110-130 | 35.0 | 12 | 4.8 | 30-50 |
| | | 8 | 119.0 | 9 | - | 105-129 | 34.9 | 9 | - | 25-45 |
| | | 9 | 122.0 | 6 | - | 115-130 | 34.2 | 6 | - | 31-39 |
| | | 10 | 120.7 | 6 | - | 111-130 | 35.2 | 6 | - | 30-40 |
| | | 11 | 123.8 | 4 | - | 115-130 | 36.1 | 4 | - | 33-42 |
| | | 12 | 120.3 | 4 | - | 115-130 | 37.4 | 4 | - | 35-41 |
| | | 13 | 121.6 | 5 | - | 115-126 | 39.6 | 5 | - | 36-43 |
| | | 14 | 131.8 | 5 | - | 129-135 | 42.4 | 5 | - | 38-50 |
| | | 15 | 131.5 | 4 | - | 125-135 | 38.6 | 4 | - | 33-45 |
| | | 16 | 135.3 | 3 | - | 126-150 | 43.2 | 3 | - | 37-50 |
| | April | 17 | 125.5 | 4 | - | 120-130 | 38.0 | 4 | - | 35-44 |
| | | 18 | 131.8 | 4 | - | 130-135 | 43.0 | 4 | - | 36-54 |
| | | 19 | 130.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 21 | 137.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 3 | 114.0 | 2 | - | 112-116 | 27.3 | 2 | - | 22-32 |
| | | 4 | 115.1 | 83 | 5.8 | 100-130 | 28.2 | 83 | 2.9 | 20-36 |
| | | 5 | 118.0 | 67 | 6.0 | 100-133 | 29.9 | 67 | 3.3 | 18-40 |
| | | 6 | 122.4 | 41 | 5.1 | 113-138 | 33.8 | 41 | 3.8 | 27-45 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1959 | April (continued) | 7 | 118.8 | 23 | 7.8 | 105-136 | 32.5 | 23 | 3.7 | 27-42 |
| | | 8 | 123.2 | 9 | - | 115-136 | 34.0 | 9 | - | 30-39 |
| | | 9 | 125.8 | 8 | - | 110-140 | 35.6 | 8 | - | 32-41 |
| | | 10 | 128.5 | 6 | - | 113-146 | 37.2 | 6 | - | 30-44 |
| | | 11 | 122.7 | 7 | - | 113-131 | 37.9 | 7 | - | 33-45 |
| | | 12 | 127.8 | 6 | - | 120-146 | 40.8 | 6 | - | 35-45 |
| | | 13 | 127.0 | 4 | - | 115-140 | 39.5 | 4 | - | 32-48 |
| | | 14 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 16 | 128.5 | 2 | - | 125-132 | 44.5 | 2 | - | 42-47 |
| | | 17 | 126.7 | 3 | - | 120-135 | 40.5 | 3 | - | 40-42 |
| | | 18 | 126.5 | 2 | - | 122-131 | 42.8 | 2 | - | 42-43 |
| | | 19 | 138.0 | 2 | - | 125-151 | 46.5 | 2 | - | 40-53 |
| | | 20 | 123.5 | 2 | - | 120-127 | 38.0 | 2 | - | 37-39 |
| | | 21 | 126.7 | 3 | - | 124-130 | 41.7 | 3 | - | 35-50 |
| | May | 4 | 115.1 | 34 | 6.3 | 100-135 | 31.2 | 34 | 3.4 | 20-37 |
| | | 5 | 121.5 | 33 | 5.7 | 107-132 | 34.8 | 33 | 3.1 | 27-40 |
| | | 6 | 124.9 | 27 | 5.3 | 112-136 | 34.9 | 27 | 3.2 | 28-40 |
| | | 7 | 126.7 | 9 | - | 120-138 | 37.3 | 9 | - | 30-45 |
| | | 8 | 127.7 | 16 | 6.4 | 120-145 | 36.9 | 16 | 3.6 | 30-43 |
| | | 9 | 124.3 | 6 | - | 110-131 | 40.0 | 6 | - | 33-46 |
| | | 10 | 127.2 | 5 | - | 121-135 | 41.8 | 5 | - | 37-47 |
| | | 11 | 123.3 | 3 | - | 111-135 | 39.8 | 3 | - | 34-43 |
| | | 12 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 16 | 135.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 17 | 125.0 | 1 | - | - | 45.5 | 1 | - | - |
| | June | 4 | 114.7 | 3 | - | 110-119 | 30.7 | 3 | - | 30-31 |
| | | 5 | 119.3 | 3 | - | 113-125 | 32.3 | 3 | - | 29-35 |
| | | 6 | 127.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 7 | 132.0 | 1 | - | - | 38.5 | 1 | - | - |
| 1960 | March | 4 | 117.0 | 2 | - | 114-120 | 28.0 | 2 | - | 26-30 |
| | | 5 | 123.0 | 4 | - | 117-130 | 34.0 | 4 | - | 31-37 |
| | | 6 | 124.0 | 4 | - | 119-127 | 35.4 | 4 | - | 33-38 |
| | | 7 | 113.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | 13 | 118.0 | 1 | - | - | 45.0 | 1 | - | - |
| | April | 3 | 107.5 | 2 | - | 100-115 | 21.0 | 2 | - | 20-22 |
| | | 4 | 115.7 | 41 | 6.9 | 102-130 | 28.4 | 41 | 2.9 | 21-34 |
| | | 5 | 119.5 | 69 | 5.6 | 105-130 | 31.2 | 69 | 3.1 | 24-41 |
| | | 6 | 121.3 | 48 | 7.4 | 110-140 | 33.1 | 48 | 3.6 | 26-44 |
| | | 7 | 121.7 | 29 | 7.5 | 105-137 | 33.9 | 29 | 4.2 | 20-40 |
| | | 8 | 124.5 | 15 | 8.4 | 110-135 | 35.6 | 15 | 3.8 | 30-45 |
| | | 9 | 127.4 | 11 | 5.2 | 120-136 | 35.5 | 11 | 4.7 | 28-44 |
| | | 10 | 126.5 | 6 | - | 105-140 | 35.7 | 6 | - | 34-40 |
| | | 11 | 127.2 | 5 | - | 122-135 | 39.4 | 5 | - | 32-50 |
| | | 12 | 129.3 | 4 | - | 120-135 | 39.0 | 4 | - | 36-45 |
| | | 13 | 125.3 | 6 | - | 115-140 | 39.8 | 6 | - | 32-52 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | April | 14 | 127.0 | 1 | - | - | 37.5 | 1 | - | - |
| | | (continued) 15 | 135.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 17 | 130.0 | 2 | - | 125-135 | 45.5 | 2 | - | 44-47 |
| | | 18 | 120.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 19 | 135.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 20 | 132.5 | 2 | - | 130-135 | 41.8 | 2 | - | 37-46 |
| | May | 4 | 118.9 | 39 | 5.3 | 107-125 | 31.6 | 39 | 2.6 | 26-37 |
| | | 5 | 121.6 | 36 | 5.5 | 110-135 | 33.5 | 36 | 3.6 | 27-43 |
| | | 6 | 126.2 | 26 | 5.8 | 115-138 | 37.2 | 26 | 4.2 | 30-45 |
| | | 7 | 123.9 | 22 | 6.9 | 112-140 | 36.2 | 22 | 3.1 | 30-45 |
| | | 8 | 127.9 | 16 | 5.9 | 116-140 | 40.8 | 16 | 5.5 | 30-55 |
| | | 9 | 126.0 | 5 | - | 121-132 | 38.9 | 5 | - | 35-46 |
| | | 10 | 128.3 | 4 | - | 120-135 | 40.1 | 4 | - | 39-42 |
| | | 11 | 124.6 | 5 | - | 120-133 | 42.6 | 5 | - | 40-50 |
| | | 12 | 132.7 | 3 | - | 127-136 | 48.8 | 3 | - | 45-51 |
| | | 13 | 133.0 | 2 | - | 130-136 | 45.3 | 2 | - | 44-46 |
| | | 14 | 127.7 | 3 | - | 122-136 | 40.5 | 3 | - | 36-44 |
| | | 16 | 128.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 19 | 139.0 | 1 | - | - | 58.0 | 1 | - | - |
| | June | 4 | 114.5 | 2 | - | 112-117 | 32.0 | 2 | - | - |
| | | 5 | 121.0 | 12 | 6.1 | 111-130 | 36.3 | 12 | 3.1 | 31-40 |
| | | 6 | 122.9 | 7 | - | 120-126 | 39.3 | 7 | - | 32-43 |
| | | 7 | 124.0 | 5 | - | 111-131 | 41.0 | 5 | - | 36-45 |
| | | 8 | 127.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 9 | 120.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 11 | 125.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 15 | 133.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 19 | 122.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 19 | 122.0 | 1 | - | - | 45.0 | 1 | - | - |
| 1961 | March | 4 | 117.5 | 4 | - | 112-125 | 27.4 | 4 | - | 26-29 |
| | | 5 | 121.0 | 1 | - | - | 32.0 | 1 | - | - |
| | | 6 | 126.0 | 3 | - | 123-130 | 32.8 | 3 | - | 32-34 |
| | | 7 | 128.3 | 4 | - | 123-130 | 35.4 | 4 | - | 34-37 |
| | | 8 | 124.0 | 3 | - | 113-134 | 32.8 | 3 | - | 30-34 |
| | | 9 | 130.0 | 1 | - | - | 32.5 | 1 | - | - |
| | | 10 | 125.0 | 2 | - | - | 34.0 | 2 | - | - |
| | | 11 | 135.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 13 | 140.0 | 2 | - | - | 43.5 | 2 | - | 43-44 |
| | | 14 | 128.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 15 | 123.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 16 | 130.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 19 | 133.0 | 1 | - | - | 37.5 | 1 | - | - |
| | April | 4 | 114.5 | 30 | 6.4 | 105-127 | 27.8 | 30 | 3.3 | 21-34 |
| | | 5 | 120.2 | 46 | 8.0 | 105-143 | 31.9 | 46 | 4.0 | 23-42 |
| | | 6 | 122.0 | 41 | 7.3 | 110-138 | 34.3 | 41 | 3.6 | 30-49 |
| | | 7 | 121.0 | 25 | 6.6 | 110-133 | 34.7 | 25 | 2.8 | 28-38 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1961 | April (continued) | 8 | 121.6 | 14 | 6.0 | 115-132 | 35.7 | 14 | 3.7 | 27-41 |
| | | 9 | 122.6 | 7 | - | 115-140 | 36.2 | 7 | - | 28-48 |
| | | 10 | 126.0 | 9 | - | 116-133 | 37.5 | 9 | - | 26-46 |
| | | 11 | 128.2 | 5 | - | 123-138 | 41.8 | 5 | - | 37-46 |
| | | 12 | 125.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 13 | 126.8 | 4 | - | 120-134 | 40.1 | 4 | - | 36-45 |
| | | 14 | 128.8 | 5 | - | 125-138 | 45.0 | 5 | - | 43-48 |
| | | 15 | 131.6 | 5 | - | 122-135 | 40.7 | 5 | - | 36-46 |
| | | 16 | 126.0 | 2 | - | 125-127 | 48.3 | 2 | - | 45-51 |
| | | 17 | 134.0 | 3 | - | 130-137 | 40.3 | 3 | - | 35-44 |
| | | 18 | 139.0 | 2 | - | 132-146 | 45.0 | 2 | - | - |
| | | 19 | 125.0 | 1 | - | - | 48.0 | 1 | - | - |
| | May | 3 | 117.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 4 | 115.9 | 44 | 4.7 | 105-127 | 30.2 | 44 | 3.8 | 20-41 |
| | | 5 | 120.7 | 38 | 5.7 | 105-132 | 33.1 | 38 | 3.7 | 23-42 |
| | | 6 | 122.1 | 49 | 6.1 | 107-135 | 35.8 | 49 | 3.3 | 28-47 |
| | | 7 | 124.3 | 23 | 7.2 | 105-136 | 37.8 | 23 | 3.2 | 32-47 |
| | | 8 | 124.3 | 8 | - | 109-135 | 38.1 | 8 | - | 34-43 |
| | | 9 | 124.3 | 12 | 5.0 | 115-133 | 39.6 | 12 | 4.0 | 34-47 |
| | | 10 | 129.0 | 11 | 4.5 | 120-135 | 39.0 | 11 | 3.5 | 34-45 |
| | | 11 | 127.5 | 6 | - | 125-133 | 42.9 | 6 | - | 37-50 |
| | | 12 | 128.3 | 9 | - | 115-138 | 44.1 | 9 | - | 36-50 |
| | | 13 | 127.3 | 4 | - | 120-135 | 39.8 | 4 | - | 35-43 |
| | | 14 | 137.5 | 2 | - | 136-139 | 41.5 | 2 | - | 38-45 |
| | | 15 | 120.0 | 2 | - | 115-125 | 41.0 | 2 | - | 37-45 |
| | | 16 | 125.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 18 | 130.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 19 | 122.0 | 1 | - | - | 44.0 | 1 | - | - |
| | June | 3 | 116.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 5 | 117.0 | 2 | - | 114-120 | 28.3 | 2 | - | 24-32 |
| 1962 | Feb. | 12 | 117.0 | 1 | - | - | 40.5 | 1 | - | - |
| | March | 7 | 120.0 | 2 | - | - | 34.5 | 2 | - | 34-35 |
| | | 21 | 125.0 | 1 | - | - | 42.0 | 1 | - | - |
| | April | 3 | 115.0 | 1 | - | - | 24.5 | 1 | - | - |
| | | 4 | 116.9 | 42 | 6.7 | 105-135 | 29.9 | 42 | 2.7 | 26-37 |
| | | 5 | 120.4 | 32 | 7.5 | 100-135 | 33.6 | 32 | 3.4 | 28-42 |
| | | 6 | 122.8 | 30 | 7.1 | 110-137 | 33.3 | 30 | 3.4 | 24-40 |
| | | 7 | 126.9 | 34 | 8.1 | 115-146 | 35.9 | 34 | 3.4 | 30-44 |
| | | 8 | 122.9 | 17 | 7.6 | 110-135 | 36.3 | 17 | 4.2 | 25-42 |
| | | 9 | 123.5 | 13 | 6.9 | 110-135 | 38.2 | 13 | 3.7 | 32-44 |
| | | 10 | 126.0 | 9 | - | 115-135 | 36.5 | 9 | - | 29-42 |
| | | 11 | 132.8 | 10 | 5.1 | 123-139 | 42.2 | 10 | 4.2 | 35-51 |
| | | 12 | 122.3 | 3 | - | 117-130 | 40.3 | 3 | - | 40-41 |
| | | 14 | 127.5 | 2 | - | 125-130 | 40.0 | 2 | - | 39-41 |
| | | 15 | 131.3 | 4 | - | 115-145 | 44.1 | 4 | - | 33-58 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1962 | April | 16 | 130.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | (continued) 17 | 136.0 | 2 | - | 130-142 | 47.5 | 2 | - | 43-52 |
| | | 18 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 20 | 135.0 | 1 | - | - | 48.0 | 1 | - | - |
| | May | 3 | 115.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 4 | 115.3 | 17 | 7.1 | 100-125 | 30.9 | 17 | 6.1 | 20-44 |
| | | 5 | 119.9 | 17 | 4.4 | 112-127 | 35.4 | 17 | 4.1 | 28-44 |
| | | 6 | 119.3 | 14 | 6.1 | 110-127 | 32.4 | 14 | 4.5 | 25-38 |
| | | 7 | 121.3 | 9 | - | 110-137 | 34.1 | 9 | - | 26-40 |
| | | 8 | 120.0 | 9 | - | 110-130 | 34.6 | 9 | - | 28-45 |
| | | 9 | 121.3 | 3 | - | 115-125 | 39.0 | 3 | - | 35-45 |
| | | 10 | 130.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 11 | 125.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 12 | 125.3 | 3 | - | 125-126 | 38.7 | 3 | - | 31-45 |
| | | 13 | 132.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 45.5 | 1 | - | - |
| | | 16 | 134.0 | 1 | - | - | 43.0 | 1 | - | - |
| | June | 4 | 121.5 | 2 | - | 118-125 | 36.3 | 2 | - | 34-38 |
| | | 5 | 116.7 | 3 | - | 110-125 | 39.0 | 3 | - | 35-42 |
| | | 6 | 124.4 | 5 | - | 115-132 | 39.8 | 5 | - | 35-42 |
| | | 8 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| 1963 | March | 16 | 130.0 | 1 | - | - | 40.0 | 1 | - | - |
| | April | 4 | 112.0 | 10 | 6.7 | 105-125 | 28.0 | 10 | 4.9 | 20-38 |
| | | 5 | 119.6 | 23 | 5.9 | 110-132 | 33.1 | 23 | 3.0 | 27-40 |
| | | 6 | 123.3 | 17 | 5.9 | 110-133 | 34.7 | 17 | 3.8 | 26-41 |
| | | 7 | 119.4 | 7 | - | 115-124 | 33.6 | 7 | - | 31-37 |
| | | 8 | 126.1 | 12 | 5.3 | 115-135 | 36.6 | 12 | 2.4 | 32-41 |
| | | 9 | 126.8 | 10 | 5.3 | 120-135 | 36.7 | 10 | 2.4 | 32-40 |
| | | 10 | 125.0 | 7 | - | 115-135 | 41.2 | 7 | - | 32-49 |
| | | 11 | 130.0 | 2 | - | - | 39.3 | 2 | - | 36-42 |
| | | 12 | 127.5 | 2 | - | 125-130 | 37.5 | 2 | - | 35-40 |
| | | 13 | 140.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 14 | 130.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 15 | 130.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 19 | 125.0 | 1 | - | - | 40.0 | 1 | - | - |
| | May | 4 | 117.1 | 38 | 5.5 | 106-130 | 31.2 | 38 | 2.9 | 26-37 |
| | | 5 | 120.3 | 55 | 5.7 | 105-135 | 34.2 | 55 | 3.8 | 24-44 |
| | | 6 | 123.3 | 29 | 5.4 | 111-135 | 34.7 | 29 | 3.3 | 27-43 |
| | | 7 | 124.6 | 19 | 8.3 | 100-137 | 37.4 | 19 | 4.6 | 28-45 |
| | | 8 | 126.5 | 30 | 5.8 | 115-136 | 38.3 | 30 | 3.9 | 30-46 |
| | | 9 | 127.2 | 15 | 5.8 | 113-135 | 40.2 | 15 | 4.1 | 34-50 |
| | | 10 | 127.5 | 2 | - | 125-130 | 39.8 | 2 | - | 38-41 |
| | | 11 | 128.2 | 6 | - | 120-137 | 40.3 | 6 | - | 36-45 |
| | | 12 | 129.5 | 2 | - | 125-134 | 39.5 | 2 | - | 37-42 |
| | | 13 | 128.3 | 4 | - | 120-138 | 44.3 | 4 | - | 37-53 |
| | | 14 | 129.3 | 3 | - | 123-140 | 39.7 | 3 | - | 36-43 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1963 | June | 4 | 118.9 | 14 | 5.0 | 110-128 | 35.5 | 14 | 3.3 | 29-41 |
| | | 5 | 122.0 | 25 | 6.3 | 115-137 | 37.1 | 25 | 3.3 | 31-46 |
| | | 6 | 122.0 | 19 | 5.8 | 115-135 | 39.6 | 19 | 5.8 | 28-49 |
| | | 7 | 128.3 | 6 | - | 120-135 | 42.0 | 6 | - | 38-46 |
| | | 8 | 128.4 | 5 | - | 125-135 | 44.8 | 5 | - | 40-52 |
| | | 9 | 127.1 | 9 | - | 122-136 | 40.6 | 9 | - | 37-44 |
| | | 11 | 127.0 | 2 | - | 125-129 | 41.3 | 2 | - | 39-43 |
| | | 12 | 128.3 | 3 | - | 125-130 | 41.7 | 3 | - | 36-50 |
| | | 14 | 140.0 | 1 | - | - | 52.0 | 1 | - | - |
| 1964 | March | 4 | 114.2 | 18 | 3.8 | 110-120 | 27.9 | 18 | 3.4 | 23-35 |
| | | 5 | 119.8 | 25 | 7.6 | 100-131 | 31.4 | 25 | 4.1 | 24-45 |
| | | 6 | 122.0 | 17 | 5.4 | 111-130 | 32.7 | 17 | 4.1 | 26-40 |
| | | 7 | 126.2 | 18 | 5.8 | 120-140 | 35.6 | 18 | 3.3 | 30-42 |
| | | 8 | 128.6 | 22 | 6.0 | 120-143 | 36.0 | 22 | 3.9 | 28-45 |
| | | 9 | 127.0 | 10 | 5.6 | 120-135 | 37.7 | 10 | 3.0 | 32-42 |
| | | 10 | 127.5 | 6 | - | 117-130 | 37.2 | 6 | - | 33-42 |
| | | 11 | 129.8 | 5 | - | 124-140 | 38.9 | 5 | - | 36-43 |
| | | 12 | 133.0 | 4 | - | 130-137 | 41.5 | 4 | - | 40-43 |
| | | 13 | 128.0 | 2 | - | 125-131 | 38.5 | 2 | - | 35-42 |
| | | 14 | 132.0 | 4 | - | 124-143 | 41.8 | 4 | - | 31-50 |
| | | 15 | 132.0 | 3 | - | 130-135 | 41.7 | 3 | - | 40-45 |
| | | 16 | 127.7 | 3 | - | 120-134 | 38.7 | 3 | - | 36-41 |
| | | 17 | 127.5 | 2 | - | 125-130 | 41.5 | 2 | - | 41-42 |
| | | 18 | 129.0 | 2 | - | 125-133 | 41.0 | 2 | - | 38-44 |
| | | 19 | 137.0 | 1 | - | - | 44.0 | 1 | - | - |
| | April | 3 | 115.0 | 1 | - | - | 23.0 | 1 | - | - |
| | | 4 | 116.6 | 17 | 3.8 | 109-124 | 29.3 | 17 | 2.7 | 24-36 |
| | | 5 | 120.7 | 28 | 6.4 | 100-130 | 33.1 | 28 | 3.9 | 27-39 |
| | | 6 | 124.3 | 12 | 6.8 | 110-135 | 34.4 | 12 | 4.1 | 27-42 |
| | | 7 | 124.2 | 9 | - | 112-134 | 34.7 | 9 | - | 29-39 |
| | | 8 | 129.5 | 10 | 3.2 | 125-135 | 38.5 | 10 | 2.3 | 34-42 |
| | | 9 | 130.4 | 11 | 4.5 | 125-140 | 39.5 | 11 | 2.0 | 36-43 |
| | | 10 | 127.1 | 7 | - | 120-134 | 37.3 | 7 | - | 35-40 |
| | | 11 | 125.0 | 2 | - | 118-132 | 40.0 | 2 | - | 32-48 |
| | | 12 | 129.7 | 3 | - | 120-140 | 41.0 | 3 | - | 35-45 |
| | | 13 | 140.5 | 2 | - | 140-141 | 46.5 | 2 | - | 45-48 |
| | | 14 | 132.5 | 2 | - | 130-135 | 45.0 | 2 | - | 42-48 |
| | | 15 | 125.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 16 | 137.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 17 | 120.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 18 | 140.0 | 1 | - | - | 51.0 | 1 | - | - |
| | | 19 | 132.7 | 3 | - | 131-135 | 43.8 | 3 | - | 42-45 |
| | | 21 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1964 | May | 4 | 119.2 | 30 | 5.2 | 110-137 | 31.7 | 30 | 3.2 | 24-38 |
| | | 5 | 121.8 | 46 | 5.8 | 105-135 | 34.4 | 46 | 3.7 | 28-45 |
| | | 6 | 123.8 | 38 | 6.1 | 112-135 | 36.4 | 38 | 4.2 | 25-46 |
| | | 7 | 128.1 | 17 | 4.4 | 120-135 | 38.5 | 17 | 3.9 | 33-50 |
| | | 8 | 126.0 | 17 | 5.8 | 112-137 | 37.8 | 17 | 4.0 | 30-46 |
| | | 9 | 126.2 | 23 | 4.4 | 120-135 | 38.4 | 23 | 2.8 | 32-46 |
| | | 10 | 128.5 | 10 | 6.2 | 120-140 | 40.3 | 10 | 5.5 | 30-46 |
| | | 11 | 127.6 | 7 | - | 120-131 | 41.0 | 7 | - | 34-45 |
| | | 12 | 131.7 | 6 | - | 122-145 | 43.2 | 6 | - | 38-55 |
| | | 14 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 15 | 134.8 | 4 | - | 128-140 | 48.1 | 4 | - | 44-51 |
| | | 16 | 135.0 | 1 | - | - | 46.5 | 1 | - | - |
| | June | 4 | 113.5 | 4 | - | 110-119 | 32.1 | 4 | - | 31-34 |
| | | 5 | 122.3 | 7 | - | 111-127 | 35.6 | 7 | - | 27-42 |
| | | 6 | 128.0 | 7 | - | 120-140 | 39.3 | 7 | - | 33-49 |
| | | 7 | 128.3 | 6 | - | 125-135 | 40.0 | 6 | - | 37-43 |
| | | 8 | 132.3 | 3 | - | 130-135 | 42.7 | 3 | - | 42-44 |
| | | 9 | 130.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 11 | 130.0 | 2 | - | - | 40.0 | 2 | - | 38-42 |
| | | 12 | 132.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 125.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 14 | 140.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1965 | March | 4 | 112.3 | 3 | - | 105-117 | 25.3 | 3 | - | 21-30 |
| | | 6 | 125.0 | 1 | - | - | 28.0 | 1 | - | - |
| | | 7 | 120.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 8 | 113.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 12 | 125.5 | 2 | - | 121-130 | 34.3 | 2 | - | - |
| | | 15 | 125.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 16 | 136.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 20 | 128.0 | 1 | - | - | 40.0 | 1 | - | - |
| | April | 4 | 123.0 | 1 | - | - | 29.0 | 1 | - | - |
| | | 9 | 136.0 | 2 | - | 127-145 | 38.5 | 2 | - | 35-42 |
| | May | 10 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 4 | 118.1 | 18 | 4.2 | 110-125 | 31.3 | 18 | 3.1 | 26-38 |
| | | 5 | 122.1 | 28 | 5.1 | 115-135 | 35.5 | 28 | 3.9 | 28-43 |
| | | 6 | 124.4 | 25 | 3.8 | 118-134 | 36.1 | 25 | 3.3 | 28-41 |
| | | 7 | 123.7 | 35 | 5.5 | 114-135 | 37.3 | 35 | 3.5 | 26-43 |
| | | 8 | 126.3 | 14 | 6.0 | 115-135 | 38.9 | 14 | 4.5 | 30-45 |
| | | 9 | 125.7 | 12 | 6.4 | 115-136 | 40.0 | 12 | 2.2 | 37-44 |
| | | 10 | 129.1 | 17 | 4.7 | 120-140 | 40.8 | 17 | 4.1 | 34-49 |
| | | 11 | 132.7 | 7 | - | 124-148 | 41.8 | 7 | - | 34-51 |
| | | 12 | 120.0 | 2 | - | 115-125 | 39.0 | 2 | - | 35-42 |
| | | 13 | 128.8 | 4 | - | 115-135 | 42.4 | 4 | - | 37-46 |
| | | 14 | 137.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 16 | 135.3 | 3 | - | 129-142 | 41.0 | 3 | - | 35-46 |
| | | 18 | 125.0 | 1 | - | - | 45.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1965 | June | 4 | 121.4 | 14 | 4.2 | 115-130 | 34.6 | 14 | 3.4 | 25-40 |
| | | 5 | 122.9 | 15 | 5.9 | 112-132 | 36.5 | 15 | 3.9 | 30-45 |
| | | 6 | 123.6 | 17 | 6.0 | 113-135 | 38.6 | 17 | 5.6 | 24-50 |
| | | 7 | 125.4 | 21 | 7.5 | 110-140 | 39.7 | 21 | 4.4 | 32-49 |
| | | 8 | 127.8 | 8 | - | 110-140 | 42.3 | 8 | - | 39-51 |
| | | 9 | 129.9 | 14 | 5.1 | 120-142 | 43.1 | 14 | 3.0 | 38-49 |
| | | 10 | 131.8 | 5 | - | 130-137 | 46.0 | 5 | - | 43-52 |
| | | 11 | 135.0 | 2 | - | - | 50.0 | 2 | - | 49-51 |
| | | 12 | 129.6 | 5 | - | 115-140 | 45.9 | 5 | - | 40-52 |
| | | 13 | 134.3 | 3 | - | 131-140 | 43.7 | 3 | - | 42-45 |
| | | 15 | 130.0 | 1 | - | - | 55.0 | 1 | - | - |
| 1966 | March | 4 | 111.7 | 3 | - | 110-115 | 25.0 | 3 | - | 23-26 |
| | | 5 | 119.7 | 13 | 4.8 | 110-126 | 31.3 | 13 | 3.2 | 25-35 |
| | | 6 | 121.1 | 9 | - | 109-125 | 33.3 | 9 | - | 30-36 |
| | | 7 | 125.1 | 8 | - | 115-137 | 34.3 | 8 | - | 30-38 |
| | | 8 | 131.0 | 4 | - | 129-135 | 36.8 | 4 | - | 35-39 |
| | | 9 | 127.3 | 3 | - | 124-131 | 37.5 | 3 | - | 34-40 |
| | | 10 | 132.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 11 | 120.5 | 2 | - | 120-121 | 38.3 | 2 | - | 37-39 |
| | | 12 | 140.5 | 2 | - | 126-155 | 48.5 | 2 | - | 37-60 |
| | | 15 | 120.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 17 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |
| | April | 4 | 116.7 | 10 | 4.4 | 107-123 | 28.7 | 10 | 3.1 | 24-33 |
| | | 5 | 119.5 | 23 | 4.8 | 112-134 | 31.5 | 23 | 3.0 | 24-38 |
| | | 6 | 125.4 | 18 | 4.8 | 116-135 | 34.1 | 18 | 3.0 | 27-39 |
| | | 7 | 125.1 | 15 | 6.2 | 110-135 | 35.7 | 15 | 3.5 | 28-42 |
| | | 8 | 124.9 | 12 | 5.7 | 115-134 | 34.7 | 12 | 3.1 | 29-39 |
| | | 9 | 128.7 | 3 | - | 124-132 | 35.0 | 3 | - | 34-36 |
| | | 10 | 123.5 | 2 | - | 123-124 | 35.3 | 2 | - | 32-38 |
| | | 11 | 130.7 | 3 | - | 124-135 | 39.0 | 3 | - | 38-40 |
| | | 12 | 126.0 | 4 | - | 111-134 | 36.4 | 4 | - | 31-43 |
| | | 13 | 133.3 | 4 | - | 129-143 | 43.1 | 4 | - | 41-46 |
| | May | 15 | 134.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 16 | 129.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 4 | 119.4 | 16 | 4.8 | 107-125 | 31.7 | 16 | 2.4 | 25-34 |
| | | 5 | 124.2 | 29 | 4.2 | 115-133 | 36.3 | 29 | 3.6 | 28-44 |
| | | 6 | 127.5 | 13 | 6.0 | 116-137 | 37.3 | 13 | 4.8 | 29-44 |
| | | 7 | 125.9 | 11 | 4.2 | 117-131 | 38.3 | 11 | 3.7 | 29-42 |
| | | 8 | 130.1 | 14 | 3.9 | 124-137 | 40.3 | 14 | 4.1 | 33-50 |
| | | 9 | 128.1 | 19 | 6.4 | 115-139 | 39.4 | 19 | 5.2 | 29-48 |
| | | 10 | 128.4 | 7 | - | 121-133 | 39.3 | 7 | - | 36-43 |
| | | 11 | 131.0 | 3 | - | 130-132 | 43.3 | 3 | - | 40-45 |
| | | 12 | 130.7 | 3 | - | 125-139 | 40.5 | 3 | - | 39-42 |
| | | 13 | 132.3 | 7 | - | 124-140 | 40.9 | 7 | - | 36-47 |
| | | 14 | 133.5 | 2 | - | 132-135 | 41.8 | 2 | - | 41-42 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1966 | May | 15 | 130.5 | 2 | - | 124-137 | 46.0 | 2 | - | 44-48 |
| | | (continued) 16 | 132.0 | 2 | - | 131-133 | 39.8 | 2 | - | 39-40 |
| | | 17 | 127.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 19 | 129.0 | 1 | - | - | 38.5 | 1 | - | - |
| | June | 5 | 125.2 | 5 | - | 123-127 | 36.0 | 5 | - | 31-40 |
| | | 6 | 130.3 | 4 | - | 124-134 | 42.3 | 4 | - | 35-48 |
| | | 7 | 130.3 | 3 | - | 125-135 | 39.5 | 3 | - | 37-41 |
| | | 8 | 129.0 | 2 | - | 121-137 | 48.0 | 2 | - | 41-55 |
| | | 10 | 135.0 | 4 | - | 130-141 | 46.8 | 4 | - | 45-48 |
| | | 11 | 131.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | | | | | | | | | |
| 1967 | January | 4 | 116.0 | 2 | - | 110-122 | 28.3 | 2 | - | 27-29 |
| | | 5 | 121.2 | 6 | - | 115-125 | 29.8 | 6 | - | 26-33 |
| | | 6 | 119.7 | 6 | - | 110-127 | 31.8 | 6 | - | 26-37 |
| | | 7 | 123.0 | 11 | 4.1 | 117-132 | 35.3 | 11 | 2.9 | 31-41 |
| | | 8 | 125.2 | 9 | - | 120-135 | 36.9 | 9 | - | 30-47 |
| | | 9 | 128.3 | 4 | - | 127-131 | 37.3 | 4 | - | 32-43 |
| | | 10 | 131.7 | 7 | - | 123-137 | 36.1 | 7 | - | 31-40 |
| | | 11 | 128.4 | 7 | - | 120-137 | 37.4 | 7 | - | 35-40 |
| | | 12 | 123.8 | 6 | - | 113-136 | 37.7 | 6 | - | 33-41 |
| | | 13 | 123.3 | 3 | - | 122-125 | 38.7 | 3 | - | 37-40 |
| | | 14 | 129.0 | 2 | - | 122-136 | 41.3 | 2 | - | 36-46 |
| | | 15 | 126.0 | 2 | - | 122-130 | 38.5 | 2 | - | 34-42 |
| | | 16 | 126.5 | 3 | - | 121-137 | 39.5 | 3 | - | 36-44 |
| | | 20 | 145.0 | 1 | - | - | 58.0 | 1 | - | - |
| | Feb. | 4 | 115.3 | 6 | - | 110-121 | 25.9 | 6 | - | 23-29 |
| | | 5 | 120.0 | 10 | 5.8 | 110-131 | 29.7 | 10 | 3.2 | 25-36 |
| | | 6 | 123.4 | 22 | 4.3 | 117-136 | 33.3 | 22 | 3.3 | 28-42 |
| | | 7 | 127.0 | 22 | 7.3 | 113-143 | 36.3 | 22 | 5.5 | 25-50 |
| | | 8 | 127.1 | 29 | 6.7 | 112-143 | 36.6 | 29 | 5.2 | 25-46 |
| | | 9 | 125.5 | 15 | 5.4 | 115-134 | 35.1 | 15 | 5.0 | 29-46 |
| | | 10 | 128.5 | 14 | 6.7 | 115-138 | 37.8 | 14 | 5.4 | 22-45 |
| | | 11 | 129.3 | 11 | 3.5 | 122-134 | 38.5 | 11 | 3.2 | 33-45 |
| | | 12 | 128.3 | 12 | 6.1 | 112-135 | 41.0 | 12 | 3.3 | 33-45 |
| | | 13 | 131.3 | 14 | 3.4 | 124-138 | 40.8 | 14 | 5.1 | 33-52 |
| | | 14 | 131.5 | 6 | - | 125-137 | 37.4 | 6 | - | 31-41 |
| | | 15 | 132.0 | 3 | - | 130-134 | 43.5 | 3 | - | 40-47 |
| | | 16 | 132.3 | 4 | - | 127-137 | 42.5 | 4 | - | 39-48 |
| | | 17 | 138.3 | 3 | - | 134-143 | 51.7 | 3 | - | 50-55 |
| | | 18 | 125.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 19 | 137.0 | 1 | - | - | 50.5 | 1 | - | - |
| | March | 3 | 108.0 | 2 | - | 103-113 | 19.5 | 2 | - | 18-21 |
| | | 4 | 119.3 | 8 | - | 114-126 | 29.1 | 8 | - | 25-32 |
| | | 5 | 120.2 | 21 | 6.0 | 111-134 | 32.0 | 21 | 3.4 | 26-40 |
| | | 6 | 124.7 | 12 | 5.1 | 115-134 | 34.9 | 12 | 4.2 | 29-46 |
| | | 7 | 125.8 | 4 | - | 120-131 | 35.5 | 4 | - | 31-42 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1967 | March (continued) | 8 | 129.0 | 4 | - | 126-132 | 37.6 | 4 | - | 36-39 |
| | | 9 | 128.9 | 9 | - | 122-136 | 38.5 | 9 | - | 34-45 |
| | | 10 | 132.3 | 3 | - | 124-138 | 38.5 | 3 | - | 37-39 |
| | | 11 | 124.5 | 4 | - | 122-127 | 37.4 | 4 | - | 31-40 |
| | | 13 | 129.7 | 7 | - | 120-135 | 42.6 | 7 | - | 37-48 |
| | | 14 | 129.8 | 4 | - | 120-138 | 42.8 | 4 | - | 40-46 |
| | | 15 | 137.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 16 | 128.5 | 2 | - | 125-132 | 42.8 | 2 | - | 41-44 |
| | | 17 | 132.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 18 | 125.0 | 1 | - | - | 42.5 | 1 | - | - |
| | April | 3 | 119.0 | 2 | - | 111-127 | 32.8 | 2 | - | 27-38 |
| | | 4 | 117.9 | 7 | - | 110-125 | 28.0 | 7 | - | 24-31 |
| | | 5 | 121.4 | 20 | 6.0 | 110-133 | 32.2 | 20 | 3.0 | 27-38 |
| | | 6 | 124.7 | 9 | - | 123-127 | 34.9 | 9 | - | 31-40 |
| | | 7 | 128.3 | 10 | 2.4 | 124-132 | 37.0 | 10 | 3.0 | 30-41 |
| | | 8 | 128.2 | 5 | - | 116-135 | 37.5 | 5 | - | 33-39 |
| | | 9 | 129.0 | 4 | - | 125-135 | 37.6 | 4 | - | 33-43 |
| | | 10 | 126.8 | 4 | - | 115-135 | 38.1 | 4 | - | 33-41 |
| | | 11 | 127.5 | 2 | - | 125-130 | 34.3 | 2 | - | 32-36 |
| | | 12 | 128.5 | 8 | - | 120-140 | 39.8 | 8 | - | 36-44 |
| | | 13 | 125.0 | 1 | - | - | 40.5 | 1 | - | - |
| | | 14 | 131.8 | 4 | - | 128-138 | 41.5 | 4 | - | 38-48 |
| | | 15 | 134.8 | 3 | - | 125-149 | 40.4 | 3 | - | 36-45 |
| | | 16 | 129.0 | 2 | - | 122-136 | 40.0 | 2 | - | 36-44 |
| | May | 3 | 104.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 4 | 115.6 | 5 | - | 110-124 | 30.8 | 5 | - | 27-34 |
| | | 5 | 121.9 | 16 | 4.2 | 109-128 | 33.3 | 16 | 3.1 | 28-40 |
| | | 6 | 127.3 | 12 | 4.5 | 119-135 | 35.8 | 12 | 2.4 | 31-40 |
| | | 7 | 127.0 | 10 | 6.2 | 120-136 | 36.3 | 10 | 2.8 | 31-41 |
| | | 8 | 129.8 | 15 | 5.2 | 119-140 | 39.8 | 15 | 4.3 | 32-52 |
| | | 9 | 130.2 | 11 | 6.4 | 121-144 | 40.4 | 11 | 4.0 | 32-49 |
| | | 10 | 128.3 | 3 | - | 125-135 | 41.3 | 3 | - | 36-50 |
| | | 11 | 133.4 | 5 | - | 128-140 | 41.6 | 5 | - | 36-49 |
| | | 12 | 136.0 | 2 | - | 130-142 | 43.8 | 2 | - | 41-46 |
| 1968 | January | 13 | 133.8 | 4 | - | 133-135 | 45.3 | 4 | - | 40-52 |
| | | 15 | 120.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 6 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 125.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 8 | 126.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 9 | 125.9 | 5 | - | 124-127 | 34.8 | 5 | - | 28-39 |
| | | 10 | 130.0 | 1 | - | - | 36.5 | 1 | - | - |
| | | 11 | 128.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 12 | 124.6 | 5 | - | 120-130 | 38.6 | 5 | - | 35-43 |
| | | 13 | 130.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 14 | 124.0 | 2 | - | 122-126 | 40.0 | 2 | - | 35-45 |
| | | 17 | 132.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 18 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1968 | Feb. | 5 | 119.5 | 2 | - | 119-120 | 28.5 | 2 | - | 27-30 |
| | | 6 | 110.0 | 2 | - | 105-115 | 24.0 | 2 | - | 22-26 |
| | | 7 | 123.4 | 5 | - | 117-131 | 32.8 | 5 | - | 29-38 |
| | | 8 | 123.6 | 7 | - | 118-130 | 32.8 | 7 | - | 27-39 |
| | | 9 | 124.0 | 6 | - | 115-135 | 34.4 | 6 | - | 30-38 |
| | | 10 | 131.0 | 2 | - | 127-135 | 36.3 | 2 | - | 35-37 |
| | | 11 | 130.5 | 2 | - | 126-135 | 35.5 | 2 | - | 34-37 |
| | | 12 | 137.5 | 2 | - | 135-140 | 43.8 | 2 | - | 42-45 |
| | | 13 | 133.0 | 2 | - | 130-136 | 40.5 | 2 | - | 40-41 |
| | | 14 | 127.8 | 4 | - | 127-129 | 38.5 | 4 | - | 36-43 |
| | | 15 | 129.5 | 2 | - | 127-132 | 39.5 | 2 | - | 39-40 |
| | | 17 | 135.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 18 | 132.5 | 2 | - | 128-137 | 41.8 | 2 | - | 39-44 |
| | March | 5 | 120.2 | 5 | - | 119-122 | 29.2 | 5 | - | 26-31 |
| | | 6 | 132.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 7 | 125.0 | 2 | - | 124-126 | 33.0 | 2 | - | 32-34 |
| | | 9 | 126.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 10 | 128.5 | 2 | - | 125-132 | 37.0 | 2 | - | 35-39 |
| | | 11 | 129.0 | 2 | - | 121-137 | 41.0 | 2 | - | 34-48 |
| | | 12 | 137.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 14 | 124.0 | 2 | - | 116-132 | 32.0 | 2 | - | 28-36 |
| | | 15 | 124.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 16 | 140.0 | 1 | - | - | 45.0 | 1 | - | - |
| | April | 17 | 131.0 | 1 | - | - | 36.5 | 1 | - | - |
| | | 4 | 113.0 | 1 | - | - | 25.0 | 1 | - | - |
| | | 5 | 121.8 | 4 | - | 116-126 | 33.6 | 4 | - | 30-38 |
| | | 6 | 120.5 | 2 | - | 115-126 | 31.5 | 2 | - | 31-32 |
| | | 7 | 123.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 8 | 125.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 9 | 121.0 | 2 | - | 120-122 | 34.0 | 2 | - | 33-35 |
| | | 10 | 131.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 11 | 135.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 12 | 122.5 | 2 | - | 115-130 | 35.3 | 2 | - | 30-40 |
| | | 13 | 129.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 14 | 129.0 | 2 | - | 125-133 | 41.5 | 2 | - | 40-43 |
| 1969 | January | 16 | 136.0 | 1 | - | - | 41.5 | 1 | - | - |
| | | 5 | 115.0 | 1 | - | - | 27.0 | 1 | - | - |
| | | 6 | 126.0 | 1 | - | - | 40.5 | 1 | - | - |
| | | 7 | 127.5 | 2 | - | 123-132 | 35.5 | 2 | - | 31-40 |
| | | 9 | 129.5 | 2 | - | 127-132 | 37.0 | 2 | - | 36-38 |
| | | 11 | 130.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 13 | 129.5 | 2 | - | 124-135 | 42.0 | 2 | - | 39-45 |
| | | 14 | 122.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 15 | 124.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 16 | 132.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 18 | 132.4 | 1 | - | - | 51.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1969 | Feb. | 5 | 119.6 | 7 | - | 112-125 | 31.1 | 7 | - | 27-36 |
| | | 6 | 121.6 | 6 | - | 117-125 | 33.3 | 6 | - | 30-35 |
| | | 7 | 123.2 | 11 | 4.2 | 117-130 | 33.8 | 11 | 2.1 | 29-38 |
| | | 8 | 127.7 | 10 | 3.3 | 121-133 | 38.0 | 10 | 3.2 | 32-44 |
| | | 9 | 127.9 | 10 | 5.7 | 122-139 | 37.9 | 10 | 2.3 | 33-42 |
| | | 10 | 136.7 | 3 | - | 129-143 | 40.8 | 3 | - | 37-47 |
| | | 11 | 129.8 | 7 | - | 123-138 | 40.9 | 7 | - | 35-45 |
| | | 12 | 127.9 | 6 | - | 120-136 | 38.1 | 6 | - | 33-45 |
| | | 13 | 126.7 | 3 | - | 123-130 | 39.0 | 3 | - | 37-41 |
| | | 14 | 131.4 | 4 | - | 125-142 | 44.4 | 4 | - | 39-48 |
| | | 15 | 130.0 | 2 | - | 125-135 | 48.8 | 2 | - | 45-52 |
| | | 16 | 124.0 | 2 | - | 123-125 | 38.7 | 2 | - | 32-45 |
| | | 17 | 126.1 | 4 | - | 121-129 | 44.6 | 4 | - | 42-46 |
| | March | 5 | 121.3 | 9 | - | 114-132 | 31.7 | 9 | - | 26-35 |
| | | 6 | 125.4 | 7 | - | 121-129 | 33.9 | 7 | - | 28-38 |
| | | 7 | 126.3 | 13 | 4.9 | 117-135 | 35.9 | 13 | 4.5 | 30-46 |
| | | 8 | 124.6 | 16 | 5.5 | 116-133 | 35.5 | 16 | 3.6 | 31-44 |
| | | 9 | 127.4 | 9 | - | 123-133 | 36.6 | 9 | - | 32-42 |
| | | 10 | 129.5 | 4 | - | 128-132 | 38.8 | 4 | - | 35-43 |
| | | 11 | 126.8 | 5 | - | 124-133 | 40.0 | 5 | - | 34-49 |
| | | 12 | 123.5 | 1 | - | - | 38.5 | 1 | - | - |
| | | 13 | 134.0 | 1 | - | - | 45.5 | 1 | - | - |
| | | 14 | 132.7 | 3 | - | 124-149 | 43.3 | 3 | - | 37-52 |
| | | 15 | 128.0 | 5 | - | 121-133 | 41.4 | 5 | - | 37-47 |
| | | 16 | 132.0 | 2 | - | 128-136 | 41.8 | 2 | - | 39-44 |
| | | 17 | 134.8 | 2 | - | 132-137 | 45.3 | 2 | - | 44-46 |
| | | 18 | 135.8 | 2 | - | 133-138 | 46.3 | 2 | - | 40-52 |
| | | 20 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 21 | 135.0 | 1 | - | - | 50.0 | 1 | - | - |
| | April | 5 | 118.0 | 1 | - | - | 29.5 | 1 | - | - |
| | | 6 | 122.8 | 4 | - | 120-126 | 33.9 | 4 | - | 31-38 |
| | | 7 | 127.3 | 3 | - | 124-130 | 36.8 | 3 | - | 36-37 |
| | | 8 | 121.5 | 2 | - | 115-128 | 34.5 | 2 | - | 33-36 |
| | | 10 | 127.5 | 1 | - | - | 37.0 | 1 | - | - |
| | | 11 | 136.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 12 | 141.0 | 1 | - | - | 50.5 | 1 | - | - |
| | | 13 | 123.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 15 | 118.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 16 | 128.0 | 1 | - | - | 29.0 | 1 | - | - |
| 1970 | January | 5 | 110.0 | 1 | - | - | 28.5 | 1 | - | - |
| | | 6 | 124.0 | 3 | - | 118-129 | 33.0 | 3 | - | 30-37 |
| | | 7 | 123.5 | 4 | - | 118-128 | 32.1 | 4 | - | 30-34 |
| | | 8 | 120.5 | 2 | - | 118-123 | 34.3 | 2 | - | 32-36 |
| | | 9 | 123.2 | 6 | - | 116-127 | 36.7 | 6 | - | 33-41 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1970 | Jan. (continued) | 10 | 125.5 | 3 | - | 117-133 | 37.8 | 3 | - | 33-40 |
| | | 11 | 122.0 | 1 | - | - | 39.5 | 1 | - | - |
| | | 12 | 127.3 | 7 | - | 116-135 | 40.1 | 7 | - | 34-46 |
| | | 13 | 125.0 | 4 | - | 118-132 | 40.3 | 4 | - | 34-50 |
| | | 14 | 131.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 15 | 130.0 | 6 | - | 124-135 | 42.9 | 6 | - | 37-47 |
| | | 16 | 137.7 | 3 | - | 136-139 | 47.0 | 3 | - | 43-50 |
| | | 17 | 131.0 | 3 | - | 124-140 | 46.2 | 3 | - | 40-55 |
| | | 18 | 136.5 | 2 | - | 133-140 | 53.8 | 2 | - | 48-59 |
| | Feb. | 4 | 120.0 | 1 | - | - | 34.0 | 1 | - | - |
| | | 5 | 117.0 | 2 | - | 114-120 | 32.5 | 2 | - | 31-34 |
| | | 6 | 119.6 | 7 | - | 110-127 | 31.4 | 7 | - | 26-36 |
| | | 7 | 122.5 | 14 | 4.5 | 115-130 | 34.1 | 14 | 2.7 | 27-38 |
| | | 8 | 126.3 | 8 | - | 119-133 | 35.9 | 8 | - | 32-41 |
| | | 9 | 121.2 | 5 | - | 113-125 | 35.6 | 5 | - | 30-39 |
| | | 10 | 123.0 | 10 | 4.8 | 112-130 | 38.0 | 10 | 3.5 | 32-44 |
| | | 11 | 128.4 | 6 | - | 125-131 | 41.8 | 6 | - | 35-45 |
| | | 12 | 127.8 | 8 | - | 117-140 | 40.3 | 8 | - | 31-53 |
| | | 13 | 126.5 | 4 | - | 114-136 | 41.0 | 4 | - | 38-45 |
| | | 14 | 130.3 | 8 | - | 117-142 | 41.4 | 8 | - | 34-50 |
| | | 15 | 131.0 | 10 | 3.6 | 122-136 | 46.5 | 10 | 5.0 | 38-57 |
| | | 16 | 130.7 | 3 | - | 128-133 | 48.3 | 3 | - | 45-53 |
| | | 17 | 137.0 | 3 | - | 133-145 | 52.7 | 3 | - | 50-56 |
| | | 18 | 134.6 | 6 | - | 128-145 | 49.4 | 6 | - | 41-60 |
| | | 19 | 133.5 | 2 | - | 124-143 | 47.3 | 2 | - | 38-56 |
| | | 20 | 135.7 | 3 | - | 133-139 | 50.2 | 3 | - | 47-55 |
| | | 21 | 130.0 | 1 | - | - | 50.0 | 1 | - | - |
| | March | 7 | 116.0 | 1 | - | - | 31.5 | 1 | - | - |
| | | 8 | 128.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 10 | 132.0 | 1 | - | - | 36.5 | 1 | - | - |
| | | 12 | 134.0 | 1 | - | - | 47.5 | 1 | - | - |
| | | 14 | 127.0 | 1 | - | - | 41.0 | 1 | - | - |
| 1971 | Feb. | 17 | 145.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 4 | 113.0 | 3 | - | 110-118 | 29.8 | 3 | - | 26-32 |
| | | 5 | 118.7 | 14 | 5.6 | 102-125 | 32.8 | 14 | 4.3 | 20-40 |
| | | 6 | 123.7 | 3 | - | 122-125 | 34.5 | 3 | - | 31-37 |
| | | 7 | 124.6 | 5 | - | 120-132 | 34.2 | 5 | - | 32-38 |
| | | 8 | 127.0 | 4 | - | 123-130 | 37.3 | 4 | - | 36-39 |
| | | 9 | 127.5 | 2 | - | 123-132 | 39.0 | 2 | - | 38-40 |
| | | 10 | 130.3 | 10 | 7.4 | 120-143 | 41.4 | 10 | 3.2 | 37-47 |
| | | 11 | 129.7 | 3 | - | 122-137 | 42.7 | 3 | - | 37-50 |
| | | 12 | 129.5 | 4 | - | 122-135 | 41.8 | 4 | - | 38-45 |
| | | 13 | 133.0 | 2 | - | 130-136 | 45.0 | 2 | - | 44-46 |
| | | 14 | 135.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 15 | 131.0 | 1 | - | - | 39.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | Feb. | 16 | 124.0 | 3 | - | 123-125 | 41.3 | 3 | - | 34-47 |
| | | (continued) 17 | 133.4 | 4 | - | 130-136 | 47.1 | 4 | - | 45-50 |
| | | 18 | 135.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 20 | 136.0 | 1 | - | - | 46.0 | 1 | - | - |
| | March | 10 | 125.0 | 1 | - | - | 38.5 | 1 | - | - |
| | | 11 | 134.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 12 | 134.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 13 | 129.0 | 1 | - | - | 38.0 | 1 | - | - |
| | May | 4 | 116.3 | 3 | - | 113-121 | 29.5 | 3 | - | 27-31 |
| | | 5 | 124.0 | 2 | - | 123-125 | 34.5 | 2 | - | 34-35 |
| | | 6 | 128.2 | 3 | - | 125-134 | 36.7 | 3 | - | 34-39 |
| | | 7 | 124.3 | 3 | - | 111-133 | 36.7 | 3 | - | 29-40 |
| | | 8 | 133.3 | 2 | - | 132-134 | 40.8 | 2 | - | 39-42 |
| | | 9 | 131.0 | 2 | - | 126-136 | 38.0 | 2 | - | - |
| | | 10 | 136.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 11 | 124.5 | 2 | - | 114-135 | 41.5 | 2 | - | 38-45 |
| | | 12 | 127.0 | 2 | - | 122-132 | 43.8 | 2 | - | 42-45 |
| | | 13 | 136.0 | 4 | - | 132-140 | 47.1 | 4 | - | 40-54 |
| | | 15 | 129.5 | 2 | - | 128-131 | 43.5 | 2 | - | 42-45 |
| | | 16 | 128.5 | 1 | - | - | 41.0 | 1 | - | - |
| | June | 4 | 103.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 7 | 131.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 8 | 129.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 14 | 131.3 | 3 | - | 123-136 | 45.3 | 3 | - | 40-50 |
| 1972 | Feb. | 5 | 113.5 | 2 | - | 106-121 | 30.0 | 2 | - | 28-32 |
| | | 6 | 125.0 | 2 | - | 120-130 | 37.0 | 2 | - | 35-38 |
| | | 7 | 126.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 8 | 135.0 | 2 | - | 131-139 | 44.5 | 2 | - | 38-51 |
| | | 9 | 125.5 | 2 | - | 124-127 | 34.5 | 2 | - | 31-38 |
| | | 12 | 131.0 | 2 | - | 124-138 | 41.5 | 2 | - | 38-45 |
| | March | 4 | 115.3 | 3 | - | 107-121 | 29.0 | 3 | - | 27-30 |
| | | 5 | 120.2 | 25 | 4.7 | 106-129 | 32.1 | 25 | 2.7 | 27-37 |
| | | 6 | 123.0 | 17 | 4.5 | 115-131 | 34.3 | 17 | 3.0 | 28-40 |
| | | 7 | 126.6 | 8 | - | 114-137 | 35.8 | 8 | - | 30-46 |
| | | 8 | 123.7 | 15 | 5.2 | 113-132 | 35.9 | 15 | 3.8 | 28-42 |
| | | 9 | 127.8 | 11 | 5.2 | 117-134 | 39.9 | 11 | 2.9 | 33-44 |
| | | 10 | 128.3 | 10 | 7.2 | 118-143 | 39.0 | 10 | 3.3 | 33-45 |
| | | 11 | 126.7 | 7 | - | 117-142 | 38.5 | 7 | - | 30-48 |
| | | 12 | 134.4 | 4 | - | 127-141 | 45.1 | 4 | - | 40-50 |
| | | 13 | 128.8 | 6 | - | 118-138 | 39.7 | 6 | - | 35-43 |
| | | 14 | 133.3 | 3 | - | 131-136 | 42.3 | 3 | - | 41-44 |
| | | 15 | 130.8 | 2 | - | 127-134 | 40.5 | 2 | - | 36-45 |
| | | 16 | 130.5 | 5 | - | 123-138 | 40.6 | 5 | - | 36-45 |
| | | 17 | 130.7 | 3 | - | 124-142 | 42.0 | 3 | - | 36-50 |
| | | 18 | 136.0 | 1 | - | - | 47.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|----------------|-------------|---|---|---------|-------------|---|---|-------|
| | | | x | n | s | Range | \bar{x} | n | s | Range |
| 1972 | March | 19 | 131.0 | 3 | - | 126-134 | 40.0 | 3 | - | 38-42 |
| | | (continued) 21 | 129.3 | 3 | - | 125-132 | 43.0 | 3 | - | 39-46 |
| | | 22 | 126.5 | 1 | - | - | 40.0 | 1 | - | - |
| | April | 5 | 120.0 | 3 | - | - | 31.7 | 3 | - | 31-33 |
| | | 15 | 134.5 | 1 | - | - | 39.5 | 1 | - | - |
| | | 20 | 134.0 | 1 | - | - | 35.5 | 1 | - | - |
| | May | 5 | 122.0 | 2 | - | 115-129 | 36.5 | 2 | - | 33-40 |
| | | 7 | 129.0 | 1 | - | - | 44.0 | 1 | - | - |
| | | 8 | 136.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 13 | 122.0 | 1 | - | - | 46.5 | 1 | - | - |
| 1973 | May | 4 | 115.1 | 5 | - | 108-123 | 31.2 | 5 | - | 28-36 |
| | | 5 | 129.5 | 2 | - | 124-134 | 37.3 | 2 | - | 36-38 |
| | | 6 | 125.8 | 8 | - | 118-133 | 38.4 | 8 | - | 35-44 |
| | | 7 | 122.6 | 4 | - | 111-132 | 37.8 | 4 | - | 34-43 |
| | | 8 | 129.3 | 3 | - | 125-132 | 42.4 | 3 | - | 38-46 |
| | | 9 | 130.2 | 7 | - | 125-142 | 44.1 | 7 | - | 37-53 |
| | | 10 | 136.0 | 3 | - | 130-139 | 46.7 | 3 | - | 45-48 |
| | | 11 | 131.0 | 3 | - | 129-133 | 41.0 | 3 | - | 40-42 |
| | | 12 | 138.0 | 1 | - | - | 45.6 | 1 | - | - |
| | | 13 | 132.0 | 6 | - | 125-138 | 46.0 | 6 | - | 40-51 |
| | | 14 | 127.6 | 7 | - | 120-132 | 41.1 | 7 | - | 36-52 |
| | | 15 | 127.5 | 4 | - | 124-133 | 45.8 | 4 | - | 40-54 |
| | | 16 | 129.3 | 3 | - | 127-133 | 44.4 | 3 | - | 42-49 |
| | | 20 | 117.0 | 1 | - | - | 39.0 | 1 | - | - |
| | June | 4 | 126.0 | 1 | - | - | 36.2 | 1 | - | - |
| | | 5 | 120.8 | 3 | - | 115-127 | 37.9 | 3 | - | - |
| | | 6 | 124.3 | 4 | - | 122-129 | 36.6 | 4 | - | 34-40 |
| | | 7 | 126.4 | 6 | - | 123-131 | 39.7 | 6 | - | 32-45 |
| | | 8 | 126.8 | 3 | - | 125-129 | 41.6 | 3 | - | 39-44 |
| | | 9 | 126.3 | 9 | - | 120-136 | 42.4 | 9 | - | 39-46 |
| | | 10 | 125.4 | 5 | - | 111-137 | 41.1 | 5 | - | 32-49 |
| | | 11 | 128.9 | 5 | - | 123-137 | 45.9 | 5 | - | 41-51 |
| | | 13 | 126.7 | 6 | - | 113-134 | 45.0 | 6 | - | 39-53 |
| | | 14 | 130.3 | 2 | - | 129-131 | 42.9 | 2 | - | 40-46 |
| | | 15 | 133.5 | 1 | - | - | 45.2 | 1 | - | - |
| | | 16 | 133.7 | 3 | - | 130-135 | 43.7 | 3 | - | 38-51 |
| | | 17 | 136.5 | 2 | - | 134-139 | 49.3 | 2 | - | 45-53 |
| | | 18 | 132.3 | 2 | - | 129-135 | 43.0 | 2 | - | 42-44 |
| | | 20 | 132.0 | 1 | - | - | 60.0 | 1 | - | - |
| | May | 7 | 120.0 | 1 | - | - | 37.5 | 1 | - | - |
| | | 8 | 126.5 | 2 | - | 124-129 | 37.3 | 2 | - | - |
| | | 10 | 128.3 | 2 | - | 127-129 | 45.0 | 2 | - | 42-48 |
| | | 11 | 135.0 | 1 | - | - | 47.5 | 1 | - | - |
| | | 12 | 118.0 | 1 | - | - | 45.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|---------------------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1978 (continued) | May | 13 | 128.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 17 | 122.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 19 | 128.0 | 1 | - | - | 45.0 | 1 | - | - |
| | June | 4 | 115.2 | 5 | - | 108-120 | 33.3 | 5 | - | 28-38 |
| | | 5 | 120.7 | 6 | - | 118-123 | 36.0 | 6 | - | 31-39 |
| | | 6 | 121.7 | 11 | 4.4 | 116-130 | 38.4 | 11 | 4.5 | 33-47 |
| | | 7 | 124.5 | 10 | 4.2 | 118-131 | 39.3 | 10 | 4.4 | 27-45 |
| | | 8 | 126.1 | 11 | 3.7 | 121-133 | 42.8 | 11 | 4.1 | 36-49 |
| | | 9 | 128.8 | 9 | - | 123-139 | 43.9 | 9 | - | 36-52 |
| | | 10 | 130.1 | 10 | 5.1 | 122-141 | 45.2 | 10 | 4.1 | 40-53 |
| | | 11 | 126.3 | 7 | - | 116-135 | 47.5 | 7 | - | 44-54 |
| | | 12 | 132.6 | 5 | - | 126-138 | 47.5 | 5 | - | 39-52 |
| | | 13 | 130.1 | 6 | - | 122-137 | 48.8 | 6 | - | 45-59 |
| | | 14 | 133.1 | 4 | - | 130-138 | 50.1 | 4 | - | 42-59 |
| | | 15 | 137.2 | 6 | - | 128-145 | 55.5 | 6 | - | 47-62 |
| | | 16 | 132.5 | 4 | - | 125-136 | 51.5 | 4 | - | 42-58 |
| | | 17 | 132.0 | 3 | - | 126-143 | 51.8 | 3 | - | 48-55 |
| | | 18 | 134.0 | 1 | - | - | 47.0 | 1 | - | - |
| | | 19 | 138.5 | 1 | - | - | 56.0 | 1 | - | - |
| | | 20 | 133.3 | 2 | - | 132-134 | 53.0 | 2 | - | 52-54 |

Table 37

Monthly mean length and weight of pregnant fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Doto

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | June | 4 | 125.5 | 2 | - | 124-127 | 35.0 | 2 | - | - |
| | | 5 | 122.0 | 4 | - | 115-130 | 36.8 | 4 | - | 36-38 |
| | | 6 | 130.0 | 1 | - | - | 37.2 | 1 | - | - |
| | | 7 | 107.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | 9 | 124.5 | 2 | - | 121-128 | 39.1 | 2 | - | 37-41 |
| | | 11 | 125.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 16 | 133.0 | 1 | - | - | 48.0 | 1 | - | - |
| 1959 | June | 5 | 115.0 | 2 | - | - | 29.3 | 2 | - | 28-30 |
| | | 6 | 126.0 | 3 | - | 118-135 | 36.1 | 3 | - | 31-44 |
| 1961 | June | 4 | 125.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 5 | 130.5 | 2 | - | 126-135 | 36.3 | 2 | - | 35-37 |
| | | 6 | 132.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 7 | 143.0 | 1 | - | - | 50.0 | 1 | - | - |
| | | 8 | 141.0 | 1 | - | - | 50.0 | 1 | - | - |
| 1965 | June | 12 | 132.0 | 1 | - | - | 56.0 | 1 | - | - |
| | | 14 | 133.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1972 | May | 8 | 123.0 | 1 | - | - | 39.5 | 1 | - | - |
| | June | 12 | 112.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1973 | June | 20 | 125.0 | 1 | - | - | 57.0 | 1 | - | - |
| 1977 | Dec. | 3 | 109.0 | 1 | - | - | 27.5 | 1 | - | - |
| | | 4 | 120.5 | 2 | - | 119-122 | 32.5 | 2 | - | 30-34 |
| | | 6 | 116.3 | 2 | - | 110-122 | 34.3 | 2 | - | - |
| | | 8 | 129.0 | 1 | - | - | 36.0 | 1 | - | - |
| | | 11 | 121.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 14 | 123.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 15 | 119.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 16 | 126.5 | 2 | - | 112-141 | 47.8 | 2 | - | 43-52 |
| | | 17 | 122.0 | 1 | - | - | 41.5 | 1 | - | - |
| 1978 | January | 7 | 123.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 9 | 124.0 | 1 | - | - | 38.0 | 1 | - | - |

Table 38

Monthly mean length and weight of postpartum fur seals.
(x = mean, n = sample size, s = standard deviation for n > 10)

Sea of Okhotsk

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1972 | July | 5 | 116.0 | 2 | - | 115-117 | 27.5 | 2 | - | 27-28 |
| | | 6 | 123.5 | 2 | - | 121-126 | 37.2 | 2 | - | 35-39 |
| | | 7 | 122.2 | 6 | - | 119-128 | 34.6 | 6 | - | 30-38 |
| | | 8 | 123.7 | 6 | - | 121-127 | 34.3 | 6 | - | 31-36 |
| | | 9 | 122.8 | 8 | - | 111-129 | 35.1 | 8 | - | 31-40 |
| | | 10 | 122.4 | 5 | - | 115-131 | 40.5 | 5 | - | 34-48 |
| | | 11 | 121.4 | 4 | - | 117-126 | 34.6 | 4 | - | 32-36 |
| | | 12 | 124.5 | 11 | 7.1 | 114-134 | 38.2 | 11 | 4.0 | 30-44 |
| | | 13 | 124.0 | 2 | - | 120-128 | 38.9 | 2 | - | - |
| | | 14 | 123.8 | 5 | - | 121-128 | 38.3 | 5 | - | 36-43 |
| | | 15 | 122.6 | 7 | - | 117-127 | 37.9 | 7 | - | 32-41 |
| | | 16 | 126.6 | 6 | - | 120-132 | 42.7 | 6 | - | 40-46 |
| | | 17 | 128.8 | 6 | - | 122-136 | 39.9 | 6 | - | 35-43 |
| | | 18 | 131.0 | 1 | - | - | 41.0 | 1 | - | - |
| | | 19 | 133.7 | 3 | - | 133-135 | 40.8 | 3 | - | 36-43 |
| | | 22 | 130.0 | 1 | - | - | 40.4 | 1 | - | - |
| | August | 4 | 122.0 | 2 | - | 116-128 | 31.8 | 2 | - | - |
| | | 5 | 118.3 | 4 | - | 111-122 | 28.8 | 4 | - | 23-31 |
| | | 6 | 121.0 | 5 | - | 115-125 | 31.4 | 5 | - | 28-36 |
| | | 7 | 122.0 | 1 | - | - | 31.6 | 1 | - | - |
| | | 8 | 125.4 | 12 | 4.0 | 116-132 | 35.5 | 12 | 4.6 | 27-46 |
| | | 9 | 124.6 | 9 | - | 119-132 | 36.0 | 9 | - | 32-41 |
| | | 10 | 127.4 | 15 | 4.9 | 120-137 | 36.0 | 15 | 3.3 | 31-42 |
| | | 11 | 126.2 | 10 | 4.6 | 118-133 | 36.8 | 10 | 3.0 | 32-41 |
| | | 12 | 128.3 | 13 | 4.5 | 120-136 | 37.4 | 13 | 4.1 | 30-42 |
| | | 13 | 125.6 | 9 | - | 116-132 | 36.0 | 9 | - | 32-43 |
| 1973 | July | 14 | 129.0 | 8 | - | 123-137 | 38.4 | 8 | - | 31-47 |
| | | 15 | 128.0 | 8 | - | 120-141 | 38.5 | 8 | - | 33-45 |
| | | 16 | 132.3 | 8 | - | 124-140 | 42.7 | 8 | - | 36-47 |
| | | 17 | 129.6 | 6 | - | 120-138 | 42.3 | 6 | - | 37-46 |
| | | 18 | 127.3 | 3 | - | 125-131 | 40.0 | 3 | - | 36-43 |
| | | 19 | 129.8 | 4 | - | 122-139 | 39.6 | 4 | - | 34-46 |
| | | 5 | 119.0 | 1 | - | - | 31.6 | 1 | - | - |
| | | 6 | 120.2 | 5 | - | 118-125 | 32.8 | 5 | - | 29-37 |
| | | 7 | 120.4 | 8 | - | 107-131 | 32.1 | 8 | - | 27-37 |
| | | 8 | 125.0 | 1 | - | - | 39.6 | 1 | - | - |
| | | 9 | 123.0 | 3 | - | 119-128 | 38.1 | 3 | - | 32-45 |
| | | 10 | 128.1 | 4 | - | 126-131 | 37.3 | 4 | - | 33-40 |
| | | 11 | 127.3 | 6 | - | 118-136 | 38.9 | 6 | - | 31-43 |
| | | 12 | 128.1 | 10 | 4.6 | 117-134 | 41.4 | 10 | 6.0 | 33-52 |
| | | 13 | 127.5 | 11 | 6.9 | 114-140 | 39.8 | 11 | 5.5 | 30-53 |
| | | 14 | 130.8 | 5 | - | 123-135 | 40.3 | 5 | - | 30-43 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1973 | July | 15 | 136.3 | 3 | - | 135-139 | 46.1 | 3 | - | 44-50 |
| | | 16 | 125.4 | 5 | - | 114-138 | 40.7 | 5 | - | 34-46 |
| | | 17 | 132.0 | 2 | - | 129-135 | 44.4 | 2 | - | 44-45 |
| | | 18 | 132.0 | 4 | - | 124-142 | 44.3 | 4 | - | 37-56 |
| | | 19 | 130.3 | 3 | - | 124-135 | 41.6 | 3 | - | 37-45 |
| | | 20 | 142.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1974 | July | 4 | 116.0 | 1 | - | - | 32.5 | 1 | - | - |
| | | 5 | 112.7 | 3 | - | 106-120 | 30.0 | 3 | - | 28-34 |
| | | 6 | 118.2 | 5 | - | 114-125 | 34.6 | 5 | - | 34-35 |
| | | 7 | 121.1 | 10 | 3.8 | 117-127 | 36.2 | 10 | 5.1 | 30-47 |
| | | 8 | 119.0 | 5 | - | 111-130 | 35.6 | 5 | - | 30-45 |
| | | 9 | 123.9 | 4 | - | 116-130 | 36.9 | 4 | - | 32-42 |
| | | 10 | 125.3 | 16 | 4.0 | 118-135 | 39.2 | 16 | 2.9 | 35-46 |
| | | 11 | 124.0 | 10 | 4.7 | 117-131 | 39.8 | 10 | 4.2 | 35-50 |
| | | 12 | 123.6 | 18 | 6.1 | 112-134 | 39.0 | 18 | 3.6 | 34-47 |
| | | 13 | 125.2 | 19 | 5.0 | 116-134 | 40.7 | 19 | 4.5 | 32-50 |
| | | 14 | 128.6 | 15 | 4.9 | 119-138 | 42.8 | 15 | 4.4 | 35-52 |
| | | 15 | 127.1 | 14 | 5.9 | 121-145 | 38.6 | 14 | 3.0 | 33-44 |
| | | 16 | 123.7 | 7 | - | 111-132 | 40.8 | 7 | - | 34-50 |
| | | 17 | 129.2 | 9 | - | 119-143 | 42.4 | 9 | - | 39-50 |
| | | 18 | 127.4 | 8 | - | 121-141 | 45.3 | 8 | - | 36-57 |
| | | 19 | 133.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 20 | 133.0 | 2 | - | 129-137 | 52.8 | 2 | - | 48-57 |
| | | 21 | 123.0 | 1 | - | - | 41.5 | 1 | - | - |
| | August | 4 | 112.5 | 3 | - | 111-115 | 29.0 | 3 | - | 26-31 |
| | | 5 | 115.1 | 8 | - | 105-133 | 29.4 | 8 | - | 24-36 |
| | | 6 | 123.6 | 7 | - | 115-128 | 34.0 | 7 | - | 31-37 |
| | | 7 | 120.6 | 19 | 4.9 | 109-130 | 33.4 | 19 | 3.1 | 28-40 |
| | | 8 | 122.9 | 14 | 4.9 | 115-130 | 35.5 | 14 | 4.6 | 30-45 |
| | | 9 | 122.9 | 8 | - | 115-128 | 36.3 | 8 | - | 28-44 |
| | | 10 | 120.9 | 10 | 6.1 | 110-130 | 37.8 | 10 | 5.6 | 32-48 |
| | | 11 | 125.1 | 13 | 5.4 | 117-141 | 37.6 | 13 | 2.9 | 33-45 |
| | | 12 | 127.0 | 26 | 3.8 | 119-135 | 39.9 | 26 | 5.0 | 32-51 |
| | | 13 | 125.0 | 12 | 4.2 | 120-135 | 38.6 | 12 | 4.7 | 31-50 |
| | Sept. | 14 | 122.1 | 14 | 5.1 | 110-132 | 38.0 | 14 | 3.9 | 31-45 |
| | | 15 | 124.6 | 11 | 7.6 | 106-136 | 39.3 | 11 | 5.3 | 32-49 |
| | | 16 | 127.1 | 15 | 5.9 | 113-135 | 40.8 | 15 | 5.4 | 34-52 |
| | | 17 | 126.3 | 15 | 4.1 | 121-136 | 41.7 | 15 | 4.1 | 35-51 |
| | | 18 | 126.9 | 5 | - | 121-132 | 41.0 | 5 | - | 34-50 |
| | | 19 | 128.0 | 4 | - | 120-137 | 41.0 | 4 | - | 37-45 |
| | | 20 | 131.3 | 4 | - | 127-137 | 45.5 | 4 | - | 36-54 |
| | | 5 | 114.9 | 5 | - | 104-126 | 27.2 | 5 | - | 18-35 |
| | | 6 | 118.8 | 6 | - | 110-125 | 33.0 | 6 | - | 27-38 |
| | | 7 | 119.5 | 9 | - | 102-130 | 36.4 | 9 | - | 31-42 |
| | | 8 | 122.3 | 9 | - | 112-134 | 35.8 | 9 | - | 30-43 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|----------------------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1974 | Sept. (continued) | 9 | 123.2 | 6 | - | 110-134 | 40.8 | 6 | - | 33-47 |
| | | 10 | 123.9 | 11 | 4.2 | 117-130 | 40.3 | 11 | 3.7 | 36-50 |
| | | 11 | 126.1 | 12 | 3.4 | 121-130 | 40.6 | 12 | 4.1 | 32-49 |
| | | 12 | 123.9 | 10 | 7.6 | 112-138 | 40.7 | 10 | 4.3 | 34-51 |
| | | 13 | 124.9 | 7 | - | 115-137 | 39.2 | 7 | - | 32-45 |
| | | 14 | 128.6 | 11 | 4.1 | 121-135 | 43.2 | 11 | 5.0 | 35-55 |
| | | 15 | 125.3 | 13 | 8.2 | 113-142 | 42.2 | 13 | 7.0 | 30-56 |
| | | 16 | 126.0 | 12 | 7.2 | 113-138 | 38.8 | 12 | 5.0 | 31-47 |
| | | 17 | 129.8 | 9 | - | 118-141 | 43.1 | 9 | - | 36-55 |
| | | 18 | 124.2 | 6 | - | 111-133 | 40.5 | 6 | - | 38-43 |
| | | 19 | 126.1 | 8 | - | 112-139 | 41.9 | 8 | - | 31-57 |
| | | 20 | 128.3 | 3 | - | 124-131 | 42.0 | 3 | - | 38-47 |
| | | 21 | 132.0 | 2 | - | 128-136 | 52.0 | 2 | - | 47-57 |
| 1975 | July | 4 | 121.0 | 3 | - | 116-130 | 34.7 | 3 | - | 28-47 |
| | | 5 | 115.3 | 7 | - | 107-122 | 33.0 | 7 | - | 28-42 |
| | | 6 | 121.1 | 12 | 6.2 | 109-131 | 38.2 | 12 | 4.1 | 27-44 |
| | | 7 | 120.2 | 22 | 4.3 | 112-133 | 36.0 | 22 | 4.3 | 30-48 |
| | | 8 | 124.2 | 11 | 4.9 | 116-132 | 36.8 | 11 | 6.9 | 29-55 |
| | | 9 | 121.0 | 11 | 5.5 | 110-128 | 38.4 | 11 | 4.3 | 32-45 |
| | | 10 | 125.4 | 10 | 4.7 | 117-133 | 40.2 | 10 | 4.9 | 35-50 |
| | | 11 | 123.7 | 14 | 6.2 | 110-137 | 40.1 | 14 | 3.8 | 31-45 |
| | | 12 | 126.7 | 18 | 4.1 | 118-135 | 39.9 | 18 | 4.1 | 34-50 |
| | | 13 | 124.4 | 24 | 6.7 | 108-139 | 41.5 | 24 | 5.1 | 34-55 |
| | | 14 | 126.3 | 23 | 6.8 | 115-137 | 41.0 | 23 | 5.4 | 28-52 |
| | | 15 | 122.1 | 15 | 6.3 | 105-131 | 40.2 | 15 | 4.5 | 34-53 |
| | | 16 | 126.1 | 17 | 6.2 | 117-138 | 43.3 | 17 | 6.4 | 36-65 |
| | | 17 | 127.3 | 19 | 7.6 | 108-140 | 42.2 | 19 | 5.1 | 34-52 |
| | | 18 | 125.9 | 9 | - | 118-136 | 42.7 | 9 | - | 31-50 |
| | | 19 | 130.7 | 7 | - | 122-140 | 46.0 | 7 | - | 33-59 |
| | | 20 | 128.8 | 2 | - | 126-131 | 44.0 | 2 | - | 43-45 |
| | | 21 | 131.4 | 3 | - | 130-133 | 43.7 | 3 | - | 42-45 |
| | | 22 | 127.0 | 1 | - | - | 40.0 | 1 | - | - |
| | August | 4 | 113.6 | 8 | - | 105-122 | 30.9 | 8 | - | 26-35 |
| | | 5 | 116.6 | 11 | 4.2 | 111-122 | 31.6 | 11 | 4.7 | 26-40 |
| | | 6 | 121.5 | 12 | 5.0 | 111-129 | 35.0 | 12 | 4.0 | 29-40 |
| | | 7 | 120.4 | 17 | 4.8 | 110-128 | 34.4 | 17 | 4.9 | 25-42 |
| | | 8 | 125.8 | 19 | 6.4 | 115-144 | 36.6 | 19 | 4.8 | 30-50 |
| | | 9 | 125.2 | 20 | 5.9 | 113-136 | 39.7 | 20 | 4.7 | 32-50 |
| | | 10 | 121.8 | 8 | - | 113-127 | 35.8 | 8 | - | 30-44 |
| | | 11 | 124.2 | 17 | 5.5 | 114-135 | 40.1 | 17 | 4.2 | 34-50 |
| | | 12 | 127.3 | 13 | 7.2 | 115-140 | 44.4 | 13 | 6.1 | 37-58 |
| | | 13 | 127.3 | 23 | 5.7 | 117-140 | 41.3 | 23 | 2.9 | 34-45 |
| | | 14 | 127.9 | 16 | 6.6 | 115-137 | 43.8 | 16 | 5.1 | 33-53 |
| | | 15 | 127.8 | 16 | 5.3 | 118-139 | 41.8 | 16 | 5.8 | 30-53 |
| | | 16 | 125.3 | 15 | 4.4 | 117-138 | 42.0 | 15 | 5.0 | 32-54 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1975 | August | 17 | 128.1 | 12 | 4.6 | 121-135 | 42.3 | 12 | 5.4 | 35-53 |
| | | (continued) 18 | 124.0 | 9 | - | 116-130 | 41.4 | 9 | - | 34-50 |
| | | 19 | 125.8 | 4 | - | 120-132 | 40.0 | 4 | - | 36-46 |
| | | 20 | 132.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 24 | 127.0 | 1 | - | - | 48.0 | 1 | - | - |
| | Sept. | 4 | 117.4 | 5 | - | 115-122 | 30.6 | 5 | - | 25-34 |
| | | 5 | 119.7 | 24 | 5.0 | 110-128 | 30.7 | 24 | 3.0 | 23-36 |
| | | 6 | 120.6 | 15 | 4.9 | 109-127 | 33.4 | 15 | 3.6 | 27-41 |
| | | 7 | 123.9 | 17 | 5.2 | 111-132 | 34.9 | 17 | 3.3 | 28-41 |
| | | 8 | 126.1 | 22 | 4.2 | 119-133 | 35.4 | 22 | 3.3 | 27-40 |
| | | 9 | 125.0 | 10 | 5.3 | 113-133 | 35.8 | 10 | 2.4 | 32-40 |
| | | 10 | 128.9 | 8 | - | 120-140 | 39.4 | 8 | - | 35-45 |
| | | 11 | 124.9 | 11 | 4.8 | 117-132 | 36.8 | 11 | 3.0 | 33-42 |
| | | 12 | 128.4 | 9 | - | 113-135 | 39.9 | 9 | - | 31-49 |
| | | 13 | 125.7 | 15 | 5.6 | 115-135 | 38.6 | 15 | 4.1 | 32-46 |
| | | 14 | 128.5 | 11 | 6.0 | 116-138 | 40.1 | 11 | 4.1 | 33-48 |
| | | 15 | 123.7 | 7 | - | 119-131 | 37.1 | 7 | - | 28-45 |
| | | 16 | 131.0 | 4 | - | 129-133 | 42.3 | 4 | - | 40-46 |
| | | 17 | 130.0 | 2 | - | 126-134 | 40.8 | 2 | - | 38-43 |
| | | 18 | 127.0 | 1 | - | - | 43.0 | 1 | - | - |
| | | 19 | 126.7 | 3 | - | 124-129 | 37.2 | 3 | - | 36-38 |
| | | 20 | 127.0 | 2 | - | - | 36.0 | 2 | - | 32-40 |
| | | 21 | 139.0 | 1 | - | - | 47.0 | 1 | - | - |
| | October | 4 | 115.0 | 1 | - | - | 30.0 | 1 | - | - |
| | | 5 | 114.0 | 6 | - | 108-119 | 29.8 | 6 | - | 27-31 |
| | | 6 | 122.7 | 3 | - | 122-124 | 36.0 | 3 | - | 33-38 |
| | | 7 | 119.5 | 2 | - | 117-122 | 35.0 | 2 | - | - |
| | | 8 | 128.0 | 3 | - | 124-131 | 36.7 | 3 | - | 34-41 |
| | | 9 | 122.7 | 3 | - | 117-127 | 38.0 | 3 | - | 31-47 |
| | | 10 | 127.0 | 2 | - | 126-128 | 30.8 | 2 | - | 30-31 |
| | | 11 | 120.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 12 | 132.0 | 2 | - | 131-133 | 45.0 | 2 | - | 44-46 |
| | | 13 | 126.4 | 5 | - | 123-129 | 42.6 | 5 | - | 34-54 |
| | | 14 | 131.0 | 2 | - | 130-132 | 41.0 | 2 | - | 37-45 |
| | | 15 | 120.5 | 2 | - | 116-125 | 39.5 | 2 | - | 37-41 |
| | | 16 | 131.5 | 2 | - | 128-135 | 45.0 | 2 | - | 41-48 |
| | | 17 | 125.3 | 3 | - | 120-128 | 40.2 | 3 | - | 30-45 |
| | | 18 | 137.5 | 2 | - | 136-139 | 48.0 | 2 | - | 44-52 |
| | | 19 | 130.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 22 | 130.0 | 1 | - | - | 49.0 | 1 | - | - |
| | | 24 | 137.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1976 | August | 3 | 121.4 | 1 | - | - | 34.0 | 1 | - | - |
| | | 4 | 116.0 | 7 | - | 112-119 | 28.5 | 7 | - | 25-33 |
| | | 5 | 118.1 | 18 | 4.4 | 108-125 | 31.6 | 18 | 3.5 | 26-38 |
| | | 6 | 118.3 | 25 | 5.4 | 107-132 | 32.6 | 25 | 4.0 | 24-41 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|---------------------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1976 (continued) | August | 7 | 123.0 | 25 | 3.8 | 116-130 | 36.3 | 25 | 4.1 | 29-42 |
| | | 8 | 123.2 | 26 | 4.9 | 114-137 | 35.4 | 26 | 3.4 | 28-43 |
| | | 9 | 123.7 | 14 | 5.9 | 111-135 | 36.7 | 14 | 3.6 | 30-43 |
| | | 10 | 122.0 | 14 | 6.0 | 110-131 | 36.9 | 14 | 3.7 | 32-44 |
| | | 12 | 126.9 | 15 | 7.7 | 112-140 | 41.3 | 15 | 6.0 | 31-55 |
| | | 13 | 126.7 | 9 | - | 112-135 | 40.6 | 9 | - | 36-44 |
| | | 14 | 127.4 | 17 | 7.2 | 117-146 | 39.4 | 17 | 6.1 | 31-53 |
| | | 15 | 124.3 | 13 | 5.5 | 115-135 | 37.6 | 13 | 4.6 | 27-46 |
| | | 16 | 129.3 | 19 | 6.4 | 111-138 | 42.1 | 19 | 5.0 | 33-52 |
| | | 17 | 124.8 | 5 | - | 117-134 | 40.3 | 5 | - | 35-45 |
| | | 18 | 115.5 | 1 | - | - | 35.0 | 1 | - | - |
| | | 19 | 131.8 | 4 | - | 129-136 | 41.1 | 4 | - | 38-44 |
| | | 20 | 132.0 | 1 | - | - | 46.0 | 1 | - | - |
| | Sept. | 4 | 112.7 | 3 | - | 108-117 | 27.0 | 3 | - | 26-27 |
| | | 5 | 119.7 | 16 | 5.2 | 111-129 | 31.8 | 16 | 3.6 | 24-38 |
| | | 6 | 121.6 | 15 | 5.1 | 110-133 | 34.6 | 15 | 4.0 | 28-42 |
| | | 7 | 124.1 | 9 | - | 117-133 | 35.3 | 9 | - | 23-43 |
| | | 8 | 126.0 | 10 | 5.6 | 116-135 | 37.8 | 10 | 2.1 | 34-41 |
| | | 9 | 126.4 | 15 | 4.5 | 117-134 | 38.6 | 15 | 3.5 | 33-45 |
| | | 10 | 124.0 | 6 | - | 110-130 | 38.6 | 6 | - | 30-46 |
| | | 11 | 128.3 | 2 | - | 125-131 | 39.9 | 2 | - | 37-43 |
| | | 12 | 123.5 | 8 | - | 113-132 | 41.7 | 8 | - | 34-46 |
| | | 13 | 128.3 | 5 | - | 124-135 | 41.8 | 5 | - | 39-44 |
| | | 14 | 125.8 | 3 | - | 124-128 | 44.5 | 3 | - | 35-50 |
| | | 15 | 129.0 | 3 | - | 122-134 | 44.3 | 3 | - | 36-52 |
| | | 16 | 130.4 | 2 | - | 125-135 | 46.0 | 2 | - | 45-47 |
| | | 17 | 130.7 | 3 | - | 129-132 | 48.8 | 3 | - | 45-51 |
| | | 18 | 126.5 | 1 | - | - | 40.5 | 1 | - | - |
| | | 19 | 126.3 | 2 | - | - | 49.0 | 2 | - | 48-50 |
| | | 21 | 127.3 | 2 | - | 120-134 | 44.5 | 2 | - | 41-48 |
| | October | 6 | 123.7 | 2 | - | 122-125 | 32.5 | 2 | - | 31-34 |
| | | 7 | 122.5 | 1 | - | - | 34.0 | 1 | - | - |
| | | 10 | 128.5 | 2 | - | 127-130 | 46.3 | 2 | - | 44-48 |
| | | 12 | 130.3 | 3 | - | 127-133 | 44.3 | 3 | - | 38-50 |
| | | 13 | 127.3 | 2 | - | 125-129 | 40.0 | 2 | - | 36-44 |
| | | 14 | 127.0 | 1 | - | - | 42.0 | 1 | - | - |
| | | 15 | 133.2 | 1 | - | - | 46.0 | 1 | - | - |
| | | 16 | 122.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 19 | 128.0 | 1 | - | - | 51.0 | 1 | - | - |
| | Nov. | 4 | 121.5 | 1 | - | - | 38.0 | 1 | - | - |
| | | 12 | 123.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 13 | 134.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 14 | 118.3 | 2 | - | 111-125 | 37.5 | 2 | - | 36-39 |
| | | 16 | 128.0 | 2 | - | - | 40.5 | 2 | - | 38-42 |
| | | 17 | 133.8 | 2 | - | 131-136 | 47.5 | 2 | - | 45-50 |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|----------------|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1976 | Nov. | 18 | 129.3 | 2 | - | 128-130 | 42.3 | 2 | - | 41-43 |
| | | (continued) 19 | 125.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 21 | 130.0 | 1 | - | - | 48.0 | 1 | - | - |
| 1977 | Nov. | 20 | 130.5 | 1 | - | - | 41.0 | 1 | - | - |
| 1978 | July | 4 | 116.8 | 3 | - | 113-120 | 28.2 | 3 | - | 26-29 |
| | | 5 | 119.2 | 19 | 4.0 | 113-125 | 30.9 | 19 | 3.1 | 27-39 |
| | | 6 | 121.6 | 16 | 5.2 | 111-130 | 33.2 | 16 | 4.4 | 28-46 |
| | | 7 | 123.7 | 19 | 5.4 | 112-134 | 34.4 | 19 | 3.4 | 28-41 |
| | | 8 | 124.7 | 19 | 4.2 | 116-134 | 35.1 | 19 | 3.6 | 28-43 |
| | | 9 | 125.7 | 17 | 3.4 | 119-132 | 36.3 | 17 | 3.5 | 30-43 |
| | | 10 | 124.7 | 12 | 4.2 | 117-130 | 36.6 | 12 | 3.8 | 28-43 |
| | | 11 | 126.3 | 17 | 4.9 | 117-135 | 37.7 | 17 | 3.1 | 32-43 |
| | | 12 | 127.6 | 15 | 5.7 | 117-136 | 39.8 | 15 | 5.4 | 31-51 |
| | | 13 | 126.7 | 13 | 5.5 | 119-139 | 39.5 | 13 | 4.0 | 35-47 |
| | | 14 | 126.8 | 16 | 7.3 | 114-140 | 40.2 | 16 | 6.1 | 30-55 |
| | | 15 | 125.1 | 17 | 6.4 | 113-136 | 40.3 | 17 | 4.8 | 31-48 |
| | | 16 | 126.3 | 20 | 4.9 | 116-133 | 40.1 | 20 | 5.0 | 31-51 |
| | | 17 | 133.9 | 13 | 5.2 | 124-141 | 46.0 | 13 | 5.2 | 36-56 |
| | | 18 | 131.1 | 5 | - | 128-138 | 40.8 | 5 | - | 35-47 |
| | | 19 | 129.9 | 4 | - | 124-137 | 43.0 | 4 | - | 34-50 |
| | | 20 | 129.5 | 2 | - | 126-133 | 44.5 | 2 | - | 39-50 |
| | | 21 | 137.8 | 2 | - | 129-146 | 57.5 | 2 | - | 54-61 |
| | August | 4 | 112.8 | 2 | - | 112-113 | 26.8 | 2 | - | 25-28 |
| | | 5 | 118.0 | 14 | 3.4 | 112-124 | 29.6 | 14 | 2.0 | 27-33 |
| | | 6 | 119.6 | 8 | - | 117-125 | 31.4 | 8 | - | 27-34 |
| | | 7 | 124.7 | 13 | 5.5 | 115-135 | 34.8 | 13 | 5.7 | 28-50 |
| | | 8 | 124.8 | 16 | 5.7 | 115-139 | 35.4 | 16 | 5.0 | 30-47 |
| | | 9 | 125.0 | 12 | 4.7 | 118-132 | 36.3 | 12 | 4.3 | 30-47 |
| | | 10 | 124.7 | 10 | 2.6 | 119-128 | 35.9 | 10 | 3.5 | 31-41 |
| | | 11 | 124.9 | 8 | - | 120-132 | 35.8 | 8 | - | 31-39 |
| | | 12 | 128.9 | 13 | 4.3 | 124-140 | 40.0 | 13 | 6.8 | 31-61 |
| | | 13 | 127.3 | 6 | - | 124-131 | 37.9 | 6 | - | 32-42 |
| | | 14 | 126.6 | 8 | - | 120-132 | 37.1 | 8 | - | 33-41 |
| | | 15 | 129.4 | 9 | - | 123-136 | 39.4 | 9 | - | 32-44 |
| | | 16 | 130.3 | 6 | - | 122-137 | 40.3 | 6 | - | 35-46 |
| | | 17 | 127.4 | 14 | 3.2 | 118-131 | 40.3 | 14 | 2.4 | 37-44 |
| | | 18 | 129.3 | 6 | - | 124-134 | 41.7 | 6 | - | 36-48 |
| | | 19 | 135.3 | 5 | - | 132-142 | 47.1 | 5 | - | 45-51 |
| | | 20 | 133.0 | 2 | - | - | 47.0 | 2 | - | - |
| | | 21 | 135.7 | 3 | - | 127-141 | 43.8 | 3 | - | 41-46 |

Table 39

Monthly mean length and weight of postpartum fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Doto

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|---|---|-------|------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1977 | Dec. | 5 | 112.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 16 | 122.0 | 1 | - | - | 40.0 | 1 | - | - |

Table 40

Monthly mean length and weight of male fur seals.

(x = mean, n = sample size, s = standard deviation for n > 10)

Sea of Japan

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|-------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | June | 3 | 121.0 | 1 | - | - | 67.0 | 1 | - | - |
| | | 7 | 175.0 | 1 | - | - | 100.0 | 1 | - | - |

Table 41

Monthly mean length and weight of male fur seals.
(x = mean, n = sample size, s = standard deviation for n > 10)

Sea of Okhotsk

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|--------|-----|------------|----|-----|---------|------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1961 | July | 2 | 109.2 | 6 | - | 100-115 | 23.3 | 6 | - | 18-27 |
| | | 3 | 121.5 | 6 | - | 112-133 | 32.5 | 6 | - | 26-40 |
| | | 4 | 132.8 | 6 | - | 130-138 | 47.3 | 6 | - | 44-55 |
| | | 5 | 144.7 | 12 | 6.4 | 132-160 | 58.5 | 12 | 13.7 | 42-93 |
| | | 6 | 148.8 | 4 | - | 128-160 | 72.5 | 4 | - | 48-105 |
| | | 7 | 167.5 | 2 | - | 165-170 | 79.5 | 2 | - | 75-84 |
| | | 8 | 195.0 | 2 | - | 172-218 | 118.5 | 2 | - | 112-125 |
| | August | 5 | 165.0 | 1 | - | - | 85.0 | 1 | - | - |
| 1972 | July | 1 | 173.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 2 | 104.0 | 1 | - | - | 26.0 | 1 | - | - |
| | | 3 | 116.5 | 5 | - | 111-122 | 33.8 | 5 | - | 31-37 |
| | | 4 | 130.0 | 1 | - | - | 42.6 | 1 | - | - |
| | | 5 | 136.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 6 | 160.0 | 2 | - | 157-163 | 83.5 | 2 | - | 67-100 |
| | August | 10 | 201.0 | 1 | - | - | 185.0 | 1 | - | - |
| | | 11 | 201.5 | 2 | - | 196-207 | 185.0 | 2 | - | 180-190 |
| | | 1 | 94.5 | 1 | - | - | 16.0 | 1 | - | - |
| | | 2 | 104.8 | 5 | - | 99-108 | 23.0 | 5 | - | 17-29 |
| | | 3 | 112.5 | 1 | - | - | 27.2 | 1 | - | - |
| 1973 | July | 4 | 133.5 | 1 | - | - | 53.0 | 1 | - | - |
| | | 6 | 160.0 | 1 | - | - | 86.0 | 1 | - | - |
| | | 2 | 105.2 | 3 | - | 104-106 | 26.9 | 3 | - | 25-29 |
| | | 3 | 120.3 | 3 | - | 115-126 | 29.2 | 3 | - | 27-31 |
| | | 4 | 127.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 6 | 128.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 7 | 159.5 | 2 | - | 159-160 | 85.5 | 2 | - | 85-86 |
| 1974 | July | 2 | 109.1 | 6 | - | 106-117 | 29.9 | 6 | - | 21-35 |
| | | 3 | 117.5 | 4 | - | 115-124 | 35.8 | 4 | - | 32-39 |
| | | 4 | 129.2 | 5 | - | 122-136 | 42.6 | 5 | - | 40-47 |
| | | 5 | 134.7 | 3 | - | 121-151 | 54.0 | 3 | - | 38-65 |
| | | 6 | 145.5 | 2 | - | 136-155 | 80.5 | 2 | - | 71-90 |
| | | 7 | 171.5 | 6 | - | 162-178 | 107.5 | 6 | - | 80-145 |
| | | 8 | 169.5 | 2 | - | 169-170 | 114.5 | 2 | - | 100-129 |
| | August | 1 | 88.0 | 1 | - | - | 14.0 | 1 | - | - |
| | | 2 | 107.5 | 8 | - | 100-117 | 25.5 | 8 | - | 18-33 |
| | | 4 | 125.8 | 5 | - | 120-133 | 40.8 | 5 | - | 35-45 |
| | | 5 | 145.6 | 2 | - | 145-146 | 69.0 | 2 | - | 68-70 |
| | Sept. | 1 | 95.0 | 2 | - | 94-96 | 24.5 | 2 | - | 22-27 |
| | | 2 | 100.0 | 3 | - | 95-105 | 21.3 | 3 | - | 20-23 |
| | | 3 | 114.5 | 2 | - | 114-115 | 31.5 | 2 | - | 30-33 |
| | | 4 | 131.0 | 2 | - | 128-134 | 47.0 | 2 | - | 45-49 |
| | | 6 | 141.0 | 1 | - | - | 68.0 | 1 | - | - |
| | | 8 | 200.0 | 1 | - | - | 145.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1975 | July | 1 | 90.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 2 | 104.6 | 8 | - | 100-111 | 26.1 | 8 | - | 19-34 |
| | | 3 | 118.2 | 22 | 5.3 | 108-128 | 34.8 | 22 | 4.4 | 27-46 |
| | | 4 | 129.2 | 24 | 7.9 | 107-144 | 44.0 | 24 | 5.9 | 27-53 |
| | | 5 | 139.4 | 25 | 7.3 | 125-152 | 56.2 | 25 | 6.2 | 44-66 |
| | | 6 | 152.9 | 14 | 8.2 | 135-169 | 79.6 | 14 | 11.5 | 58-94 |
| | | 7 | 160.0 | 6 | - | 153-165 | 96.3 | 6 | - | 77-110 |
| | | 8 | 174.8 | 3 | - | 166-180 | 119.7 | 3 | - | 108-132 |
| | | 9 | 177.0 | 3 | - | 173-185 | 135.7 | 3 | - | 129-142 |
| | August | 1 | 88.0 | 1 | - | - | 14.0 | 1 | - | - |
| | | 2 | 107.0 | 3 | - | 104-112 | 23.3 | 3 | - | 21-27 |
| | | 3 | 117.1 | 11 | 5.0 | 105-124 | 31.1 | 11 | 3.3 | 24-38 |
| | | 4 | 131.4 | 9 | - | 121-140 | 44.3 | 9 | - | 35-52 |
| | | 5 | 137.5 | 2 | - | 135-140 | 51.0 | 2 | - | 46-56 |
| | | 6 | 148.0 | 1 | - | - | 68.0 | 1 | - | - |
| | | 7 | 152.0 | 1 | - | - | 70.0 | 1 | - | - |
| | | 17 | 124.0 | 1 | - | - | 45.0 | 1 | - | - |
| | Sept. | 1 | 104.0 | 3 | - | 101-107 | 17.7 | 3 | - | 16-19 |
| | | 2 | 106.2 | 5 | - | 99-112 | 24.1 | 5 | - | 22-27 |
| | | 3 | 118.2 | 3 | - | 112-122 | 28.2 | 3 | - | 26-30 |
| | | 4 | 133.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 5 | 144.0 | 1 | - | - | 47.5 | 1 | - | - |
| | October | 0 | 88.5 | 2 | - | 85-92 | 15.0 | 2 | - | 13-17 |
| | | 1 | 88.0 | 1 | - | - | 13.5 | 1 | - | - |
| | | 2 | 103.0 | 2 | - | 96-110 | 20.0 | 2 | - | 18-21 |
| | | 3 | 114.5 | 2 | - | 113-116 | 29.8 | 2 | - | 29-30 |
| | | 4 | 130.0 | 1 | - | - | 33.5 | 1 | - | - |
| 1976 | Sept. | 1 | 99.7 | 3 | - | 96-105 | 20.3 | 3 | - | 18-24 |
| | | 2 | 102.3 | 3 | - | 95-109 | 23.2 | 3 | - | 22-24 |
| | | 3 | 120.3 | 2 | - | 116-124 | 32.4 | 2 | - | 32-33 |
| | | 4 | 141.5 | 2 | - | 138-145 | 43.5 | 2 | - | 40-47 |
| | | 5 | 156.5 | 1 | - | - | 63.8 | 1 | - | - |
| | | 6 | 153.0 | 1 | - | - | 72.0 | 1 | - | - |
| | October | 1 | 98.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 2 | 104.9 | 3 | - | 101-109 | 22.3 | 3 | - | 20-24 |
| | | 4 | 130.8 | 2 | - | 126-135 | 43.8 | 2 | - | 40-47 |
| | Nov. | 0 | 78.0 | 3 | - | 71-86 | 12.3 | 3 | - | 11-15 |
| | | 1 | 99.1 | 2 | - | 95-103 | 19.0 | 2 | - | - |
| | | 2 | 112.5 | 3 | - | 108-117 | 28.7 | 3 | - | 25-32 |
| | | 3 | 126.9 | 4 | - | 123-129 | 37.6 | 4 | - | 32-42 |
| | | 4 | 132.2 | 2 | - | 123-141 | 45.0 | 2 | - | 39-51 |
| | | 5 | 156.0 | 1 | - | - | 71.0 | 1 | - | - |
| | Nov. | 0 | 97.0 | 1 | - | - | 17.0 | 1 | - | - |
| | | 2 | 107.0 | 1 | - | - | 23.0 | 1 | - | - |
| 1977 | Nov. | 5 | 158.5 | 1 | - | - | 87.0 | 1 | - | - |

Sea of Okhotsk
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|--------|-----|-------------|----|------|---------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1978 | July | 2 | 104.5 | 1 | - | - | 22.0 | 1 | - | - |
| | | 3 | 123.0 | 2 | - | 117-129 | 36.5 | 2 | - | 35-38 |
| | | 4 | 130.7 | 6 | - | 124-136 | 41.8 | 6 | - | 38-46 |
| | | 5 | 147.5 | 10 | 8.9 | 133-167 | 62.9 | 10 | 10.2 | 52-85 |
| | | 6 | 156.4 | 12 | 12.2 | 133-179 | 88.3 | 12 | 20.0 | 60-119 |
| | | 7 | 167.5 | 1 | - | - | 96.5 | 1 | - | - |
| | August | 8 | 174.3 | 2 | - | 163-185 | 131.5 | 2 | - | 120-143 |
| | | 2 | 104.8 | 4 | - | 99-111 | 23.6 | 4 | - | 18-30 |
| | | 5 | 144.5 | 1 | - | - | 55.5 | 1 | - | - |

Table 42

Monthly mean length and weight of male fur seals.

(x = mean, n = sample size, s = standard deviation for n > 10)

Joban

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|----|-----|---------|------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Feb. | 2 | 100.0 | 2 | - | 95-105 | 23.0 | 2 | - | 21-25 |
| | | 5 | 132.0 | 1 | - | - | 43.5 | 1 | - | - |
| | March | 2 | 102.1 | 22 | 8.3 | 90-125 | 18.7 | 22 | 2.8 | 13-28 |
| | | 3 | 115.1 | 29 | 5.7 | 100-127 | 25.2 | 29 | 2.8 | 20-32 |
| | | 4 | 124.0 | 12 | 6.1 | 115-135 | 34.6 | 12 | 5.6 | 28-48 |
| | | 5 | 135.0 | 1 | - | - | 41.0 | 1 | - | - |
| | April | 6 | 144.0 | 2 | - | 140-148 | 49.5 | 2 | - | 44-55 |
| | | 1 | 92.7 | 2 | - | 78-107 | 14.3 | 2 | - | 11-17 |
| | | 2 | 100.7 | 26 | 4.5 | 90-110 | 17.8 | 26 | 2.2 | 14-23 |
| | | 3 | 109.6 | 33 | 4.2 | 100-120 | 24.8 | 33 | 2.6 | 17-30 |
| | | 4 | 118.9 | 11 | 7.2 | 107-130 | 31.4 | 11 | 6.0 | 23-42 |
| | | 5 | 125.0 | 1 | - | - | 46.0 | 1 | - | - |
| 1959 | March | 6 | 160.0 | 1 | - | - | 75.0 | 1 | - | - |
| | | 1 | 83.8 | 4 | - | 80-85 | 13.8 | 4 | - | 13-15 |
| | | 2 | 98.9 | 14 | 3.4 | 93-105 | 17.5 | 14 | 1.6 | 16-22 |
| | | 3 | 111.0 | 20 | 5.7 | 100-125 | 24.3 | 20 | 3.2 | 17-30 |
| | | 4 | 120.2 | 11 | 6.0 | 111-128 | 32.2 | 11 | 4.2 | 26-40 |
| | | 5 | 132.5 | 2 | - | 130-135 | 43.0 | 2 | - | 40-46 |
| | April | 6 | 155.0 | 1 | - | - | 63.0 | 1 | - | - |
| | | 1 | 82.5 | 6 | - | 75-95 | 11.8 | 6 | - | 8-16 |
| | | 2 | 100.5 | 30 | 4.7 | 90-110 | 17.9 | 30 | 2.1 | 15-23 |
| | | 3 | 108.0 | 23 | 6.6 | 98-125 | 24.1 | 23 | 2.6 | 20-34 |
| | | 4 | 122.0 | 12 | 7.3 | 108-132 | 33.1 | 12 | 4.4 | 27-44 |
| | | 5 | 121.5 | 2 | - | 118-125 | 35.0 | 2 | - | - |
| 1962 | March | 6 | 155.0 | 1 | - | - | 62.0 | 1 | - | - |
| | | 1 | 85.0 | 1 | - | - | 13.5 | 1 | - | - |
| | | 2 | 93.8 | 5 | - | 85-107 | 21.2 | 5 | - | 19-26 |
| | | 3 | 110.0 | 7 | - | 100-125 | 24.1 | 7 | - | 15-28 |
| | | 4 | 116.7 | 3 | - | 113-120 | 33.7 | 3 | - | 31-38 |
| | April | 6 | 155.0 | 1 | - | - | 62.0 | 1 | - | - |
| | | 1 | 82.8 | 6 | - | 70-90 | 11.6 | 6 | - | 7-14 |
| | | 2 | 98.2 | 30 | 5.4 | 85-112 | 18.4 | 30 | 2.1 | 15-23 |
| | | 3 | 110.1 | 65 | 5.8 | 95-122 | 24.4 | 65 | 3.0 | 17-33 |
| | | 4 | 119.8 | 26 | 8.6 | 105-145 | 31.9 | 26 | 4.9 | 22-45 |
| | | 5 | 138.9 | 17 | 9.8 | 125-155 | 49.6 | 17 | 7.9 | 33-64 |
| | | 6 | 152.7 | 3 | - | 140-165 | 66.7 | 3 | - | 59-82 |
| | May | 10 | 185.0 | 1 | - | - | 157.0 | 1 | - | - |
| | | 2 | 98.5 | 2 | - | 95-102 | 17.0 | 2 | - | 16-18 |
| | | 3 | 106.0 | 3 | - | 96-112 | 23.0 | 3 | - | 20-27 |
| | | 4 | 124.0 | 1 | - | - | 33.0 | 1 | - | - |
| | | 4 | 124.0 | 1 | - | - | 33.0 | 1 | - | - |
| 1963 | March | 1 | 80.0 | 3 | - | 80-80 | 11.8 | 3 | - | 11-12 |
| | | 2 | 102.1 | 14 | 5.4 | 93-111 | 20.4 | 14 | 2.4 | 18-27 |
| | | 3 | 116.5 | 4 | - | 112-122 | 30.0 | 4 | - | 25-34 |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|---------------------|-------|-------|-------------|----|---------|---------|-------------|----|-------|--------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1963 (continued) | March | 4 | 118.5 | 2 | - | 110-127 | 29.0 | 2 | - | 27-31 |
| | | 5 | 134.0 | 2 | - | 130-138 | 42.5 | 2 | - | 40-45 |
| | | 8 | 200.0 | 1 | - | - | 140.0 | 1 | - | - |
| | April | 1 | 83.0 | 1 | - | - | 10.5 | 1 | - | - |
| | | 2 | 102.0 | 10 | 5.2 | 95-110 | 18.0 | 10 | 1.5 | 16-21 |
| | | 3 | 117.2 | 6 | - | 112-120 | 24.9 | 6 | - | 23-26 |
| | | 4 | 122.0 | 6 | - | 120-132 | 32.8 | 6 | - | 29-39 |
| | | 5 | 132.5 | 2 | - | 125-140 | 43.5 | 2 | - | 41-46 |
| 1964 | March | 1 | 80.0 | 2 | - | 75-85 | 51.3 | 2 | - | 12-90* |
| | | 2 | 91.7 | 3 | - | 75-100 | 18.0 | 3 | - | 12-22 |
| | | 3 | 110.0 | 2 | - | 105-115 | 26.0 | 2 | - | 24-28 |
| | | 4 | 115.0 | 1 | - | - | 30.0 | 1 | - | - |
| 1965 | March | 1 | 84.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 97.4 | 5 | - | 91-105 | 18.2 | 5 | - | 15-21 |
| | | 3 | 109.5 | 6 | - | 103-115 | 25.3 | 6 | - | 21-28 |
| | | 4 | 120.0 | 1 | - | - | 31.5 | 1 | - | - |
| | | 5 | 148.0 | 1 | - | - | 60.0 | 1 | - | - |
| | | 6 | 149.0 | 1 | - | - | 55.0 | 1 | - | - |
| | April | 1 | 82.5 | 2 | - | 75-90 | 10.5 | 2 | - | 9-12 |
| | | 2 | 109.7 | 3 | - | 105-117 | 22.8 | 3 | - | 19-25 |
| | | 3 | 112.6 | 10 | 6.1 | 98-121 | 26.1 | 10 | 2.5 | 23-32 |
| | | 5 | 140.0 | 1 | - | - | 52.0 | 1 | - | - |
| | | 6 | 157.0 | 1 | - | - | 80.0 | 1 | - | - |
| | May | 1 | 86.7 | 3 | - | 85-90 | 12.3 | 3 | - | 11-14 |
| | | 2 | 102.0 | 5 | - | 95-106 | 18.6 | 5 | - | 17-20 |
| 3 | | 111.7 | 9 | - | 108-117 | 25.3 | 9 | - | 23-27 | |
| 4 | | 123.3 | 4 | - | 118-126 | 35.3 | 4 | - | 31-40 | |
| 5 | | 146.0 | 1 | - | - | 59.0 | 1 | - | - | |
| 1966 | March | 2 | 106.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 4 | 125.0 | 1 | - | - | 30.0 | 1 | - | - |
| | May | 3 | 122.0 | 1 | - | - | 31.0 | 1 | - | - |
| 1968 | March | 1 | 87.5 | 2 | - | 85-90 | 12.8 | 2 | - | 12-13 |
| | | 2 | 95.3 | 4 | - | 85-105 | 15.3 | 4 | - | 10-19 |
| | | 3 | 112.5 | 2 | - | 110-115 | 25.0 | 2 | - | - |
| | | 4 | 127.8 | 5 | - | 115-153 | 35.4 | 5 | - | 26-63 |
| | April | 1 | 83.0 | 1 | - | - | 11.0 | 1 | - | - |
| Feb. | | 4 | 131.0 | 1 | - | - | 40.0 | 1 | - | - |
| | | 5 | 130.0 | 1 | - | - | 42.5 | 1 | - | - |
| | March | 1 | 76.0 | 2 | - | 72-80 | 10.3 | 2 | - | 7-13 |
| | | 2 | 99.0 | 2 | - | 92-106 | 17.5 | 2 | - | 17-18 |
| | | 3 | 111.4 | 8 | - | 106-120 | 25.8 | 8 | - | 22-28 |
| | | 4 | 124.7 | 6 | - | 120-131 | 32.3 | 6 | - | 26-36 |
| 1971 | March | 2 | 102.2 | 16 | 5.7 | 95-114 | 18.5 | 16 | 1.8 | 15-22 |
| | | 3 | 111.7 | 15 | 3.4 | 104-121 | 24.8 | 15 | 4.3 | 19-36 |
| | | 4 | 124.0 | 5 | - | 115-131 | 36.7 | 5 | - | 34-42 |
| | | 5 | 137.7 | 3 | - | 134-143 | 44.3 | 3 | - | 40-51 |

Joban
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|---|---|---------|-------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1971 | April | 2 | 110.0 | 1 | - | - | 18.0 | 1 | - | - |
| 1972 | Feb. | 5 | 150.0 | 1 | - | - | 62.0 | 1 | - | - |
| | March | 2 | 104.0 | 1 | - | - | 21.0 | 1 | - | - |
| | | 3 | 112.8 | 4 | - | 111-116 | 24.3 | 4 | - | 23-25 |
| | | 5 | 139.0 | 1 | - | - | 42.0 | 1 | - | - |
| | April | 1 | 79.0 | 1 | - | - | 11.0 | 1 | - | - |
| | | 2 | 101.0 | 1 | - | - | 17.0 | 1 | - | - |
| | | 3 | 112.0 | 2 | - | 104-120 | 24.0 | 2 | - | 22-26 |
| | | 4 | 124.5 | 2 | - | 122-127 | 35.0 | 2 | - | - |
| 1978 | May | 4 | 127.3 | 2 | - | 122-132 | 42.5 | 2 | - | 36-49 |
| | | 6 | 152.8 | 1 | - | - | 75.0 | 1 | - | - |

Table 43

Monthly mean length and weight of male fur seals.
(x = mean, n = sample size, s = standard deviation for n > 10)

Sanriku

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|-------|-----|------------|-----|-----|---------|------------|-----|------|--------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | Feb. | 1 | 84.6 | 5 | - | 82-88 | 13.1 | 5 | - | 12-16 |
| | | 2 | 101.1 | 28 | 4.8 | 90-110 | 19.7 | 28 | 2.9 | 15-30 |
| | | 3 | 112.2 | 45 | 6.6 | 95-129 | 25.6 | 45 | 3.8 | 16-34 |
| | | 4 | 122.3 | 6 | - | 120-125 | 32.0 | 6 | - | 27-35 |
| | | 5 | 133.7 | 3 | - | 130-137 | 44.0 | 3 | - | 41-46 |
| | | 6 | 157.0 | 1 | - | - | 69.0 | 1 | - | - |
| | | 7 | 168.0 | 1 | - | - | 93.0 | 1 | - | - |
| | March | 1 | 83.5 | 2 | - | 82-85 | 12.5 | 2 | - | 11-14 |
| | | 2 | 101.0 | 39 | 4.8 | 90-110 | 18.2 | 39 | 2.1 | 13-23 |
| | | 3 | 111.1 | 57 | 5.5 | 100-125 | 24.3 | 57 | 2.9 | 17-32 |
| | | 4 | 121.9 | 16 | 6.8 | 113-135 | 33.3 | 16 | 5.6 | 22-43 |
| | | 5 | 143.0 | 6 | - | 130-155 | 49.8 | 6 | - | 36-65 |
| | | 6 | 143.0 | 2 | - | 140-146 | 50.5 | 2 | - | 48-53 |
| | | 7 | 170.0 | 1 | - | - | 85.0 | 1 | - | - |
| | April | 1 | 88.3 | 28 | 5.5 | 80-97 | 14.3 | 28 | 3.0 | 10-22 |
| | | 2 | 100.6 | 165 | 6.3 | 84-124 | 19.0 | 165 | 2.9 | 10-31 |
| | | 3 | 110.6 | 244 | 6.1 | 90-141 | 24.4 | 244 | 2.9 | 15-36 |
| | | 4 | 121.7 | 52 | 7.1 | 106-137 | 32.4 | 52 | 5.1 | 23-45 |
| | | 5 | 135.1 | 22 | 9.7 | 115-154 | 44.2 | 22 | 9.3 | 31-65 |
| | | 6 | 151.3 | 12 | 9.4 | 135-170 | 61.5 | 12 | 13.7 | 43-87 |
| | | 7 | 163.4 | 9 | - | 135-185 | 94.7 | 9 | - | 47-139 |
| | | 8 | 180.0 | 1 | - | - | 146.0 | 1 | - | - |
| | | 9 | 166.0 | 1 | - | - | 83.0 | 1 | - | - |
| | May | 1 | 89.0 | 25 | 4.0 | 82-97 | 17.0 | 25 | 16.0 | 11-95 |
| | | 2 | 101.3 | 169 | 5.3 | 80-118 | 19.0 | 169 | 2.4 | 13-30 |
| | | 3 | 112.2 | 254 | 6.2 | 94-135 | 25.1 | 254 | 3.2 | 16-43 |
| | | 4 | 122.2 | 48 | 6.6 | 107-133 | 33.4 | 48 | 5.3 | 22-49 |
| | | 5 | 134.3 | 9 | - | 115-150 | 45.2 | 9 | - | 30-61 |
| | | 6 | 140.5 | 6 | - | 110-171 | 59.1 | 6 | - | 29-85 |
| | | 7 | 155.4 | 5 | - | 135-170 | 76.8 | 5 | - | 37-115 |
| | June | 1 | 89.0 | 4 | - | 86-90 | 14.4 | 4 | - | 12-17 |
| | | 2 | 103.6 | 31 | 5.1 | 90-115 | 21.3 | 31 | 1.8 | 18-27 |
| | | 3 | 111.3 | 20 | 5.8 | 100-125 | 26.0 | 20 | 3.3 | 21-34 |
| | | 4 | 119.5 | 2 | - | 119-120 | 35.5 | 2 | - | 33-38 |
| | | 5 | 145.0 | 1 | - | - | 57.0 | 1 | - | - |
| 1959 | Feb. | 1 | 81.8 | 6 | - | 75-92 | 13.2 | 6 | - | 12-15 |
| | | 2 | 101.5 | 28 | 4.7 | 92-115 | 20.1 | 28 | 2.4 | 17-27 |
| | | 3 | 111.6 | 26 | 5.4 | 100-120 | 26.5 | 26 | 3.4 | 20-33 |
| | | 4 | 121.0 | 23 | 8.3 | 102-139 | 32.4 | 23 | 4.0 | 19-39 |
| | | 5 | 135.0 | 3 | - | 130-140 | 46.7 | 3 | - | 39-54 |
| | | 6 | 150.0 | 1 | - | - | 55.0 | 1 | - | - |
| | | 7 | 152.0 | 1 | - | - | 76.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|-----|-----|---------|-------------|-----|-----|--------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1959 | March | 1 | 85.3 | 26 | 6.4 | 75-107 | 12.3 | 26 | 1.5 | 10-17 |
| | | 2 | 100.0 | 61 | 6.4 | 83-115 | 18.7 | 61 | 2.3 | 12-24 |
| | | 3 | 111.8 | 58 | 6.0 | 98-125 | 25.1 | 58 | 3.8 | 17-35 |
| | | 4 | 121.5 | 33 | 7.4 | 110-142 | 33.2 | 33 | 5.0 | 24-50 |
| | | 5 | 138.0 | 14 | 5.8 | 130-150 | 41.5 | 14 | 3.8 | 37-52 |
| | | 6 | 146.7 | 3 | - | 145-150 | 58.2 | 3 | - | 55-60 |
| | | 7 | 145.0 | 1 | - | - | 55.0 | 1 | - | - |
| | | 8 | 193.0 | 1 | - | - | 116.0 | 1 | - | - |
| | April | 1 | 89.1 | 50 | 6.5 | 75-113 | 13.3 | 50 | 2.6 | 9-25 |
| | | 2 | 101.5 | 171 | 6.7 | 80-130 | 18.3 | 171 | 2.1 | 11-27 |
| | | 3 | 113.8 | 154 | 6.5 | 84-131 | 26.0 | 154 | 3.9 | 14-40 |
| | | 4 | 125.1 | 166 | 7.8 | 106-147 | 33.8 | 166 | 4.3 | 18-50 |
| | | 5 | 137.5 | 24 | 8.2 | 125-151 | 45.9 | 24 | 8.3 | 30-60 |
| | | 6 | 152.2 | 9 | - | 143-167 | 67.6 | 9 | - | 57-80 |
| | | 7 | 155.7 | 3 | - | 140-165 | 73.0 | 3 | - | 56-86 |
| | | 8 | 167.5 | 2 | - | 145-190 | 46.0 | 2 | - | 17-75 |
| | May | 1 | 88.0 | 17 | 8.4 | 65-100 | 13.1 | 17 | 1.3 | 11-16 |
| | | 2 | 103.9 | 59 | 5.9 | 84-115 | 19.3 | 59 | 2.1 | 15-25 |
| | | 3 | 114.9 | 50 | 6.5 | 96-125 | 26.6 | 50 | 3.4 | 18-35 |
| | | 4 | 125.9 | 39 | 7.2 | 112-150 | 36.6 | 39 | 4.6 | 22-46 |
| | | 5 | 138.1 | 10 | 8.1 | 128-155 | 48.5 | 10 | 4.6 | 42-55 |
| | | 6 | 154.7 | 3 | - | 114-180 | 59.3 | 3 | - | 15-105 |
| | | 7 | 162.5 | 2 | - | 145-180 | 98.5 | 2 | - | 76-121 |
| | June | 1 | 92.1 | 7 | - | 87-97 | 14.6 | 7 | - | 13-16 |
| | | 2 | 105.8 | 4 | - | 102-112 | 20.1 | 4 | - | 19-21 |
| | | 5 | 146.0 | 1 | - | - | 60.0 | 1 | - | - |
| 1960 | March | 2 | 95.9 | 12 | 5.9 | 83-105 | 17.9 | 12 | 1.9 | 15-23 |
| | | 3 | 109.0 | 5 | - | 104-116 | 25.4 | 5 | - | 23-31 |
| | | 4 | 118.8 | 4 | - | 116-124 | 29.5 | 4 | - | 28-30 |
| | | 5 | 134.3 | 4 | - | 133-136 | 41.3 | 4 | - | 37-45 |
| | | 8 | 155.0 | 1 | - | - | 71.0 | 1 | - | - |
| | April | 1 | 88.7 | 6 | - | 82-95 | 12.8 | 6 | - | 12-14 |
| | | 2 | 100.8 | 111 | 6.1 | 80-120 | 18.2 | 111 | 1.9 | 12-25 |
| | | 3 | 111.3 | 102 | 6.2 | 100-125 | 24.6 | 102 | 3.1 | 17-35 |
| | | 4 | 123.0 | 31 | 5.4 | 113-136 | 33.0 | 31 | 4.1 | 24-46 |
| | | 5 | 136.1 | 12 | 6.0 | 125-146 | 46.5 | 12 | 4.0 | 38-52 |
| | | 6 | 160.8 | 5 | - | 150-170 | 72.0 | 5 | - | 60-80 |
| | May | 1 | 89.4 | 12 | 4.6 | 80-95 | 12.8 | 12 | 1.7 | 10-15 |
| | | 2 | 101.2 | 69 | 5.5 | 85-115 | 19.0 | 69 | 2.2 | 14-25 |
| | | 3 | 113.3 | 74 | 6.4 | 95-127 | 25.6 | 74 | 2.9 | 18-32 |
| | | 4 | 126.6 | 18 | 8.5 | 113-145 | 35.8 | 18 | 5.9 | 27-51 |
| | | 5 | 142.2 | 11 | 8.9 | 120-155 | 52.3 | 11 | 9.8 | 25-67 |
| | | 7 | 185.0 | 1 | - | - | 10.8 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|-----|-----|---------|-------------|-----|------|--------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | June | 1 | 85.8 | 4 | - | 75-95 | 12.9 | 4 | - | 10-14 |
| | | 2 | 102.2 | 11 | 4.3 | 95-111 | 20.2 | 11 | 2.2 | 17-24 |
| | | 3 | 113.0 | 10 | 4.9 | 105-120 | 25.8 | 10 | 2.4 | 22-29 |
| | | 4 | 134.0 | 1 | - | - | 39.0 | 1 | - | - |
| 1961 | March | 1 | 75.0 | 1 | - | - | 9.0 | 1 | - | - |
| | | 2 | 106.0 | 4 | - | 100-113 | 19.1 | 4 | - | 17-22 |
| | | 3 | 118.0 | 6 | - | 112-126 | 24.7 | 6 | - | 22-28 |
| | | 4 | 125.5 | 2 | - | 125-126 | 32.3 | 2 | - | 31-33 |
| | | 5 | 138.0 | 1 | - | - | 46.0 | 1 | - | - |
| | | 6 | 133.0 | 1 | - | - | 40.0 | 1 | - | - |
| | April | 1 | 84.5 | 21 | 3.4 | 75-90 | 17.3 | 21 | 24.1 | 7-125* |
| | | 2 | 100.2 | 56 | 4.9 | 85-112 | 18.6 | 56 | 2.2 | 12-24 |
| | | 3 | 110.7 | 120 | 6.7 | 97-155 | 25.3 | 120 | 4.7 | 18-64 |
| | | 4 | 122.6 | 36 | 8.3 | 103-150 | 33.3 | 36 | 4.7 | 24-45 |
| | | 5 | 129.9 | 10 | 7.5 | 117-144 | 44.4 | 10 | 6.6 | 32-53 |
| | | 6 | 151.0 | 7 | - | 141-161 | 61.9 | 7 | - | 50-80 |
| | | 7 | 142.3 | 4 | - | 132-150 | 66.0 | 4 | - | 52-87 |
| | | 8 | 175.0 | 1 | - | - | 130.0 | 1 | - | - |
| | | 10 | 186.0 | 1 | - | - | 129.0 | 1 | - | - |
| | May | 1 | 85.0 | 3 | - | 80-95 | 13.7 | 3 | - | 11-16 |
| | | 2 | 99.9 | 56 | 5.3 | 90-112 | 18.8 | 56 | 2.4 | 14-27 |
| | | 3 | 111.0 | 110 | 7.5 | 83-133 | 25.5 | 110 | 5.4 | 12-55 |
| | | 4 | 123.0 | 45 | 8.1 | 98-145 | 35.4 | 45 | 3.9 | 27-47 |
| | | 5 | 138.4 | 10 | 5.5 | 130-149 | 51.8 | 10 | 8.9 | 35-65 |
| | | 6 | 160.6 | 5 | - | 140-185 | 81.1 | 5 | - | 64-100 |
| | | 7 | 171.3 | 4 | - | 155-190 | 103.8 | 4 | - | 75-140 |
| | June | 2 | 105.4 | 5 | - | 100-112 | 19.0 | 5 | - | 18-21 |
| | | 3 | 117.0 | 7 | - | 110-123 | 27.1 | 7 | - | 21-33 |
| | | 4 | 130.0 | 1 | - | - | 38.0 | 1 | - | - |
| | | 5 | 145.0 | 1 | - | - | 57.0 | 1 | - | - |
| 1962 | March | 1 | 70.0 | 1 | - | - | 9.5 | 1 | - | - |
| | | 2 | 105.0 | 1 | - | - | 26.5 | 1 | - | - |
| | | 3 | 110.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | 4 | 113.7 | 3 | - | 110-120 | 33.3 | 3 | - | 30-36 |
| | April | 1 | 88.0 | 7 | - | 80-94 | 13.5 | 7 | - | 12-15 |
| | | 2 | 101.1 | 54 | 5.4 | 85-112 | 19.1 | 54 | 1.6 | 15-22 |
| | | 3 | 109.8 | 94 | 6.2 | 93-123 | 24.2 | 94 | 2.7 | 17-31 |
| | | 4 | 120.3 | 56 | 8.1 | 105-138 | 32.9 | 56 | 4.4 | 25-45 |
| | | 5 | 140.4 | 10 | 6.8 | 130-150 | 50.1 | 10 | 5.0 | 43-60 |
| | | 6 | 154.3 | 11 | 8.4 | 139-170 | 61.3 | 11 | 7.6 | 43-72 |
| | | 7 | 176.6 | 5 | - | 170-186 | 103.6 | 5 | - | 87-113 |
| | May | 1 | 85.5 | 14 | 5.0 | 77-92 | 13.4 | 14 | 2.1 | 10-17 |
| | | 2 | 101.7 | 39 | 6.1 | 90-115 | 20.3 | 39 | 2.6 | 15-26 |
| | | 3 | 111.6 | 79 | 6.8 | 97-130 | 25.4 | 79 | 3.7 | 18-39 |
| | | 4 | 121.3 | 49 | 6.9 | 110-140 | 34.2 | 49 | 6.7 | 24-61 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|------------|---------------|-------------|----|------|---------|-------------|----|------|---------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1962 | May | 5 | 138.0 | 10 | 11.0 | 120-156 | 53.7 | 10 | 13.3 | 26-68 |
| | | (continued) 6 | 150.8 | 5 | - | 140-165 | 65.6 | 5 | - | 57-77 |
| | | 7 | 160.0 | 1 | - | - | 92.0 | 1 | - | - |
| | June | 1 | 92.0 | 5 | - | 85-100 | 13.8 | 5 | - | 13-15 |
| | | 2 | 109.7 | 3 | - | 109-110 | 24.3 | 3 | - | 22-27 |
| | | 3 | 118.3 | 3 | - | 115-120 | 30.2 | 3 | - | 26-32 |
| 1963 | March | 1 | 82.5 | 2 | - | 80-85 | 10.8 | 2 | - | 10-11 |
| | | 2 | 99.2 | 5 | - | 95-105 | 18.8 | 5 | - | 17-21 |
| | | 3 | 108.0 | 2 | - | 106-110 | 24.0 | 2 | - | - |
| | April | 4 | 128.5 | 2 | - | 125-132 | 31.8 | 2 | - | 31-32 |
| | | 1 | 85.9 | 12 | 4.8 | 80-95 | 12.6 | 12 | 0.9 | 10-14 |
| | | 2 | 101.7 | 55 | 5.0 | 90-112 | 19.2 | 55 | 2.0 | 15-26 |
| | | 3 | 110.1 | 56 | 5.8 | 100-122 | 24.6 | 56 | 2.9 | 19-31 |
| | | 4 | 120.5 | 37 | 7.8 | 105-140 | 34.2 | 37 | 6.2 | 26-62 |
| | | 5 | 139.9 | 10 | 6.2 | 135-155 | 52.2 | 10 | 8.1 | 41-67 |
| | | 6 | 151.7 | 9 | - | 130-177 | 62.8 | 9 | - | 41-78 |
| | | 7 | 153.3 | 3 | - | 150-160 | 65.3 | 3 | - | 56-73 |
| | | 8 | 199.3 | 3 | - | 195-203 | 160.0 | 3 | - | 150-170 |
| | May | 1 | 86.8 | 32 | 6.2 | 74-112 | 13.6 | 32 | 2.5 | 10-24 |
| | | 2 | 102.6 | 84 | 5.6 | 90-118 | 18.9 | 84 | 1.9 | 15-23 |
| | | 3 | 113.7 | 85 | 5.7 | 100-125 | 25.6 | 85 | 3.5 | 17-33 |
| | | 4 | 121.8 | 65 | 7.2 | 105-140 | 34.7 | 65 | 5.1 | 26-50 |
| | | 5 | 137.5 | 31 | 8.1 | 120-166 | 50.4 | 31 | 13.2 | 25-110 |
| | | 6 | 153.7 | 19 | 13.6 | 130-180 | 79.8 | 19 | 26.5 | 48-135 |
| | | 7 | 178.7 | 7 | - | 154-195 | 116.6 | 7 | - | 67-146 |
| | | 8 | 182.5 | 4 | - | 170-200 | 140.0 | 4 | - | 85-180 |
| | | 9 | 185.0 | 1 | - | - | 150.0 | 1 | - | - |
| | June | 1 | 91.0 | 5 | - | 90-93 | 13.8 | 5 | - | 13-14 |
| | | 2 | 104.1 | 37 | 5.3 | 91-116 | 21.3 | 37 | 2.2 | 17-25 |
| | | 3 | 117.4 | 15 | 4.5 | 110-127 | 28.7 | 15 | 2.7 | 26-37 |
| | | 4 | 125.0 | 5 | - | 120-130 | 36.3 | 5 | - | 31-45 |
| | 1964 March | 1 | 83.6 | 5 | - | 80-85 | 13.4 | 5 | - | 11-16 |
| | | 2 | 98.7 | 21 | 4.0 | 90-105 | 18.0 | 21 | 1.7 | 15-22 |
| | | 3 | 112.9 | 40 | 5.1 | 104-125 | 26.2 | 40 | 2.7 | 20-31 |
| | | 4 | 124.8 | 24 | 7.7 | 110-137 | 33.7 | 24 | 3.4 | 25-42 |
| | | 5 | 132.3 | 3 | - | 130-135 | 40.3 | 3 | - | 38-43 |
| | | 6 | 151.0 | 2 | - | 135-167 | 58.0 | 2 | - | 41-75 |
| | April | 1 | 84.5 | 23 | 5.2 | 76-98 | 12.3 | 23 | 1.4 | 10-16 |
| | | 2 | 102.8 | 53 | 5.5 | 90-117 | 19.9 | 53 | 2.0 | 16-25 |
| | | 3 | 113.7 | 50 | 5.1 | 100-126 | 27.0 | 50 | 3.2 | 21-34 |
| | | 4 | 125.5 | 30 | 7.8 | 105-138 | 35.9 | 30 | 5.7 | 20-47 |
| | | 5 | 140.5 | 11 | 10.9 | 115-155 | 47.1 | 11 | 7.6 | 35-61 |
| | | 6 | 151.3 | 7 | - | 135-170 | 69.1 | 7 | - | 41-100 |
| | | 7 | 165.4 | 7 | - | 146-187 | 84.9 | 7 | - | 55-125 |
| | | 8 | 186.3 | 4 | - | 173-202 | 144.1 | 4 | - | 121-183 |
| | | 9 | 194.0 | 1 | - | - | 137.0 | 1 | - | - |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | | |
|------|-------|-------|-------------|-------|---------|---------|-------------|------|--------|---------|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range | |
| 1964 | May | 1 | 85.0 | 15 | 6.0 | 73-95 | 13.1 | 15 | 1.7 | 9-16 | |
| | | 2 | 102.6 | 56 | 5.3 | 85-112 | 19.2 | 56 | 2.4 | 11-27 | |
| | | 3 | 112.0 | 52 | 6.1 | 100-125 | 26.1 | 52 | 4.5 | 17-41 | |
| | | 4 | 122.8 | 21 | 7.0 | 110-139 | 34.2 | 21 | 5.3 | 25-47 | |
| | | 5 | 138.3 | 16 | 9.7 | 115-152 | 48.6 | 16 | 10.2 | 35-70 | |
| | | 6 | 155.3 | 11 | 7.3 | 140-166 | 70.9 | 11 | 9.4 | 59-86 | |
| | | 7 | 170.5 | 2 | - | 165-176 | 100.5 | 2 | - | 100-101 | |
| | June | 9 | 177.0 | 1 | - | - | 140.0 | 1 | - | - | |
| | | 2 | 105.0 | 1 | - | - | 20.0 | 1 | - | - | |
| | | 3 | 125.0 | 1 | - | - | 29.0 | 1 | - | - | |
| 1965 | March | 1 | 81.3 | 8 | - | 75-89 | 9.9 | 8 | - | 7-13 | |
| | | 2 | 99.9 | 8 | - | 95-108 | 19.1 | 8 | - | 15-23 | |
| | | 3 | 113.1 | 12 | 4.3 | 104-120 | 25.0 | 12 | 2.8 | 19-30 | |
| | | 4 | 119.0 | 6 | - | 109-127 | 31.3 | 6 | - | 21-39 | |
| | | 5 | 127.5 | 2 | - | 125-130 | 37.5 | 2 | - | 37-38 | |
| | April | 10 | 200.0 | 1 | - | - | 155.0 | 1 | - | - | |
| | | 1 | 82.9 | 14 | 4.9 | 70-90 | 10.2 | 14 | 1.7 | 6-13 | |
| | | 2 | 99.2 | 11 | 4.8 | 90-105 | 18.5 | 11 | 2.3 | 14-22 | |
| | | 3 | 112.5 | 25 | 5.6 | 100-120 | 24.9 | 25 | 3.2 | 20-33 | |
| | | 4 | 119.4 | 8 | - | 110-125 | 32.1 | 8 | - | 27-36 | |
| | | 6 | 150.0 | 1 | - | - | 56.0 | 1 | - | - | |
| | | May | 1 | 85.0 | 6 | - | 83-91 | 11.7 | 6 | - | 11-13 |
| | | | 2 | 100.4 | 26 | 4.3 | 93-115 | 18.6 | 26 | 1.6 | 16-23 |
| | 3 | | 112.2 | 57 | 6.0 | 100-129 | 25.6 | 57 | 2.7 | 20-31 | |
| | 4 | | 124.8 | 26 | 6.9 | 110-138 | 35.7 | 26 | 5.5 | 27-50 | |
| | 5 | | 141.5 | 6 | - | 135-155 | 52.3 | 6 | - | 47-59 | |
| | 6 | | 150.0 | 4 | - | 135-160 | 74.3 | 4 | - | 48-88 | |
| | 7 | | 153.7 | 6 | - | 120-181 | 80.4 | 6 | - | 33-125 | |
| | 8 | | 168.3 | 3 | - | 165-175 | 100.0 | 3 | - | 90-110 | |
| | June | 10 | 140.0 | 1 | - | - | 43.0 | 1 | - | - | |
| | | 1 | 88.3 | 10 | 4.2 | 80-93 | 14.3 | 10 | 1.9 | 11-17 | |
| | | 2 | 104.1 | 44 | 4.9 | 90-115 | 20.5 | 44 | 2.0 | 16-24 | |
| | | 3 | 116.1 | 34 | 5.1 | 107-130 | 27.6 | 34 | 3.6 | 18-35 | |
| | | 4 | 130.8 | 4 | - | 125-144 | 42.5 | 4 | - | 36-53 | |
| | | 5 | 143.0 | 1 | - | - | 58.0 | 1 | - | - | |
| | | 8 | 170.0 | 1 | - | - | 117.0 | 1 | - | - | |
| 1966 | | March | 2 | 99.9 | 14 | 4.3 | 90-110 | 18.1 | 14 | 1.6 | 14-20 |
| | | | 3 | 109.9 | 8 | - | 104-115 | 23.9 | 8 | - | 19-28 |
| | | | 4 | 117.2 | 5 | - | 105-129 | 30.6 | 5 | - | 23-35 |
| | 11 | | 185.0 | 1 | - | - | 132.0 | 1 | - | - | |
| | April | 1 | 79.5 | 2 | - | 77-82 | 10.7 | 2 | - | 10-11 | |
| | | 2 | 100.6 | 17 | 3.2 | 95-109 | 18.1 | 17 | 1.2 | 16-20 | |
| | | 3 | 111.2 | 19 | 6.5 | 99-123 | 24.1 | 19 | 3.4 | 16-30 | |
| | | 4 | 126.3 | 9 | - | 117-131 | 33.8 | 9 | - | 29-41 | |
| | | 5 | 149.3 | 3 | - | 144-158 | 56.7 | 3 | - | 51-62 | |
| | | 6 | 150.0 | 1 | - | - | 62.0 | 1 | - | - | |
| 8 | | 178.3 | 3 | - | 161-194 | 121.0 | 3 | - | 81-180 | | |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1966 | May | 1 | 92.5 | 2 | - | 92-93 | 13.6 | 2 | - | 13-14 |
| | | 2 | 103.5 | 22 | 3.1 | 98-110 | 19.4 | 22 | 1.9 | 16-23 |
| | | 3 | 113.8 | 34 | 6.5 | 100-126 | 25.2 | 34 | 3.1 | 19-31 |
| | | 4 | 127.0 | 12 | 6.7 | 111-137 | 35.5 | 12 | 3.1 | 28-41 |
| | | 7 | 171.0 | 2 | - | 168-174 | 96.5 | 2 | - | 95-98 |
| | June | 1 | 93.0 | 1 | - | - | 14.0 | 1 | - | - |
| 1967 | Feb. | 2 | 109.4 | 7 | - | 100-120 | 21.4 | 7 | - | 18-25 |
| | | 3 | 116.5 | 2 | - | 115-118 | 27.8 | 2 | - | 25-30 |
| | | 1 | 87.5 | 2 | - | 86-89 | 13.5 | 2 | - | 11-15 |
| | | 2 | 100.0 | 4 | - | 95-106 | 19.8 | 4 | - | 18-24 |
| | | 3 | 114.7 | 7 | - | 110-120 | 26.5 | 7 | - | 22-32 |
| | March | 4 | 125.5 | 2 | - | 118-133 | 34.3 | 2 | - | 26-42 |
| | | 5 | 140.0 | 2 | - | 135-145 | 46.5 | 2 | - | 43-49 |
| | | 1 | 86.0 | 3 | - | 80-90 | 11.3 | 3 | - | 9-13 |
| | | 2 | 103.6 | 9 | - | 90-126 | 20.3 | 9 | - | 15-37 |
| | | 3 | 110.9 | 16 | 5.8 | 99-125 | 25.6 | 16 | 4.0 | 15-34 |
| | April | 4 | 122.5 | 2 | - | 122-123 | 31.3 | 2 | - | - |
| | | 6 | 158.0 | 1 | - | - | 61.0 | 1 | - | - |
| | | 8 | 173.0 | 1 | - | - | 90.0 | 1 | - | - |
| | | 1 | 86.5 | 10 | 4.0 | 79-91 | 12.9 | 10 | 1.8 | 9-15 |
| | | 2 | 101.0 | 16 | 5.2 | 89-112 | 19.0 | 16 | 1.8 | 15-22 |
| | May | 3 | 111.4 | 30 | 4.6 | 103-121 | 24.9 | 30 | 3.0 | 19-32 |
| | | 4 | 122.1 | 15 | 9.1 | 101-139 | 32.7 | 15 | 6.1 | 20-45 |
| | | 5 | 131.5 | 6 | - | 115-150 | 40.8 | 6 | - | 29-52 |
| | | 7 | 163.0 | 1 | - | - | 88.5 | 1 | - | - |
| | | 9 | 192.0 | 1 | - | - | 133.0 | 1 | - | - |
| 1968 | Feb. | 1 | 85.5 | 5 | - | 80-91 | 12.6 | 5 | - | 11-14 |
| | | 2 | 102.1 | 7 | - | 97-110 | 20.1 | 7 | - | 18-21 |
| | | 3 | 112.7 | 15 | 6.1 | 100-124 | 25.9 | 15 | 3.5 | 19-32 |
| | | 4 | 125.6 | 5 | - | 117-142 | 34.8 | 5 | - | 28-50 |
| | | 6 | 145.0 | 1 | - | - | 55.0 | 1 | - | - |
| | March | 1 | 80.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 100.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 4 | 119.0 | 1 | - | - | 27.0 | 1 | - | - |
| | April | 1 | 87.5 | 2 | - | 73-102 | 12.0 | 2 | - | 9-15 |
| | | 3 | 110.0 | 1 | - | - | 22.0 | 1 | - | - |
| | | 6 | 151.0 | 1 | - | - | 58.0 | 1 | - | - |
| | May | 1 | 81.0 | 1 | - | - | 10.0 | 1 | - | - |
| | | 2 | 95.7 | 3 | - | 93-99 | 16.3 | 3 | - | 14-18 |
| | | 3 | 113.0 | 1 | - | - | 23.5 | 1 | - | - |
| | Feb. | 4 | 121.0 | 1 | - | - | 30.5 | 1 | - | - |
| | | 13 | 188.0 | 1 | - | - | 175.5 | 1 | - | - |
| | | 1 | 80.5 | 1 | - | - | 12.5 | 1 | - | - |
| 1969 | Feb. | 2 | 101.7 | 3 | - | 96-106 | 19.5 | 3 | - | 18-21 |
| | | 3 | 113.0 | 2 | - | 110-116 | 28.3 | 2 | - | 25-31 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-------|-------------|----|---------|---------|-------------|----|-------|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1969 | March | 2 | 101.0 | 2 | - | 94-108 | 19.0 | 2 | - | 18-20 |
| | | 3 | 113.8 | 5 | - | 108-118 | 25.7 | 5 | - | 22-29 |
| | | 4 | 135.0 | 1 | - | - | 37.0 | 1 | - | - |
| | | 6 | 153.0 | 1 | - | - | 66.0 | 1 | - | - |
| | April | 2 | 96.7 | 3 | - | 93-100 | 17.6 | 3 | - | 17-19 |
| | | 3 | 110.3 | 3 | - | 109-112 | 25.2 | 3 | - | 24-27 |
| 1970 | January | 4 | 127.0 | 1 | - | - | 34.5 | 1 | - | - |
| | | 1 | 83.0 | 1 | - | - | 15.0 | 1 | - | - |
| | Feb. | 3 | 112.0 | 2 | - | 110-114 | 26.0 | 2 | - | 25-27 |
| | | 2 | 102.0 | 1 | - | - | 18.5 | 1 | - | - |
| | | 3 | 111.0 | 2 | - | 110-112 | 24.8 | 2 | - | 23-26 |
| | | 4 | 126.5 | 2 | - | 119-134 | 37.5 | 2 | - | 31-44 |
| 1971 | March | 5 | 133.0 | 1 | - | - | 42.5 | 1 | - | - |
| | | 1 | 79.0 | 1 | - | - | 11.5 | 1 | - | - |
| | Feb. | 2 | 96.6 | 7 | - | 89-105 | 18.9 | 7 | - | 15-22 |
| | | 3 | 113.3 | 7 | - | 109-121 | 27.3 | 7 | - | 24-30 |
| | | 4 | 131.3 | 3 | - | 127-137 | 38.7 | 3 | - | 37-41 |
| | | 5 | 145.0 | 1 | - | - | 54.0 | 1 | - | - |
| 1972 | March | 6 | 152.0 | 1 | - | - | 58.0 | 1 | - | - |
| | | 1 | 85.5 | 1 | - | - | 14.5 | 1 | - | - |
| | | 2 | 101.8 | 13 | 5.7 | 94-113 | 18.4 | 13 | 1.5 | 16-21 |
| | | 3 | 115.5 | 9 | - | 104-126 | 27.2 | 9 | - | 23-31 |
| | April | 4 | 122.5 | 4 | - | 116-130 | 32.5 | 4 | - | 29-35 |
| | | 5 | 135.0 | 1 | - | - | 45.0 | 1 | - | - |
| | | 2 | 100.0 | 1 | - | - | 18.0 | 1 | - | - |
| | | 3 | 109.0 | 1 | - | - | 31.0 | 1 | - | - |
| | May | 5 | 141.0 | 1 | - | - | 51.0 | 1 | - | - |
| | | 7 | 171.0 | 1 | - | - | 90.0 | 1 | - | - |
| | | 2 | 104.5 | 4 | - | 99-115 | 20.3 | 4 | - | 17-24 |
| | | 3 | 113.5 | 5 | - | 110-116 | 26.3 | 5 | - | 21-35 |
| June | 4 | 127.5 | 4 | - | 121-135 | 35.3 | 4 | - | 32-37 | |
| | 2 | 95.0 | 1 | - | - | 16.5 | 1 | - | - | |
| | 3 | 120.0 | 2 | - | 115-125 | 31.8 | 2 | - | 31-32 | |
| | 5 | 120.0 | 1 | - | - | 28.0 | 1 | - | - | |
| 1972 | Feb. | 4 | 123.0 | 1 | - | - | 39.0 | 1 | - | - |
| | | 2 | 100.8 | 15 | 5.2 | 88-107 | 20.1 | 15 | 2.0 | 16-24 |
| | March | 3 | 111.9 | 11 | 5.2 | 103-123 | 26.6 | 11 | 4.3 | 23-39 |
| | | 4 | 125.1 | 8 | - | 114-135 | 34.4 | 8 | - | 25-40 |
| | | 5 | 131.5 | 5 | - | 122-147 | 43.9 | 5 | - | 36-64 |
| | | 6 | 140.0 | 1 | - | - | 58.0 | 1 | - | - |
| | April | 2 | 98.0 | 1 | - | - | 20.0 | 1 | - | - |
| | | 3 | 114.7 | 3 | - | 112-117 | 25.5 | 3 | - | 22-28 |
| | May | 2 | 100.0 | 4 | - | 93-104 | 18.6 | 4 | - | 17-21 |
| | | 3 | 109.3 | 3 | - | 103-116 | 25.0 | 3 | - | 24-25 |
| | | 4 | 127.3 | 3 | - | 117-137 | 40.5 | 3 | - | 31-49 |

Sanriku
(continued)

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|-------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1973 | May | 1 | 89.0 | 2 | - | 86-92 | 12.7 | 2 | - | 12-13 |
| | | 2 | 104.9 | 10 | 5.5 | 96-115 | 19.8 | 10 | 1.1 | 18-22 |
| | | 3 | 114.0 | 16 | 5.0 | 105-123 | 25.7 | 16 | 2.9 | 20-30 |
| | | 4 | 124.2 | 5 | - | 117-132 | 34.4 | 5 | - | 31-40 |
| | | 5 | 141.0 | 1 | - | - | 50.0 | 1 | - | - |
| | June | 1 | 93.7 | 8 | - | 87-106 | 16.1 | 8 | - | 13-20 |
| | | 2 | 105.9 | 21 | 5.0 | 96-115 | 21.5 | 21 | 2.3 | 17-26 |
| | | 3 | 115.3 | 16 | 7.5 | 88-122 | 29.4 | 16 | 5.4 | 12-40 |
| | | 4 | 128.7 | 3 | - | 120-134 | 38.4 | 3 | - | 35-41 |
| | | 5 | 135.0 | 3 | - | 133-138 | 45.9 | 3 | - | 43-52 |
| 1978 | May | 7 | 169.0 | 1 | - | - | 89.0 | 1 | - | - |
| | | 2 | 102.3 | 3 | - | 101-104 | 19.2 | 3 | - | 17-22 |
| | | 3 | 111.4 | 7 | - | 98-122 | 28.1 | 7 | - | 26-36 |
| | | 4 | 104.0 | 1 | - | - | 31.0 | 1 | - | - |
| | | 5 | 147.5 | 1 | - | - | 78.0 | 1 | - | - |
| | | 6 | 163.5 | 2 | - | 127-170 | 89.0 | 2 | - | 80-98 |
| | | 7 | 174.0 | 1 | - | - | 107.0 | 1 | - | - |
| | June | 2 | 104.5 | 7 | - | 100-109 | 20.7 | 7 | - | 17-25 |
| | | 3 | 109.0 | 11 | 3.4 | 103-114 | 25.5 | 11 | 3.3 | 21-31 |
| | | 4 | 126.3 | 2 | - | 119-133 | 43.8 | 2 | - | 38-49 |
| | | 5 | 137.5 | 2 | - | 130-145 | 55.0 | 2 | - | 45-65 |
| | | 7 | 163.5 | 1 | - | - | 101.0 | 1 | - | - |

Table 44

Monthly mean length and weight of male fur seals.
 (x = mean, n = sample size, s = standard deviation for n > 10)

Doto

| Year | Month | Age | Length (cm) | | | | Weight (kg) | | | |
|------|---------|-----|-------------|----|-----|---------|-------------|----|-----|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1958 | June | 2 | 108.3 | 3 | - | 100-115 | 23.4 | 3 | - | 20-26 |
| | | 3 | 114.6 | 7 | - | 105-125 | 28.5 | 7 | - | 23-36 |
| 1959 | April | 4 | 120.0 | 1 | - | - | 35.0 | 1 | - | - |
| | June | 2 | 104.3 | 6 | - | 96-110 | 18.2 | 6 | - | 15-22 |
| 1961 | June | 2 | 107.0 | 4 | - | 100-117 | 21.8 | 4 | - | 18-28 |
| | | 3 | 114.0 | 3 | - | 105-122 | 27.3 | 3 | - | 22-35 |
| | | 4 | 138.0 | 1 | - | - | 48.0 | 1 | - | - |
| | | 5 | 147.0 | 1 | - | - | 57.0 | 1 | - | - |
| 1963 | July | 1 | 96.7 | 9 | - | 90-105 | 16.8 | 9 | - | 14-21 |
| | | 2 | 110.0 | 4 | - | 105-115 | 25.3 | 4 | - | 23-30 |
| 1965 | June | 3 | 108.0 | 1 | - | - | 26.0 | 1 | - | - |
| 1972 | June | 2 | 108.0 | 2 | - | 106-110 | 21.0 | 2 | - | 20-22 |
| | | 3 | 117.5 | 2 | - | 115-120 | 28.3 | 2 | - | 27-29 |
| | | 4 | 130.0 | 1 | - | - | 33.0 | 1 | - | - |
| 1973 | June | 2 | 102.0 | 2 | - | 101-103 | 20.3 | 2 | - | - |
| 1977 | Nov. | 1 | 100.0 | 1 | - | - | 35.0 | 1 | - | - |
| | | 2 | 106.0 | 1 | - | - | 38.5 | 1 | - | - |
| | | 3 | 136.5 | 1 | - | - | 41.0 | 1 | - | - |
| | | 4 | 133.0 | 1 | - | - | 45.0 | 1 | - | - |
| | Dec. | 0 | 76.6 | 11 | 1.9 | 73-79 | 12.1 | 11 | 1.9 | 9-15 |
| | | 2 | 110.3 | 3 | - | 106-118 | 33.0 | 3 | - | 23-45 |
| | | 3 | 122.0 | 1 | - | - | 37.0 | 1 | - | - |
| 1978 | January | 1 | 85.3 | 3 | - | 82-89 | 14.3 | 3 | - | 12-16 |
| | | 2 | 98.2 | 3 | - | 92-102 | 20.0 | 3 | - | 17-21 |
| | | 3 | 114.8 | 2 | - | 110-119 | 30.0 | 2 | - | 27-33 |
| | | 4 | 129.0 | 1 | - | - | 43.5 | 1 | - | - |
| | | 5 | 138.0 | 1 | - | - | 53.0 | 1 | - | - |
| | | 6 | 151.0 | 1 | - | - | 79.0 | 1 | - | - |

Table 45

Monthly mean length and weight of male fur seals.

(x = mean, n = sample size, s = standard deviation for n > 10)

Western Bering Sea

| Year | Month | Age | Length(cm) | | | | Weight(kg) | | | |
|------|--------|-----|------------|---|---|-------|------------|---|---|-------|
| | | | \bar{x} | n | s | Range | \bar{x} | n | s | Range |
| 1960 | July | 2 | 107.0 | 1 | - | - | 20.0 | 1 | - | - |
| | August | 3 | 115.0 | 1 | - | - | 24.0 | 1 | - | - |

Table 46
Monthly stomach contents of fur seals
taken in the Sea of Okhotsk.

| Food Items | 1972 | | | | | | | | 1973 | | | |
|--|--------|-----------|-----|-------|--------|-----------|-----|-------|--------|-----------|-----|-------|
| | July | | | | August | | | | July | | | |
| | Volume | Frequency | | | Volume | Frequency | | | Volume | Frequency | | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| <u>Gadus macrocephalus</u> | 6675 | 26.1 | 3 | 5.3 | 1930 | 6.6 | 2 | 2.7 | | | | |
| <u>Theragra chalcogramma</u> | 10415 | 40.7 | 19 | 33.9 | 7570 | 25.8 | 7 | 9.5 | 7750 | 18.1 | 13 | 14.0 |
| Gadidae | 5581 | 21.8 | 16 | 28.6 | 4075 | 13.9 | 9 | 12.2 | 7213 | 16.8 | 21 | 22.6 |
| <u>Oncorhynchus gorbuscha</u> | 1225 | 4.8 | 4 | 7.1 | 1325 | 4.5 | 4 | 5.4 | 15970 | 37.2 | 19 | 20.4 |
| <u>Oncorhynchus</u> sp. | 275 | 1.1 | 2 | 3.6 | 1722 | 5.9 | 5 | 6.8 | | | | |
| Salmonidae | | | | | | | | | 2025 | 4.7 | 4 | 4.3 |
| Coryphaenidae | | | | | | | | | 4615 | 10.8 | 8 | 8.6 |
| <u>Clupea harengus pallasii</u> | | | | | | | | | 51 | 0.1 | 1 | 1.1 |
| <u>Cololabis saira</u> | 10 | 0.0 | 1 | 1.8 | 5875 | 20.0 | 9 | 12.2 | 550 | 1.3 | 1 | 1.1 |
| Myctophidae | | | | | 31 | 0.1 | 1 | 1.3 | 99 | 0.2 | 1 | 1.1 |
| Unidentified fishes | 325 | 1.3 | 3 | 5.3 | 1507 | 5.1 | 14 | 18.9 | 4270 | 9.9 | 14 | 15.0 |
| Squid | | | | | | | | | | | | |
| <u>Gonatopsis borealis</u> | 130 | 0.5 | 1 | 1.8 | | | | | | | | |
| <u>Onychoteuthis banksii</u> | 130 | 0.5 | 1 | 1.8 | | | | | 50 | 0.1 | 2 | 2.1 |
| <u>Ommastrephes sloani pacificus</u> | | | | | 180 | 0.6 | 2 | 2.7 | | | | |
| <u>Gonatus magister</u> | 290 | 1.1 | 1 | 1.8 | | | | | | | | |
| Unidentified squid | 10 | 0.0 | 3 | 5.4 | 140 | 0.5 | 8 | 10.8 | 350 | 0.8 | 8 | 8.6 |
| Miscellaneous | | | | | | | | | | | | |
| <u>Theragra chalcogramma</u> and squid | 370 | 1.4 | 1 | 1.8 | | | | | | | | |
| Gadidae and <u>Oncorhynchus</u> sp. | | | | | 1980 | 6.8 | 2 | 2.7 | | | | |
| <u>Theragra chalcogramma</u> and | | | | | 1810 | 6.2 | 2 | 2.7 | | | | |
| <u>Cololabis saira</u> | | | | | | | | | | | | |
| Fish and squid | | | | | 19 | 0.1 | 1 | 1.3 | | | | |
| Pebbles | | | | | | | | | | | 1 | 1.1 |
| Stones | | | | | 100 | 0.3 | 1 | 1.3 | | | | |
| Unidentified | 175 | 0.7 | 1 | 1.8 | 1045 | 3.6 | 7 | 9.5 | | | | |
| Total | 25611 | 100.0 | 56 | 100.0 | 29309 | 100.0 | 74 | 100.0 | 42943 | 100.0 | 93 | 100.0 |
| Stomachs with food | | | 50 | | | | 62 | | | | 69 | |
| Stomachs with trace | | | 56 | | | | 99 | | | | 43 | |

| Food Items | 1974 | | | | | | | | | | | |
|---------------------------------------|--------|-------|-----------|-------|--------|-------|-----------|-------|-----------|-------|-----------|-------|
| | July | | | | August | | | | September | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| Gadidae | 8421 | 16.0 | 39 | 24.5 | 9551 | 12.1 | 52 | 29.2 | 20725 | 19.4 | 45 | 26.1 |
| <u>Theragra chalcogramma</u> | 32360 | 61.6 | 42 | 26.4 | 54856 | 69.7 | 65 | 36.5 | 66440 | 62.0 | 50 | 29.0 |
| <u>Gadus macrocephalus</u> | 390 | 0.7 | 1 | 0.6 | 1800 | 2.3 | 1 | 0.6 | | | | |
| <u>Oncorhynchus gorbuscha</u> | 2290 | 4.4 | 4 | 2.5 | 1630 | 2.1 | 3 | 1.7 | 590 | 0.6 | 2 | 1.2 |
| <u>Oncorhynchus keta</u> | 2720 | 5.2 | 5 | 3.2 | 480 | 0.6 | 1 | 0.6 | | | | |
| <u>Oncorhynchus</u> sp. | 2738 | 5.2 | 7 | 4.4 | 3025 | 3.9 | 6 | 3.4 | 30 | 0.0 | 1 | 0.6 |
| <u>Pleurogrammus azonus</u> | 1235 | 2.4 | 6 | 3.8 | 1765 | 2.2 | 6 | 3.4 | 16405 | 15.3 | 35 | 20.3 |
| <u>Ammodytes</u> sp. | 2 | 0.0 | 2 | 1.3 | 29 | 0.0 | 4 | 2.2 | 359 | 0.3 | 4 | 2.3 |
| <u>Blennioidei</u> | 1215 | 2.3 | 4 | 2.5 | 1520 | 1.9 | 5 | 2.8 | 70 | 0.1 | 2 | 1.2 |
| <u>Entosphenus</u> sp. | 10 | 0.0 | 1 | 0.6 | | | | | 70 | 0.1 | 2 | 1.2 |
| <u>Oncorhynchus masou</u> | | | | | 695 | 0.9 | 2 | 1.1 | 295 | 0.3 | 2 | 1.2 |
| <u>Clupea harengus pallasii</u> | | | | | 272 | 0.4 | 2 | 1.1 | 360 | 0.3 | 2 | 1.2 |
| <u>Salvelinus</u> sp. | | | | | 5 | 0.0 | 1 | 0.6 | | | | |
| Unidentified fishes | 435 | 0.8 | 7 | 4.4 | 2127 | 2.7 | 9 | 5.0 | 1420 | 1.3 | 11 | 6.4 |
| Squid | | | | | | | | | | | | |
| <u>Onychoteuthis borealijaponicus</u> | | | | | 210 | 0.3 | 1 | 0.6 | | | | |
| <u>Ommastrephes sloani pacificus</u> | | | | | | | | | 228 | 0.2 | 2 | 1.2 |
| Unidentified squid | 718 | 1.4 | 39 | 24.6 | 570 | 0.7 | 18 | 10.1 | 90 | 0.1 | 11 | 6.4 |
| Miscellaneous | | | | | | | | | | | | |
| <u>Thysanoessa</u> sp. and | 4 | 0.0 | 1 | 0.6 | | | | | | | | |
| <u>Themisto</u> sp. | | | | | | | | | | | | |
| Pebbles | 1 | 0.0 | 1 | 0.6 | 135 | 0.2 | 2 | 1.1 | 37 | 0.0 | 3 | 1.7 |
| Total | 52539 | 100.0 | 159 | 100.0 | 78670 | 100.0 | 178 | 100.0 | 107119 | 100.0 | 172 | 100.0 |
| Stomachs with food | | | 111 | | | | 139 | | | | 133 | |
| Stomachs with trace | | | 99 | | | | 122 | | | | 57 | |
| Stomachs without food | | | 39 | | | | 38 | | | | 30 | |

| Food Items | 1975 | | | | | | | | | | | | | | | |
|-----------------------------|--------|-------|-----------|-------|--------|-------|-----------|-------|-----------|-------|-----------|-------|---------|-------|-----------|-------|
| | July | | | | August | | | | September | | | | October | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| <u>Theragra</u> | 53053 | 60.7 | 87 | 46.8 | 7397 | 7.3 | 18 | 10.5 | 16118 | 35.7 | 35 | 31.0 | 22405 | 47.5 | 21 | 31.8 |
| <u>chalcogramma</u> | | | | | | | | | | | | | | | | |
| <u>Eleginus gracilis</u> | 2760 | 3.2 | 9 | 4.8 | 215 | 0.2 | 1 | 0.6 | 2035 | 4.5 | 6 | 5.3 | | | | |
| <u>Gadidae</u> | 25 | 0.0 | 1 | 0.5 | 163 | 0.2 | 4 | 2.3 | 2680 | 5.9 | 8 | 7.1 | 70 | 0.1 | 1 | 1.5 |
| <u>Oncorhynchus</u> | 14350 | 16.4 | 19 | 10.2 | 42657 | 42.0 | 42 | 24.6 | 110 | 0.2 | 1 | 0.9 | | | | |
| <u>gorbuscha</u> | | | | | | | | | | | | | | | | |
| <u>Oncorhynchus masou</u> | 3270 | 3.8 | 4 | 2.2 | 5745 | 5.7 | 11 | 6.4 | | | | | | | | |
| <u>Oncorhynchus keta</u> | 1660 | 1.9 | 1 | 0.5 | 460 | 0.4 | 1 | 0.6 | | | | | | | | |
| <u>Oncorhynchus sp.</u> | 5145 | 5.9 | 15 | 8.1 | 14465 | 14.3 | 33 | 19.3 | 510 | 1.1 | 5 | 4.4 | 1045 | 2.2 | 5 | 7.6 |
| <u>Cololabis saira</u> | 245 | 0.3 | 3 | 1.6 | 3993 | 3.9 | 10 | 5.8 | | | | | | | | |
| <u>Ammodytes sp.</u> | 721 | 0.8 | 8 | 4.3 | 1615 | 1.6 | 3 | 1.8 | 10220 | 22.6 | 20 | 17.7 | 1090 | 2.3 | 4 | 6.1 |
| <u>Pleurogrammus azonus</u> | 100 | 0.1 | 1 | 0.5 | | | | | 6955 | 15.4 | 15 | 13.3 | 21360 | 45.3 | 32 | 48.5 |
| <u>Entosphenus sp.</u> | 29 | 0.0 | 2 | 1.1 | 140 | 0.1 | 2 | 1.2 | 40 | 0.1 | 1 | 0.9 | | | | |
| <u>Blennoidei</u> | 2035 | 2.3 | 4 | 2.2 | 1795 | 1.8 | 4 | 2.3 | 180 | 0.4 | 1 | 0.9 | | | | |
| <u>Clupea harengus</u> | | | | | | | | | | | | | | | | |
| <u>pallasi</u> | | | | | 15310 | 15.1 | 26 | 15.2 | 1560 | 3.5 | 2 | 1.7 | | | | |
| <u>Osmeridae</u> | | | | | | | | | 130 | 0.3 | 1 | 0.9 | 840 | 1.8 | 1 | 1.5 |
| Unidentified fishes | 3472 | 4.0 | 23 | 12.4 | 2443 | 2.4 | 13 | 7.6 | 4670 | 10.3 | 18 | 15.9 | 310 | 0.7 | 1 | 1.5 |
| Squid | | | | | | | | | | | | | | | | |
| <u>Ommastrephes</u> | | | | | | | | | | | | | | | | |
| <u>sloani pacificus</u> | 65 | 0.1 | 1 | 0.5 | | | | | | | | | | | | |
| Unidentified squid | 421 | 0.5 | 8 | 4.3 | | | | | | | | | 25 | 0.1 | 1 | 1.5 |
| Miscellaneous | | | | | | | | | | | | | | | | |
| <u>Themisto sp.</u> | trace | - | 1 | - | | | | | | | | | | | | |
| Mixed | | | | | 5040 | 5.0 | 3 | 1.8 | | | | | | | | |
| Pebbles | 75gr. | - | 3 | - | 86gr. | - | 3 | - | 334gr. | - | 3 | - | 22gr. | - | 3 | - |
| <u>Thysanoessa sp.</u> | | | | | | | | | trace | - | 2 | - | | | | |
| Inorganic material | | | | | | | | | trace | - | 1 | - | | | | |
| Total | 45213 | 100.0 | 186 | 100.0 | 101438 | 100.0 | 171 | 100.0 | 45213 | 100.0 | 113 | 100.0 | 47145 | 100.0 | 66 | 100.0 |
| Stomachs with food | | | 144 | | | | 136 | | | | 106 | | | | 53 | |
| Stomachs with trace | | | 183 | | | | 158 | | | | 125 | | | | 28 | |

| Food Items | 1976 | | | | | | | | | | | | | | | |
|-----------------------|--------|-------|-----------|-------|-----------|-------|-----------|-------|---------|-------|-----------|-------|----------|-------|-----------|-------|
| | August | | | | September | | | | October | | | | November | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| Theragra | | | | | | | | | | | | | | | | |
| chalcogramma | 10861 | 16.5 | 19 | 13.7 | 1270 | 1.6 | 1 | 1.1 | | | | | | | | |
| Eleginus gracilis | 24 | 0.0 | 1 | 0.7 | | | | | | | | | | | | |
| Gadidae | 209 | 0.3 | 5 | 3.6 | 90 | 0.1 | 1 | 1.1 | | | | | | | | |
| Oncorhynchus | | | | | | | | | | | | | | | | |
| gorbuscha | 9415 | 14.3 | 16 | 11.5 | | | | | | | | | | | | |
| Oncorhynchus sp. | 2568 | 3.9 | 13 | 9.3 | | | | | 65 | 6.3 | 1 | 33.3 | 4198 | 51.4 | 11 | 47.8 |
| Osmeridae | 3105 | 4.7 | 9 | 6.5 | 10047 | 12.3 | 12 | 13.3 | | | | | | | | |
| Ammodytes sp. | 19765 | 30.0 | 24 | 17.3 | 10480 | 12.8 | 15 | 16.7 | | | | | | | | |
| Clupea harengus | | | | | | | | | | | | | | | | |
| pallasi | 1360 | 2.1 | 1 | 0.7 | | | | | | | | | | | | |
| Entosphenus sp. | 75 | 0.1 | 2 | 1.4 | 170 | 0.2 | 2 | 2.2 | | | | | | | | |
| Pleurogrammus azonus | 7851 | 11.9 | 24 | 17.3 | 59365 | 72.7 | 54 | 60.0 | 610 | 59.5 | 1 | 33.4 | 2975 | 36.4 | 4 | 17.4 |
| Blennoidei | 6408 | 9.8 | 20 | 14.4 | 22 | 0.0 | 1 | 1.1 | | | | | | | | |
| Cololabis saira | | | | | | | | | | | | | 45 | 0.6 | 1 | 4.4 |
| Unidentified fishes | 700 | 1.1 | 3 | 2.2 | 245 | 0.3 | 4 | 4.5 | 350 | 34.2 | 1 | 33.3 | 215 | 2.6 | 2 | 8.7 |
| Squid | | | | | | | | | | | | | | | | |
| Ommastrephes sloani | | | | | | | | | | | | | | | | |
| pacificus | | | | | | | | | | | | | 690 | 8.5 | 4 | 17.4 |
| Unidentified squid | | | | | | | | | | | | | 40 | 0.5 | 1 | 4.3 |
| Miscellaneous | | | | | | | | | | | | | | | | |
| Mixed | 3470 | 5.3 | 2 | 1.4 | | | | | | | | | | | | |
| Pebbles | 169gr. | - | 5 | - | 3 gr. | - | 1 | - | 2 gr. | - | 1 | - | | | | |
| Total | 65811 | 100.0 | 139 | 100.0 | 81689 | 100.0 | 90 | 100.0 | 1025 | 100.0 | 3 | 100.0 | 8163 | 100.0 | 23 | 100.0 |
| Stomachs with food | | | 116 | | | | 84 | | | | 3 | | | | 17 | |
| Stomachs with trace | | | 146 | | | | 67 | | | | 18 | | | | 24 | |
| Stomachs without food | | | 56 | | | | 18 | | | | 5 | | | | 5 | |

| Food Items | 1978 | | | | | | | |
|---------------------------------------|--------|-------|-----------|-------|---------|-------|-----------|-------|
| | July | | | | August | | | |
| | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | |
| <u>Theragra chalcogramma</u> | 43670 | 40.1 | 82 | 35.8 | 5406 | 20.3 | 11 | 14.7 |
| Gadidae | 190 | 0.2 | 1 | 0.4 | 185 | 0.7 | 2 | 2.7 |
| <u>Oncorhynchus gorbuscha</u> | 14255 | 13.1 | 17 | 7.4 | 1665 | 6.3 | 5 | 6.7 |
| <u>Oncorhynchus</u> sp. | 1765 | 1.6 | 7 | 3.1 | 2170 | 8.1 | 8 | 10.7 |
| Zoarcidae | 26675 | 24.5 | 39 | 17.1 | 11655 | 43.8 | 26 | 34.7 |
| <u>Clupea harengus pallasii</u> | 85 | 0.1 | 1 | 0.4 | | | | |
| <u>Sebastes</u> sp. | 55 | 0.0 | 1 | 0.4 | 30 | 0.1 | 1 | 1.3 |
| <u>Pleurogrammus azonus</u> | 75 | 0.1 | 1 | 0.4 | 605 | 2.3 | 4 | 5.3 |
| <u>Ammodytes</u> sp. | 40 | 0.0 | 1 | 0.4 | | | | |
| <u>Oncorhynchus keta</u> | | | | | 1640 | 6.2 | 1 | 1.3 |
| Unidentified fishes | 16606 | 15.2 | 28 | 12.3 | 409 | 1.5 | 4 | 5.3 |
| Squid | | | | | | | | |
| <u>Todarodes pacificus</u> | 320 | 0.3 | 6 | 2.6 | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 1115 | 1.0 | 13 | 5.7 | 350 | 1.3 | 6 | 8.0 |
| Unidentified squid | 1153 | 1.1 | 28 | 12.2 | 133 | 0.5 | 4 | 5.3 |
| Miscellaneous | | | | | | | | |
| Mixed | 2960 | 2.7 | 4 | 1.8 | 2380 | 8.9 | 3 | 4.0 |
| Small stone | - | - | 1 | - | 3.5 gr. | - | 2 | - |
| Total | 108964 | 100.0 | 229 | 100.0 | 26628 | 100.0 | 75 | 100.0 |
| Stomachs with food | | | 157 | | | | 56 | |
| Stomachs with trace | | | 111 | | | | 73 | |
| Stomachs without food | | | 69 | | | | 71 | |

Table 47
Monthly stomach contents of fur seals taken
off Joban, Sanriku and Doto.

| Food Items | 1964 | | | | | | | | | | | | | | | |
|--|--------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | March | | | | April | | | | May | | | | June | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| <u>Diaphus</u> sp. | 7203 | 12.0 | 20 | 19.8 | 900 | 1.6 | 4 | 3.5 | 2540 | 8.7 | 10 | 10.5 | | | | |
| <u>Notoscophelus</u> <u>elongatus</u> | 47120 | 78.7 | 64 | 63.4 | 53586 | 96.4 | 101 | 89.4 | 25970 | 88.4 | 77 | 81.1 | 1830 | 30.6 | 5 | 26.3 |
| <u>Cololabis</u> <u>saira</u> | 100 | 0.2 | 1 | 1.0 | | | | | | | | | | | | |
| <u>Gadus</u> <u>macrocephalus</u> | 3980 | 6.6 | 2 | 2.0 | | | | | | | | | | | | |
| <u>Scomber</u> <u>japonicus</u> | | | | | 70 | 0.1 | 1 | 0.9 | | | | | 3860 | 64.4 | 11 | 57.9 |
| Unidentified fish | | | | | | | | | | | | | trace | - | 1 | 5.3 |
| Squid | | | | | | | | | | | | | | | | |
| <u>Loligo</u> <u>bleekeri</u> | 100 | 0.2 | 1 | 1.0 | 540 | 1.0 | 3 | 2.7 | 160 | 0.5 | 1 | 1.1 | | | | |
| <u>Onychoteuthis</u> <u>banksii</u> | 200 | 0.3 | 1 | 1.0 | | | | | | | | | | | | |
| <u>Moroteuthis</u> <u>lonnbergii</u> | 270 | 0.5 | 4 | 4.0 | | | | | | | | | | | | |
| <u>Watasenia</u> <u>scintillans</u> | 320 | 0.5 | 4 | 4.0 | | | | | | | | | | | | |
| <u>Ommastrephes</u> <u>sloani</u> | 660 | 1.0 | 4 | 4.0 | 240 | 0.4 | 3 | 2.7 | 690 | 2.4 | 7 | 7.4 | 100 | 1.7 | 1 | 5.3 |
| <u>pacificus</u> Unidentified squid | | | | | | | | | | | | | 200 | 3.3 | 1 | 5.3 |
| Miscellaneous | | | | | | | | | | | | | | | | |
| <u>Larus</u> <u>crassirostris</u> <u>vieillot</u> | | | | | 330 | 0.5 | 1 | 0.9 | | | | | | | | |
| Total | 59953 | 100.0 | 101 | 100.0 | 55636 | 100.0 | 113 | 100.0 | 29360 | 100.0 | 95 | 100.0 | 5990 | 100.0 | 19 | 100.0 |
| Stomachs with food | | | 91 | | | | 106 | | | | 88 | | | | 15 | |
| Stomachs without food | | | 239 | | | | 291 | | | | 440 | | | | 48 | |

| Food Items | February | | | | 1972 March | | | | April | | | |
|--|----------|-------|-----------|-------|---------------|-------|-----------|-------|--------|-------|-----------|-------|
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| <u>Scomber japonicus</u> | 1580 | 57.8 | 3 | 49.9 | 14123 | 35.4 | 44 | 30.3 | 51 | 0.4 | 3 | 5.5 |
| Gadidae | 840 | 30.7 | 1 | 16.7 | 645 | 1.6 | 1 | 0.7 | | | | |
| <u>Engraulis japonica</u> | | | | | 3140 | 7.9 | 14 | 9.7 | 4464 | 33.4 | 10 | 18.2 |
| Myctophidae | | | | | 7585 | 19.0 | 12 | 8.3 | 3220 | 24.1 | 8 | 14.5 |
| Unidentified fishes | | | | | 675 | 1.7 | 10 | 6.9 | 1021 | 7.6 | 9 | 16.4 |
| Squid | | | | | | | | | | | | |
| <u>Moroteuthis robusta</u> | 195 | 7.1 | 1 | 16.7 | 7810 | 19.6 | 11 | 7.6 | 480 | 3.6 | 1 | 1.8 |
| <u>Onychoteuthis banksii</u> | 120 | 4.4 | 1 | 16.7 | 1709 | 4.3 | 9 | 6.2 | | | | |
| <u>Watasenia scintillans</u> | | | | | 880 | 2.2 | 8 | 5.5 | 815 | 6.1 | 2 | 3.6 |
| <u>Enoploteuthis chunii</u> | | | | | 890 | 2.2 | 5 | 3.4 | | | | |
| <u>Ommastrephes sloani pacificus</u> | | | | | | | | | 370 | 2.8 | 1 | 1.8 |
| Unidentified squid | | | | | 1598 | 4.0 | 29 | 20.0 | 2536 | 18.9 | 20 | 36.4 |
| Miscellaneous | | | | | | | | | | | | |
| Myctophidae and Gadidae | | | | | 540 | 1.3 | 1 | 0.7 | | | | |
| <u>Scomber japonicus</u> and | | | | | 315 | 0.8 | 1 | 0.7 | | | | |
| <u>Engraulis japonica</u> | | | | | | | | | | | | |
| <u>Scomber japonicus</u> and Myctophidae | | | | | 420 | 3.1 | 1 | 1.8 | | | | |
| Total | 2735 | 100.0 | 6 | 100.0 | 39910 | 100.0 | 145 | 100.0 | 13377 | 100.0 | 55 | 100.0 |
| Stomachs with food | | | 4 | | | | 103 | | | | 41 | |
| Stomachs with trace | | | 7 | | | | 118 | | | | 41 | |
| Stomachs without food | | | 14 | | | | 85 | | | | 26 | |

| <u>Food Items</u> | <u>1972 (continued)</u> | | | | | | | |
|------------------------------|-------------------------|----------|------------------|----------|---------------|----------|------------------|----------|
| | <u>May</u> | | | | <u>June</u> | | | |
| | <u>Volume</u> | | <u>Frequency</u> | | <u>Volume</u> | | <u>Frequency</u> | |
| | <u>cc</u> | <u>%</u> | <u>No.</u> | <u>%</u> | <u>cc</u> | <u>%</u> | <u>No.</u> | <u>%</u> |
| Fish | | | | | | | | |
| <u>Scomber japonicus</u> | 90 | 4.6 | 1 | 7.7 | | | | |
| Myctophidae | 970 | 49.2 | 4 | 30.8 | 160 | 26.9 | 1 | 25.0 |
| Unidentified fishes | 768 | 39.0 | 5 | 38.4 | 425 | 71.4 | 1 | 25.0 |
| Squid | | | | | | | | |
| <u>Onychoteuthis banksii</u> | 70 | 3.5 | 1 | 7.7 | | | | |
| Unidentified squid | 72 | 3.7 | 2 | 15.4 | 10 | 1.7 | 2 | 50.0 |
| Total | 1970 | 100.0 | 13 | 100.0 | 595 | 100.0 | 4 | 100.0 |
| Stomachs with food | | | 11 | | | | 4 | |
| Stomachs with trace | | | 9 | | | | 3 | |
| Stomachs without food | | | 3 | | | | 5 | |

| Food Items | 1978 | | | | | | | | | | | |
|-------------------------------|---------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | January | | | | May | | | | June | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| <u>Theragra chalcogramma</u> | 23410 | 98.0 | 37 | 94.8 | | | | | | | | |
| <u>Arctoscopus japonicus</u> | 470 | 2.0 | 1 | 2.6 | | | | | | | | |
| <u>Scomber japonicus</u> | | | | | 465 | 6.5 | 5 | 22.7 | 130 | 0.7 | 3 | 5.4 |
| Myctophidae | | | | | 2965 | 41.7 | 7 | 31.8 | 10280 | 57.9 | 21 | 38.2 |
| <u>Sardinops melanosticta</u> | | | | | 2380 | 33.5 | 6 | 27.3 | 6200 | 34.9 | 15 | 27.3 |
| <u>Engraulis japonicus</u> | | | | | 120 | 1.7 | 1 | 4.6 | | | | |
| <u>Oncorhynchus sp.</u> | | | | | 1130 | 15.9 | 1 | 4.6 | | | | |
| Unidentified fishes | | | | | 20 | 0.3 | 1 | 4.5 | 185 | 1.0 | 3 | 5.5 |
| Squid | | | | | | | | | | | | |
| <u>Todarodes pacificus</u> | | | | | | | | | 50 | 0.3 | 1 | 1.8 |
| Unidentified squid | | | | | 30 | 0.4 | 1 | 4.5 | 915 | 5.2 | 12 | 21.8 |
| Miscellaneous | | | | | | | | | | | | |
| Sea bird | 90 gr. | - | 1 | 2.6 | | | | | | | | |
| Small wood | | | | | | | | | - | - | 1 | - |
| Total | 23880 | 100.0 | 39 | 100.0 | 7110 | 100.0 | 22 | 100.0 | 17760 | 100.0 | 55 | 100.0 |
| Stomachs with food | | | 38 | | | | 17 | | | | 46 | |
| Stomachs with trace | | | 37 | | | | 22 | | | | 87 | |
| Stomachs without food | | | 19 | | | | 8 | | | | 44 | |

Table 48
Monthly stomach contents of fur seals
taken off Joban and Sanriku.

| Food Items | 1966 | | | | | | | | | | | | | | | |
|------------------------------|--------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | March | | | | April | | | | May | | | | June | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| <u>Diaphus</u> sp. | 7737 | 54.2 | 23 | 33.3 | 1120 | 5.5 | 2 | 3.6 | 2457 | 7.1 | 12 | 10.6 | | | | |
| <u>Notoscopelus</u> | 364 | 2.5 | 5 | 7.2 | 9225 | 45.2 | 21 | 37.5 | 26406 | 76.0 | 64 | 56.6 | 1375 | 28.4 | 6 | 18.2 |
| <u>elongatus</u> | | | | | | | | | | | | | | | | |
| <u>Scomber japonicus</u> | 40 | 0.3 | 2 | 2.0 | | | | | | | | | 200 | 4.2 | 1 | 3.0 |
| <u>Theragra chalcogramma</u> | 380 | 2.6 | 2 | 2.9 | | | | | | | | | | | | |
| <u>Engraulis japonica</u> | | | | | | | | | 2560 | 7.4 | 4 | 3.5 | | | | |
| Unidentified fishes | | | | | | | | | 116 | 0.3 | 1 | 0.9 | | | | |
| Squid | | | | | | | | | | | | | | | | |
| <u>Watasenia</u> | 3942 | 27.6 | 24 | 34.8 | 20 | 0.1 | 2 | 3.6 | | | | | | | | |
| <u>scintillans</u> | | | | | | | | | | | | | | | | |
| Unidentified squid | 1822 | 12.8 | 13 | 18.8 | 10050 | 49.2 | 31 | 55.4 | 3206 | 9.2 | 32 | 28.3 | 3262 | 67.4 | 26 | 78.8 |
| Total | 14285 | 100.0 | 69 | 100.0 | 20415 | 100.0 | 56 | 100.0 | 34745 | 100.0 | 113 | 100.0 | 4837 | 100.0 | 33 | 100.0 |
| Stomachs with food | | | 40 | | | | 46 | | | | 92 | | | | 27 | |
| Stomachs without food | | | 104 | | | | 158 | | | | 191 | | | | 56 | |

| Food Items | 1968 | | | | | | | | | | | | | | | |
|------------------------------|---------|-------|-----------|-------|----------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | January | | | | February | | | | March | | | | April | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| Gadidae | 7400 | 75.5 | 4 | 36.3 | | | | | | | | | | | | |
| <u>Scomber japonicus</u> | 1900 | 19.4 | 1 | 9.1 | 6370 | 27.8 | 9 | 20.5 | 1350 | 22.5 | 2 | 7.7 | | | | |
| <u>Theragra chalcogramma</u> | | | | | 6493 | 28.3 | 7 | 15.9 | 1370 | 22.8 | 1 | 3.9 | 9120 | 88.3 | 2 | 33.3 |
| <u>Diaphus</u> sp. | | | | | 525 | 2.3 | 3 | 6.8 | 1600 | 26.6 | 2 | 7.7 | 926 | 9.0 | 3 | 50.0 |
| Unidentified fishes | 366 | 3.7 | 3 | 27.3 | 345 | 1.5 | 5 | 11.4 | 227 | 3.8 | 3 | 11.5 | | | | |
| Squid | | | | | | | | | | | | | | | | |
| <u>Ommastrephes sloani</u> | 136 | 1.4 | 3 | 27.3 | 8699 | 37.9 | 10 | 22.7 | 1095 | 18.2 | 11 | 42.3 | 285 | 2.7 | 1 | 16.7 |
| <u>pacificus</u> | | | | | | | | | | | | | | | | |
| <u>Watasenia scintillans</u> | | | | | 140 | 0.6 | 6 | 13.6 | 367 | 6.1 | 7 | 26.9 | | | | |
| Unidentified squid | | | | | 630 | 1.6 | 4 | 9.1 | | | | | | | | |
| Total | 9802 | 100.0 | 11 | 100.0 | 22932 | 100.0 | 44 | 100.0 | 6009 | 100.0 | 26 | 100.0 | 10331 | 100.0 | 6 | 100.0 |
| Stomachs with food | | | 10 | | | | 42 | | | | 25 | | | | 6 | |
| Stomachs without food | | | 14 | | | | 71 | | | | 59 | | | | 36 | |

| Food Items | 1970 | | | | | | | | | | | |
|--------------------------------------|---------|-------|-----------|-------|----------|-------|-----------|-------|--------|-------|-----------|-------|
| | January | | | | February | | | | March | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| <u>Scomber japonicus</u> | 10135 | 74.7 | 17 | 53.2 | 17495 | 30.5 | 37 | 34.6 | 13367 | 64.6 | 32 | 48.5 |
| <u>Decapterus muroadsi</u> | 340 | 2.5 | 1 | 3.1 | | | | | 360 | 1.7 | 1 | 1.5 |
| <u>Engraulis japonica</u> | 430 | 3.2 | 1 | 3.1 | | | | | | | | |
| <u>Diaphus</u> sp. | | | | | 1010 | 1.8 | 2 | 1.9 | trace | 0.0 | 1 | 1.5 |
| <u>Trachurus japonicus</u> | | | | | 225 | 0.4 | 1 | 0.9 | | | | |
| Gadidae and Scombridae | | | | | 8285 | 14.5 | 5 | 4.7 | | | | |
| Myctophidae | | | | | 1480 | 2.6 | 1 | 0.9 | | | | |
| Gadidae | | | | | 16350 | 28.5 | 12 | 11.2 | 190 | 0.9 | 1 | 1.5 |
| Carangidae | | | | | 590 | 1.0 | 1 | 0.9 | | | | |
| Myctophidae | | | | | 3100 | 5.4 | 2 | 1.9 | | | | |
| <u>Theragra chalcogramma</u> | | | | | | | | | 2930 | 14.2 | 2 | 3.0 |
| Moridae | | | | | | | | | 470 | 2.3 | 1 | 1.5 |
| Unidentified fishes | 110 | 0.8 | 1 | 3.1 | 7250 | 12.7 | 29 | 27.1 | 610 | 2.9 | 9 | 13.7 |
| Squid | | | | | | | | | | | | |
| <u>Ommastrephes sloani pacificus</u> | 490 | 3.6 | 4 | 12.5 | | | | | 495 | 2.4 | 4 | 6.1 |
| <u>Watasenia scintillans</u> | 210 | 1.5 | 2 | 6.3 | 260 | 0.5 | 12 | 11.2 | 555 | 2.7 | 2 | 3.0 |
| Unidentified squid | 1630 | 12.0 | 5 | 15.6 | 1225 | 2.1 | 5 | 4.7 | 652 | 3.2 | 12 | 18.2 |
| Miscellaneous | | | | | | | | | | | | |
| Bird | 230 | 1.7 | 1 | 3.1 | | | | | | | | |
| Unidentified | | | | | | | | | 1060 | 5.1 | 1 | 1.5 |
| Total | 13575 | 100.0 | 32 | 100.0 | 57270 | 100.0 | 107 | 100.0 | 20689 | 100.0 | 66 | 100.0 |
| Stomachs with food | | | 23 | | | | 92 | | | | 60 | |
| Stomachs with trace | | | 24 | | | | 70 | | | | 107 | |
| Stomachs without food | | | 17 | | | | 60 | | | | 112 | |

| Food Items | February | | | | 1971 March | | | | April | | | |
|--------------------------------------|----------|-------|-----------|-------|---------------|-------|-----------|-------|--------|-------|-----------|-------|
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | |
| <u>Scomber japonicus</u> | 6150 | 51.6 | 20 | 27.8 | 115 | 0.9 | 3 | 3.8 | | | | |
| Gadidae | 960 | 8.1 | 2 | 2.7 | 825 | 6.5 | 1 | 1.3 | | | | |
| <u>Engraulis japonica</u> | 45 | 0.4 | 3 | 4.2 | 880 | 7.0 | 3 | 3.8 | 2870 | 85.7 | 2 | 50.0 |
| <u>Diaphus</u> sp. | | | | | | | | | 265 | 7.9 | 1 | 25.0 |
| Unidentified fishes | 100 | 0.8 | 9 | 12.5 | 2005 | 15.8 | 7 | 8.8 | | | | |
| Squid | | | | | | | | | | | | |
| <u>Ommastrephes sloani pacificus</u> | 2930 | 24.6 | 15 | 20.8 | 50 | 0.4 | 1 | 1.3 | | | | |
| Small squid | 685 | 5.7 | 3 | 4.2 | 5225 | 41.3 | 18 | 22.8 | 215 | 6.4 | 1 | 25.0 |
| <u>Watasenia scintillans</u> | * | * | 3 | 4.2 | 165 | 1.3 | 5 | 6.3 | | | | |
| Unidentified squid | 130 | 1.1 | 11 | 15.2 | 595 | 4.7 | 28 | 35.4 | | | | |
| Miscellaneous | | | | | | | | | | | | |
| <u>Scomber japonicus</u> and squid | 335 | 2.8 | 3 | 4.2 | 50 | 0.4 | 1 | 1.3 | | | | |
| Fish and squid | 590 | 4.9 | 3 | 4.2 | 1450 | 11.5 | 10 | 12.7 | | | | |
| <u>Diaphus</u> sp. and squid | | | | | 1290 | 10.2 | 2 | 2.5 | | | | |
| Total | 11925 | 100.0 | 72 | 100.0 | 12650 | 100.0 | 79 | 100.0 | 3350 | 100.0 | 4 | 100.0 |
| Stomachs with food | | | 63 | | | | 70 | | | | 4 | |
| Stomachs with trace | | | 56 | | | | 122 | | | | 14 | |
| Stomachs without food | | | 28 | | | | 48 | | | | 6 | |

| Food Items | 1971 (continued) | | | | | | | |
|--------------------------|------------------|-------|-----------|-------|--------|-------|-----------|-------|
| | May | | | | June | | | |
| | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | |
| <u>Scomber japonicus</u> | 1980 | 30.0 | 5 | 26.3 | | | | |
| <u>Diaphus</u> sp. | 4185 | 63.5 | 8 | 42.1 | * | * | 1 | 7.7 |
| Salmonidae | * | * | 1 | 5.3 | 530 | 37.2 | 1 | 7.7 |
| Unidentified fishes | 325 | 4.9 | 3 | 15.8 | * | * | 3 | 23.0 |
| Squid | | | | | | | | |
| Small squid | 105 | 1.6 | 1 | 5.3 | 590 | 41.4 | 3 | 23.0 |
| Unidentified squid | * | * | 1 | 5.3 | 305 | 21.4 | 5 | 38.6 |
| Total | 6595 | 100.0 | 19 | 100.0 | 1425 | 100.0 | 13 | 100.0 |
| Stomachs with food | | | | | | | 8 | |
| Stomachs with trace | | | | | | | 6 | |
| Stomachs without food | | | | | | | 0 | |

* Not measured

Table 49
Monthly stomach contents of fur seals
taken off Sanriku and Doto.

| Food Items | 1973 | | | | | | | |
|--------------------------------------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | May | | | | June | | | |
| | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | |
| Myctophidae | 3800 | 76.7 | 8 | 22.9 | 6125 | 73.0 | 18 | 29.5 |
| <u>Scomber japonicus</u> | | | | | 105 | 1.3 | 2 | 3.3 |
| Stomateidae | | | | | 155 | 1.8 | 1 | 1.6 |
| Unidentified fishes | 350 | 7.1 | 4 | 11.4 | 1005 | 12.0 | 20 | 32.8 |
| Squid | | | | | | | | |
| <u>Ommastrephes sloani pacificus</u> | 190 | 3.8 | 2 | 5.7 | 230 | 2.7 | 2 | 3.3 |
| <u>Moroteuthis robusta</u> | | | | | 425 | 5.1 | 4 | 6.6 |
| Unidentified squid | 615 | 12.4 | 21 | 60.0 | 342 | 4.1 | 13 | 21.3 |
| Miscellaneous | | | | | | | | |
| Piece of wood | | | | | - | - | 1 | 1.6 |
| Total | 4955 | 100.0 | 35 | 100.0 | 8387 | 100.0 | 61 | 100.0 |
| Stomachs with food | | | 34 | | | | 52 | |
| Stomachs with trace | | | 61 | | | | 131 | |
| Stomachs without food | | | 35 | | | | 62 | |

Table 50
Monthly stomach contents of fur seals
taken off Sanriku.

| Food Items | 1969 | | | | | | | | | | | | | | | |
|------------------------------|---------|-------|-----------|-------|----------|-------|-----------|-------|--------|-------|-----------|-------|--------|-------|-----------|-------|
| | January | | | | February | | | | March | | | | April | | | |
| | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | | Volume | | Frequency | |
| | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % | cc | % | No. | % |
| Fish | | | | | | | | | | | | | | | | |
| Moridae | 590 | 12.4 | 1 | 8.3 | 145 | 1.7 | 1 | 2.6 | 680 | 4.0 | 1 | 1.6 | | | | |
| <u>Scomber japonicus</u> | 400 | 8.4 | 2 | 16.7 | 1358 | 16.0 | 10 | 25.6 | 588 | 3.4 | 3 | 4.8 | | | | |
| Carangidae | 75 | 1.6 | 1 | 8.3 | 1326 | 15.7 | 4 | 10.2 | 76 | 0.4 | 1 | 1.6 | | | | |
| <u>Diaphus</u> sp. | 365 | 7.7 | 1 | 8.3 | 141 | 1.7 | 3 | 7.7 | 1350 | 7.9 | 5 | 7.9 | 751 | 18.9 | 2 | 13.3 |
| <u>Laemonema longipes</u> | | | | | 1710 | 20.2 | 1 | 2.6 | | | | | | | | |
| <u>Engraulis japonica</u> | | | | | | | | | 460 | 2.7 | 2 | 3.2 | 1869 | 47.0 | 3 | 20.0 |
| <u>Theragra chalcogramma</u> | | | | | | | | | 1005 | 5.9 | 2 | 3.2 | | | | |
| <u>Decapterus muroadsi</u> | | | | | | | | | 115 | 0.7 | 1 | 1.6 | | | | |
| Gadidae | | | | | | | | | 4895 | 28.5 | 4 | 6.3 | | | | |
| Unidentified fishes | 1110 | 23.4 | 2 | 16.7 | 3511 | 41.4 | 12 | 30.8 | 6227 | 36.3 | 21 | 33.3 | 1243 | 31.2 | 7 | 46.7 |
| Squid | | | | | | | | | | | | | | | | |
| <u>Watasenia scintillans</u> | 50 | 1.1 | 1 | 8.3 | 226 | 2.7 | 5 | 12.8 | 583 | 3.4 | 9 | 14.3 | 104 | 2.6 | 2 | 13.3 |
| <u>Ommastrephes sloani</u> | 100 | 2.1 | 1 | 8.3 | | | | | 443 | 2.6 | 4 | 6.3 | | | | |
| <u> pacificus</u> | | | | | | | | | | | | | | | | |
| <u>Onychoteuthis</u> | 1250 | 26.3 | 1 | 8.3 | | | | | | | | | | | | |
| <u> banksii</u> | | | | | | | | | | | | | | | | |
| Unidentified squid | 808 | 17.0 | 2 | 16.7 | 54 | 0.6 | 3 | 7.7 | 716 | 4.2 | 10 | 15.9 | 13 | 0.3 | 1 | 6.7 |
| Total | 4748 | 100.0 | 12 | 100.0 | 8470 | 100.0 | 39 | 100.0 | 17139 | 100.0 | 63 | 100.0 | 3980 | 100.0 | 15 | 100.0 |
| Stomachs with food | | | 8 | | | | 50 | | | | 57 | | | | 12 | |
| Stomachs with trace | | | 5 | | | | 27 | | | | 34 | | | | 9 | |
| Stomachs without food | | | 5 | | | | 27 | | | | 41 | | | | 10 | |

Table 51
Monthly stomach contents of fur seals
taken off Doto.

| Food Items | 1977 | | | |
|---------------------------------------|----------|-------|-----------|-------|
| | December | | | |
| | Volume | | Frequency | |
| | cc | % | No. | % |
| Fish | | | | |
| <u>Theragra chalcogramma</u> | 1255 | 25.6 | 3 | 18.7 |
| Hexagrammidae | 60 | 1.2 | 1 | 6.3 |
| <u>Arctoscopus japonicus</u> | 675 | 13.7 | 3 | 18.7 |
| Unidentified fishes | 25 | 0.5 | 1 | 6.3 |
| Squid | | | | |
| <u>Onychoteuthis borealijaponicus</u> | 350 | 7.1 | 3 | 18.7 |
| Unidentified squid | 2550 | 51.9 | 5 | 31.3 |
| Total | 4915 | 100.0 | 16 | 100.0 |
| Stomachs with food | | | 14 | |
| Stomachs with trace | | | 16 | |
| Stomachs without food | | | 13 | |