Pacific Islands Fisheries Science Center
Administrative Report H-04-02C

USE OF MARINE HABITATS BY HAWAIIAN MONK SEALS (*Monachus schauinslandi*) FROM LAYSAN ISLAND: SATELLITE-LINKED MONITORING IN 2001-2002

Brent S. Stewart, Ph.D., J.D.
and
Pamela K. Yochem, M.S., D.V.M.

Hubbs-SeaWorld Research Institute
2595 Ingraham Street
San Diego, CA 92109

January 2004

PREFACE

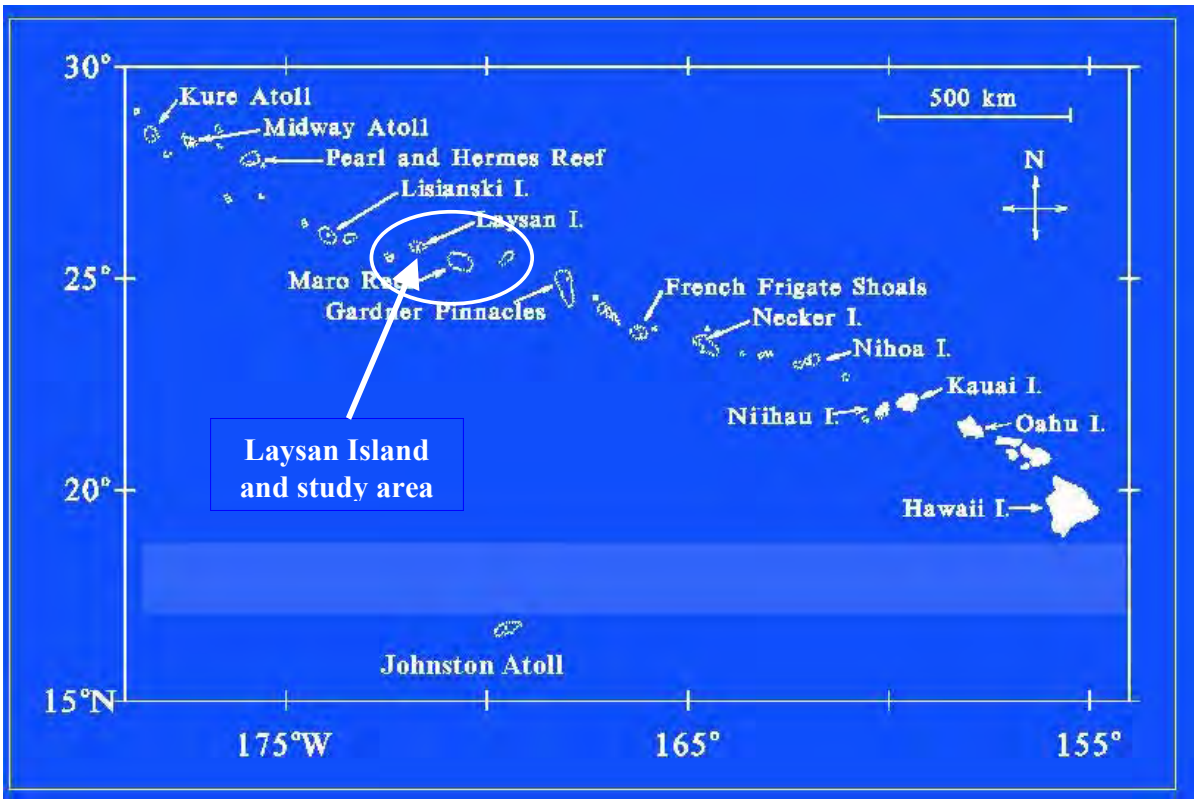
This report has been sponsored by the Pacific Islands Fisheries Science Center and provides the results of recent research efforts to ascertain the habitat use and foraging ecology of Hawaiian monk seals in the Northwestern Hawaiian Islands (NWHI). This work is a part of a research project involving a synthesis of all data available on the foraging behavior of Hawaiian monk seals in the NWHI. Subsequent publications of these results will involve a more thorough comparative analysis and interpretation of variation in individual and colony behaviors relative to variation in biotic and abiotic characteristics of marine habitats throughout the NWHI marine ecosystem.

This report was funded by contract AB133F-03-CN-0008. Because this report was prepared by an independent investigator, its statements, findings, conclusions, and recommendation do not necessarily reflect the official views of the National Marine Fisheries Service, NOAA, U.S. Department of Commerce.

George A. Antonelis
Marine Mammal Research Program
Protected Species Division
Bud.Antonelis@noaa.gov
January 2004

1. Introduction

The Hawaiian monk seal (*Monachus schauinslandi*) is endemic to the Hawaiian Island Archipelago with six principal colonies in the Northwestern Hawaiian Islands (NWHI) and reefs of the archipelago. The species was designated as *Endangered* in 1976 under the Endangered Species Act of 1973 (ESA) following declines of 50% from the late 1950s. Overall, numbers declined about 11% annually from 1989 through the mid-1990s, owing to low birth rates and poor survival of neonates and juveniles from a variety of known and unknown causes (e.g., Gilmartin and Eberhardt, 1995; Antonelis and Ragen, 1997; Craig and Ragen, 1999). The Hawaiian monk seal metapopulation now numbers 1,300 to 1,400 with colonies at six isolated sites in the NWHI and small but increasing numbers at the main Hawaiian Islands (Ragen and Lavigne, 1999; Baker and Johanos, 2004). Here we report the results of studies conducted at Laysan Island[1] (25°46'N, 171°44'W; Figures 1, 2), the second largest colony at 250-300 seals, from October 2001 through September 2002 to define the general geographic and vertical marine habitats used by seals when foraging.



[1] Laysan Island is approximately 1,400 km northwest of Honolulu and about 215 km southeast of the nearest neighboring colony of monk seals at Lisianski Island. The coral sand island is the top of a submerged volcanic peak and has only a relatively small surrounding coral reef habitat (ca 145,000 acres) with the distance to a surrounding fringing reef of 100 to 500 m. Beyond the reef, water depth increases gradually for about 8 km and then steeply to 3000 m or more (Ely and Clapp, 1973; http://www.hawaiireef.noaa.gov, accessed Nov. 2002).

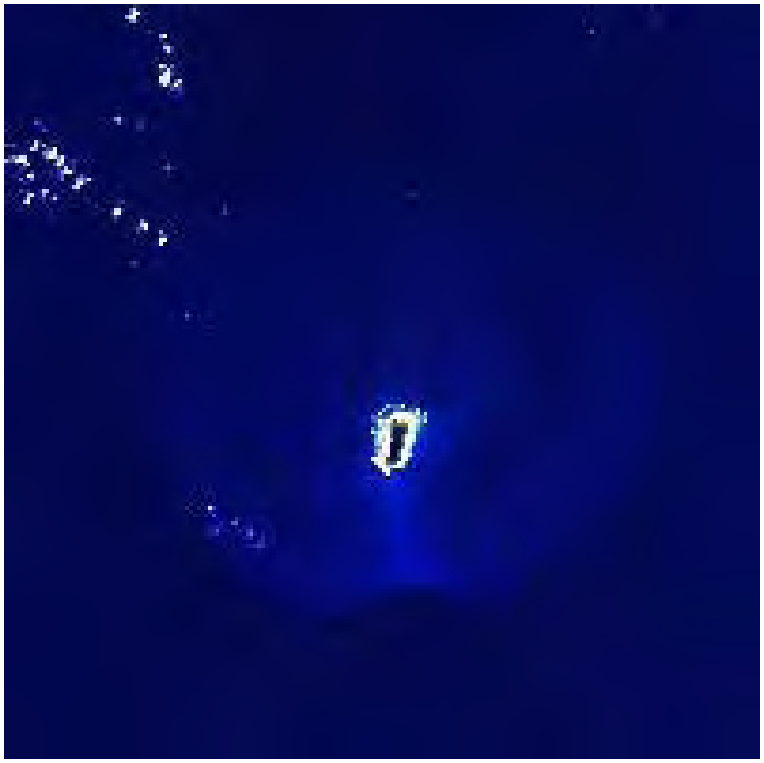


Figure 2. Laysan Island and surrounding seamount slope and near-surface coral reef.

2. Methods

Capture and restraint

We captured 30 Hawaiian monk seals at Laysan Island (25°46' N, 171°44'W) between 6 and 17 October 2001with a hoop net, physically restrained (Fig. 3), and then chemically sedated them with an intravenous (extradural vein) injection of diazepam (approximate dosage 0.11 mg/kg; Tables 1 & 2). Sedation was reversed with 0.25 mg flumazenil in one seal (TM24, a male weaned pup) when all procedures were completed (20 mins post-diazepam injection) to speed the animal's recovery and return to water owing to warm ambient air temperatures. Three seals (adult males TJ58 and TZ56, and one adult female TJ58) were given a precautionary intramuscular injection of atropine sulfate in response to a slight decline (but still within normal range) in heart rate, body temperature, or both.

Biomedical sampling

Within 2 to 4 minutes of intravenous injection of diazepam, we collected blood, tissue (blubber and skin), fecal and microbiological swab (ocular, nasal, oral, genital, rectal) samples. We took measurements of standard length and axillary girth to within 0.5 cm.

Figure 3. Physical restraint of Hawaiian monk seal
(note satellite transmitter attached to seal's back; Photo by B. Stewart).

Preliminary processing (including preservation of samples for shipping) of biomedical samples was accomplished within 2 to 5 hours of collection according to protocols established by Aguirre et al. (1999), Aguirre (2000), and the *2000 Field Manual for Research on the Hawaiian Monk Seal*.[2]

No dead, moribund or emaciated seals were observed during this field expedition. We collected biomedical samples from all 30 seals fitted with satellite transmitters. Minor clinical abnormalities were detected in five seals during physical exams. One seal (TD28, a 2-year old juvenile male) was slightly dehydrated ($\leq$ 5%), had bright yellow (normal odor) loose feces and multiple punctate ulcerations of the rectal mucosa in a region approximately 0.5 – 1.0 cm proximal to the anus. A female weaned pup (TM56) was slightly dehydrated ($\leq$ 5%). An adult female (T84F, non-cohort, $\geq$ 16 y) had a small central opacity in the left cornea. Tapeworms (sample collected) were visible at the anus and packed the rectum of a 7-year old adult female (TJ70). A 7-year old adult male (TJ58) had a slight, bilateral, pinkish-brown nasal discharge (nares otherwise normal, swabbed as per epidemiology protocol).

Tracking instrument deployment

Once seals were sedated and samples collected, we glued a satellite linked data recorder/transmitter (SLDR) to the dorsal pelage of each of 30 seals (10 weaned pups [5 females, 5 males]; 10 juveniles [5 males, 5 females]; 10 adults [5 males, 5 females]; Table 2) using a quick setting epoxy.

The SLDRS consisted of an ARGOS certified transmitter, for determination of geographic location, and a microprocessor controlled event recorder to monitor use of vertical marine habitats (diving behavior). The SLDRs deployed on weaned pups and some juveniles were capable of about 20,000 transmissions (Table 2). Those deployed on the other juveniles and on all adults had larger battery supplies and were capable of about 60,000 transmissions

[2] Anonymous. 2000. 2000 Field manual for research on the Hawaiian monk seal. Unpublished document, NOAA, SWFSC.

(Table 2). Effective transmission power output was 250 W for all PTTs.

Maximum depth of dive, duration of dive, and time at depth were summarized by 6-hour periods and then transmitted as frequency histograms (Table 3). The depth of the deepest dive made during each 24-hour period was recorded and transmitted separately. To conserve battery power and extend tracking, we programmed the SLDRS to be active only during periods of the day when good satellite coverage was expected (Appendix I). The SLDRs were also programmed to shift from a transmission rate of around 1/40 s to around 1/90 s once a seal was hauled out constantly for 6 to 10 minutes. Moreover, if the seal remained hauled out for about 70 minutes, transmissions ceased until it reentered the sea for more than 1.5 minutes. Whenever at sea, transmissions were suppressed when the SLDR was below the sea surface owing to an electrical conductivity circuit that closed whenever there was continuous saltwater contact between two or three electrodes mounted on the surface of the SLDR.

Locations were determined several times each day by the Argos earth-orbiting satellite system and the Argos Data Collection and Location Service (DCLS), as described in detail elsewhere (e.g., Fancy et al., 1988; Harris et al., 1990; Stewart et al., 1989; Stewart, 1997).

3. Results

Geographic dispersion of foraging monk seals

We tracked seals for 7 to 351 days and geographic locations were determined for each seal during 57 to 2861 of the satellite orbits (Tables 4 and 5). We filtered the locations to eliminate un-reliable ones based on the distance and time between successive locations and estimates of reasonable travel rates of monk seals (cf. Abernathy, 1999). We used the remaining locations to define general patterns of dispersion of foraging seals by age and sex (Figs. 4 and 5) and individually (Figs. 6, 7, 8, 9, 10, 11).

Virtually all seals ranged widely from Laysan Island to forage though there was considerable variation among seals (Figs. 6 through 11). Twenty (67%) of all seals traveled to and spent substantial time foraging at Maro Reef, including all male weaned pups and two of the female pups (Fig. 1). Moreover, ten seals traveled as far as Raita Bank to forage, including three pups (Table 6). Twelve seals also foraged around the Northampton Seamounts (Figs .6-11; Table 6).

Diving patterns

Daily maximum dive depths: All seals exceeded 40 meters[3] during the tracking period (Table 5) and most (80%) seals dove to 100 m or more. Indeed, dives of all adult females exceeded 300 m (Table 5) and they were consistently the deepest divers (cf Figs. 12-16). Adult females also were the most variable in daily dive depth maxima (Fig. 13).

[3] i.e., deeper than the currently defined *Critcal Habitat* for Hawaiian monk seals of 20 fathoms (36.6 m).

Dive depth frequency histograms: Over 12,000 depth histogram records were received for all seals accounting for over one million maximum depths of dives (Table 7). Overall, most dives were shallower than 40 m though there were clear secondary deeper modes at 60 to 80 m (juveniles and weaned pups), 120 to 140 m (adult females and weaned pups) and 250 to 350 m (adult females and juveniles) (Fig. 18). Adult males were consistently the shallowest divers (Figs. 19, 20, 21; cf. also 22-27). Nonetheless, foraging depths of seals of similar age and sex varied substantially (Figs. 22-27).

Dive duration frequency histograms: Over 12,000 duration histograms were received for all seals accounting for over one million measured dive durations (Table 7). Overall, most dives lasted eight minutes or less and there were no substantial differences among adults, juveniles, and weaned pups (Figs. 28-31), though durations of individuals of each group varied substantially (Figs. 32-37).

Time at depth: As a proxy for dive effort, the time-at-depth data suggest that individuals allocated substantial amounts of time foraging at depth (Figs. 38-41), though individuals varied considerably in those allocations (Figs. 42-46). Adult females, weaned pups, and juveniles all spent substantially greater amounts of time foraging at greater depths than adult males (cf. Figs. 42-46).

4. Acknowledgments

This study was a collaborative effort between the National Marine Fisheries Service, Honolulu Laboratory, and Hubbs-SeaWorld Research Institute. G. Antonelis of NMFS/SWFSC was the Field Team Leader for these collaborative efforts. We thank B. Ryon, J. Pearson, and G. Antonelis for field assistance; B. Ryon, L. Kashinsky, J. Henderson, G. Antonelis, and J. Baker for logistic and preparatory support; Midway Phoenix Corporation, G. Deutshcer and other staff of the USFWS for their logistic support at Midway Island and Laysan Island; and the crew of the *Katy Mary* for transport, landing and pickup support. The contract to Hubbs-SeaWorld Research Institute was administered by Dr. G. Antonelis at the NMFS Honolulu Laboratory. The research was authorized under the U.S. Marine Mammal Protection Act (16 U.S.C. §1361 *et seq*.), Scientific Research and Enhancement Permit No. 848-1335 to the Southwest Fisheries Science Center.

5. References

Aguirre, A.A. 2000. Health assessment and disease status studies of the Hawaiian monk seal (*Monachus schauinslandi*). NOAA/NMFS Admin. Report H-00-01. 44 pp.

Aguirre, A.A., Reif, J.S. and Antonelis, G.A. 1999. Hawaiian monk seal epidemiology plan: Health assessment and disease status studies. NOAA-TM-NMFS-SWFSC-280. 63 pp.

Antonelis, G.A. and Ragen, T. 1997. Habitat conservation and the Hawaiian monk seal. Pp. 142-149. In: Pinniped populations, Eastern North Pacific: Status, trends and issues (G.

Stone, J. Goebel, and S. Webster, eds.). Proceedings of a Symposium of the 127th Annual Meeting of the American Fisheries Society, Monterey, California.

Baker, J.D. and Johanos, T.C. 2004. Abundance of the Hawaiin monk seal in the main Hawaiian Islands. Biological Conservation 116:103-110.

Craig, M.P. and Ragen, T.J. 1999. Body size, survival, and decline of juvenile Hawaiian monk seals, *Monachus schauinslandi*. Marine Mammal Science 15:786-809.

Ely, C.A. and Clapp, R.B. 1973. The natural history of Laysan Island, Northwestern Hawaiian Islands. Atoll Research Bulletin 171: 1-361.

Fancy, S.G., et al. 1988. Satellite telemetry: a new tool for wildlife research and management. United States Fish and Wildlife Service Resources Publication, 171:1-54.

Gilmartin, W.G. and Eberhardt, L.L. 1995. Status of the Hawaiian monk seal (*Monachus schauinslandi*) population. Canadian Journal of Zoology 73:1185-1190.

Harris, R. B., et al. 1990. Tracking wildlife by satellite: current systems and performance. United States Department of the Interior, Fish and Wildlife Service Technical Report, 30:1-52.

Ragen, T.J. and Lavigne, D.M. 1999. The Hawaiian monk seal: Biology of an endangered species. Pp. 224-245, In: Conservation and management of marine mammals (Twiss, J.R. and Reeves, R.R., eds.). Smithsonian Institution Press. Washington, D.C. 471 pp.

Stewart, B. S. 1997. Ontogeny of differential migration and sexual segregation in northern elephant seals. Journal of Mammalogy 78:1101-1116.

Stewart, B.S., Leatherwood, S., Yochem, P.K. and Heide-Jorgensen, M.P. 1989. Harbor seal tracking and telemetry by satellite. Marine Mammal Science 5:361-375.

Stewart, B. S., S. Leatherwood, P. K. Yochem, and M. -P. Heide-Jorgensen. 1989. Harbor seal tracking and telemetry by satellite. Marine Mammal Science, 5:361-375.

TTable 1. Chemical sedation of Hawaiian monk seals at Laysan Island, October 2001.

Date	Seal ID	PTT No.	Sex	Age Class	Age (years)	Length (cm)	Girth (cm)	Diazepam (mg IV)	Atropine (mg IM)	Lidocaine Used?	Time (Local)		
											Capture	Release	Into Water
5-Oct-01	TD82	13050	F	Juvenile	2	159	91	14	-----	Yes	18:24	19:17	19:18
6-Oct-01	TC50	13031	M	Adult	6	195	118	32	-----	Yes	8:54	9:48	?
6-Oct-01	TM64	13048	F	W. Pup	<1	130	88.5	10	-----	No	10:10	10:42	10:52
6-Oct-01	TM62	13049	M	W. Pup	<1	128	96	10	-----	No	11:08	11:44	11:48
6-Oct-01	TM28	13051	M	W. Pup	<1	146	83	11	-----	Yes	17:28	18:01	18:01
7-Oct-01	TM56	13054	F	W. Pup	<1	132	78.5	10	-----	No	7:11	7:43	7:51
7-Oct-01	TJ58	13033	M	Adult	7	203	116	32	3.24	No	8:01	8:38	8:38
7-Oct-01	TY78	13034	M	Juvenile	3	176.5	100	16	-----	Yes	9:28	10:18	10:18
7-Oct-01	TD90	13039	M	Juvenile	2	150	85.5	12	-----	No	17:10	17:51	17:51
7-Oct-01	TD28	13038	M	Juvenile	2	159	99	12	-----	Yes	18:06	18:47	18:47
8-Oct-01	TD64	13052	F	Juvenile	2	151	93	11	-----	Yes	7:53	8:25	8:28
8-Oct-01	TD84	13055	M	Juvenile	2	160	105.5	14	-----	Yes	9:08	9:41	9:41
8-Oct-01	TY65	13059	M	Juvenile	3	169	92	12	-----	Yes	10:02	10:35	10:37
8-Oct-01	TM16	13057	M	W. Pup	<1	138	93	10	-----	Yes	17:42	18:13	?
9-Oct-01	TD48	13043	F	Juvenile	2	165	107	13	-----	Yes	10:10	10:45	10:45
9-Oct-01	T84F	13041	F	Adult	≥ 16	215	128	22	-----	No	11:25	12:05	12:05
9-Oct-01	TM34	13053	F	W. Pup	<1	144.5	99.5	10	-----	No	17:34	18:05	18:09
9-Oct-01	TM20	13056	M	W. Pup	<1	144	90	10	-----	Yes	18:23	18:51	18:53
10-Oct-01	TJ70	13037	F	Adult	7	211	124.5	22	2.7	No	7:21	7:55	8:11
10-Oct-01	TD78	5416	F	Juvenile	2	157	90	12	-----	No	8:24	8:51	8:53
10-Oct-01	TM22	5421	F	W. Pup	<1	133	80	10	-----	No	9:30	9:59	10:00
11-Oct-01	TD78	13046	F	Juvenile	2	174.5	102	14	-----	No	7:54	8:23	8:30
11-Oct-01	Y608	13042	F	Adult	≥ 16	221	148.5	24	-----	No	9:33	10:11	10:15
11-Oct-01	TM44	5412	F	W. Pup	<1	132	81	10	-----	No	10:35	11:03	11:13
11-Oct-01	TM24*	5422	M	W. Pup	<1	142	84	10*	-----	No	14:40	15:04	15:07
11-Oct-01	TT26	13040	F	Adult	17	184	150	25	-----	Yes	17:51	18:25	18:27
12-Oct-01	BF44	24112	F	Adult	13	218	124.5	22	-----	No	7:17	7:45	7:59
13-Oct-01	TN40	24107	M	Adult	14	220	132	32	-----	No	8:12	8:42	9:06
13-Oct-01	TZ56	13044	M	Adult	10	208	130	32	2.7	Yes	9:07	9:46	9:50
17-Oct-01	TZ34	24109	M	Adult	10	204	122	32	-----	No	8:50	9:31	10:08

* Reversed with 0.25 mg flumazenil 20 min post-sedation to speed seal's recovery and return to the water due to high ambient air temperature.

Table 2. Instrumentation of Hawaiian monk seals with satellite-linked data recorders (SLDRs) at Laysan Island, October 2001.

Date	Seal ID	PTT No.	Sex	Age Class	Age (years)	Length (cm)	Girth (cm)	Diazepam (mg IV)	Atropine (mg IM)	Lidocaine Used?	Time (Local)		
											Capture	Release	Into Water
5-Oct-01	TD82	13050	F	Juvenile	2	159	91	14	-----	Yes	18:24	19:17	19:18
6-Oct-01	TC50	13031	M	Adult	6	195	118	32	-----	Yes	8:54	9:48	?
6-Oct-01	TM64	13048	F	W. Pup	<1	130	88.5	10	-----	No	10:10	10:42	10:52
6-Oct-01	TM62	13049	M	W. Pup	<1	128	96	10	-----	No	11:08	11:44	11:48
6-Oct-01	TM28	13051	M	W. Pup	<1	146	83	11	-----	Yes	17:28	18:01	18:01
7-Oct-01	TM56	13054	F	W. Pup	<1	132	78.5	10	-----	No	7:11	7:43	7:51
7-Oct-01	TJ58	13033	M	Adult	7	203	116	32	3.24	No	8:01	8:38	8:38
7-Oct-01	TY78	13034	M	Juvenile	3	176.5	100	16	-----	Yes	9:28	10:18	10:18
7-Oct-01	TD90	13039	M	Juvenile	2	150	85.5	12	-----	No	17:10	17:51	17:51
7-Oct-01	TD28	13038	M	Juvenile	2	159	99	12	-----	Yes	18:06	18:47	18:47
8-Oct-01	TD64	13052	F	Juvenile	2	151	93	11	-----	Yes	7:53	8:25	8:28
8-Oct-01	TD84	13055	M	Juvenile	2	160	105.5	14	-----	Yes	9:08	9:41	9:41
8-Oct-01	TY65	13059	M	Juvenile	3	169	92	12	-----	Yes	10:02	10:35	10:37
8-Oct-01	TM16	13057	M	W. Pup	<1	138	93	10	-----	Yes	17:42	18:13	?
9-Oct-01	TD48	13043	F	Juvenile	2	165	107	13	-----	Yes	10:10	10:45	10:45
9-Oct-01	T84F	13041	F	Adult	≥ 16	215	128	22	-----	No	11:25	12:05	12:05
9-Oct-01	TM34	13053	F	W. Pup	<1	144.5	99.5	10	-----	No	17:34	18:05	18:09
9-Oct-01	TM20	13056	M	W. Pup	<1	144	90	10	-----	Yes	18:23	18:51	18:53
10-Oct-01	TJ70	13037	F	Adult	7	211	124.5	22	2.7	No	7:21	7:55	8:11
10-Oct-01	TD78	5416	F	Juvenile	2	157	90	12	-----	No	8:24	8:51	8:53
10-Oct-01	TM22	5421	F	W. Pup	<1	133	80	10	-----	No	9:30	9:59	10:00
11-Oct-01	TD78	13046	F	Juvenile	2	174.5	102	14	-----	No	7:54	8:23	8:30
11-Oct-01	Y608	13042	F	Adult	≥ 16	221	148.5	24	-----	No	9:33	10:11	10:15
11-Oct-01	TM44	5412	F	W. Pup	<1	132	81	10	-----	No	10:35	11:03	11:13
11-Oct-01	TM24*	5422	M	W. Pup	<1	142	84	10*	-----	No	14:40	15:04	15:07
11-Oct-01	TT26	13040	F	Adult	17	184	150	25	-----	Yes	17:51	18:25	18:27
12-Oct-01	BF44	24112	F	Adult	13	218	124.5	22	-----	No	7:17	7:45	7:59
13-Oct-01	TN40	24107	M	Adult	14	220	132	32	-----	No	8:12	8:42	9:06
13-Oct-01	TZ56	13044	M	Adult	10	208	130	32	2.7	Yes	9:07	9:46	9:50
17-Oct-01	TZ34	24109	M	Adult	10	204	122	32	-----	No	8:50	9:31	10:08

* Reversed with 0.25 mg flumazenil 20 min post-sedation to speed seal's recovery and return to the water due to high ambient air temperature.

PTT	SEAL ID	LTAG NO	RTAG NO	LOCAL DATE OUT	LOCAL TIME OUT	LATITUDE LONGITUDE	LENGTH (CM)	GIRTH (CM)	TRANS CAPACITY4	AGE5	SEX
5412	TM44	M44	M45	11 OCT 01	1101	25°46.89, 171°43.69	132	81	20K	WP	F
5416	TD78	D78	D79	10 OCT 01	0851	25°46.46, 171°44.39	157	90	20K	J	F
5421	TM22	M22	M23	10 OCT 01	0958	25°46.33, 171°44.5	133	80	20K	WP	F
5422	TM24	M24	M25	11OCT 01	1503	25°46.42, 171°44.43	142	84	20K	WP	M
13031	TC50	C50 & C100	C51 & C101	6 OCT 01	0900	25°45.91, 171°44.5	195	118	60K	AD	M
13033	TJ58	J96	J97	7 OCT 01	0836	25°46.52, 171°44.4	203	116	60K	AD	M
13034	TY78	Y78	Y93	7 OCT 01	1020	25°46.69, 171°44.42	176.5	100	60K	J	M
13037	TJ70	J70	J71	10 OCT 01	0805	25°46.49, 171°44.38	211	124.5	60K	AD	F
13038	TD28	D28	D119	7 OCT 01	1846	25°46.58, 171°44.42	159	99	60K	J	M
13039	TD90	D90	D91	7 OCT 01	1749	25°46.55, 171°44.39	150	85.5	60K	J	M
13040	TT26	T25 & T85	T26 & T86	11 OCT 01	1825	25°46.31, 171°44.52	184	150	60K	AD	F
13041	T84F	6FA	6FB	9 OCT 01	1110	25°46.53, 171°43.38	215	128	60K	AD	F
13042	Y608	5AA & 5AG	5AB & 5AH	11 OCT 01	1012	25°46.89, 171°43.69	221	148.5	60K	AD	F
13043	TD48	D48 & D118	D49	9 OCT 01	1044	25°46.69, 171°43.34	165	107	60K	J	F
13044	TZ56	Z56 & Z77 & Z202	Z203	13 OCT 01	0947	25°45.39, 171°44.33	208	130	60K	AD	M
13046	TD98	D98	D99	11 OCT 01	0829	25°46.56, 171°44.4	174.5	102	60K	J	F
13048	TM64	M64	M65	6 OCT 01	1040	25°45.95, 171°44.5	130	88.5	20K	WP	F
13049	TM62	M62	M63	6 OCT 01	1144	25°45.97, 171°44.5	128	96	20K	WP	M
13050	TD82	D82	D83	5 OCT 01	1920	25°46.43, 171°44.4	159	91	20K	J	F
13051	TM28	M28	M29	6 OCT 01	1802	25°46.52, 171°44.4	146	83	20K	WP	M
13052	TD64	D64	D65	8 OCT 01	0825	25°46.37, 171°44.5	151	93	20K	J	F
13053	TM34	M34	M35	9 OCT 01	1734	25°46.71, 171°44.4	144.5	99.5	20K	WP	F
13054	TM56	M56	M57	7 OCT 01	0750	25°46.52, 171°44.4	132	78.5	20K	WP	F
13055	TD84	D84	D85	8 OCT 01	0938	25°46.47, 171°44.4	160	105.5	20K	J	M
13056	TM20	M20	M21	9 OCT 01	1847	25°46.62, 171°44.4	144	90	20K	WP	M
13057	TM16	M16	M17	8 OCT 01	1813	25°46.76, 171°44.25	138	93	20K	WP	M
13059	TY65	Y62	Y63	8 OCT 01	1036	25°46.48, 171°44.39	169	92	20K	J	M
24107	TN40	N65 & N109	N66 & N110	13 OCT 01	0900	25°45.39, 171°44.33	220	132	60K	AD	M
24109	TZ34	Z208, Z34, Z38	Z39	17 OCT 01	0932	25°45.39, 171°44.33	204	122	60K	AD	M
112	BF44	F45 & F105	F104	12 OCT 01	0745	25°46.48, 171°44.37	218	124.5	60K	AD	F

[5] WP=weaned pup; J=juvenile; AD=adult.

Table 3. Structure of frequency histogram data on dive depth, duration and time at depth.

Bin #	Depth interval (m)	Duration interval (min)	Time at depth interval (m)
1	4-20	0-2	0 (At the surface)
2	20-40	2-4	4-20
3	40-60	4-6	20-40
4	60-80	6-8	40-60
5	80-100	8-10	60-80
6	100-120	10-12	80-100
7	120-140	12-14	100-120
8	140-160	14-16	120-140
9	160-180	16-18	140-160
10	180-200	18-20	160-180
11	200-250	20-25	180-200
12	250-350	25-30	200-250
13	350-450	30-40	250-350
14	>450	>40	>350

Table 4. Tracking details for Hawaiian monk seals instrumented at Laysan Island in 2001.

SEAL ID	PTT	AGE	SEX	TRACK START	TRACK END	DAYS TRACKED
TC50	13031	ADULT	MALE	6-Oct-01	12-Dec-01	66
TJ58	13033	ADULT	MALE	8-Oct-01	24 Sept-02	351
TZ56	13044	ADULT	MALE	14-Oct-01	28-Aug-02	319
TN40	24107	ADULT	MALE	14-Oct-01	27-May-02	225
TZ34	24109	ADULT	MALE	17-Oct-01	19-Jan-02	93
TJ70	13037	ADULT	FEMALE	10-Oct-01	17-Jun-02	250
TT26	13040	ADULT	FEMALE	11-Oct-01	9-May-02	129
T84F	13041	ADULT	FEMALE	10-Oct-01	12-Jul-02	275
Y608	13042	ADULT	FEMALE	12-Oct-01	30-Jul-02	291
BF44	24112	ADULT	FEMALE	13-Oct-01	23-Apr-02	191
TY78	13034	JUVENILE	MALE	9-Oct-01	14-Jul-02	278
TD28	13038	JUVENILE	MALE	8-Oct-01	3-Dec-01	26
TD90	13039	JUVENILE	MALE	8-Oct-01	30-Jul-02	295
TD84	13055	JUVENILE	MALE	9-Oct-01	11-Feb-02	125
TY65	13059	JUVENILE	MALE	9-Oct-01	12-Apr-02	185
TD78	5416	JUVENILE	FEMALE	10-Oct-01	6-Mar-02	146
TD48	13043	JUVENILE	FEMALE	10-Oct-01	16-Jul-02	279
TD98	13046	JUVENILE	FEMALE	12-Oct-01	26-Jun-02	256
TD82	13050	JUVENILE	FEMALE	6-Oct-01	13-Oct-01	7
TD64	13052	JUVENILE	FEMALE	9-Oct-01	16-Apr-02	189
TM24	5422	WEANED PUP	MALE	11-Oct	26-Jan-02	132
TM62	13049	WEANED PUP	MALE	7-Oct-01	8-Jan-02	101
TM28	13051	WEANED PUP	MALE	7-Oct-01	7-May-02	212
TM20	13056	WEANED PUP	MALE	9-Oct-01	10-Jun-02	244
TM16	13057	WEANED PUP	MALE	9-Oct-01	17-Apr-02	190
TM44	5412	WEANED PUP	FEMALE	11-Oct-01	25-Oct-01	13
TM22	5421	WEANED PUP	FEMALE	10-Oct-01	22-Oct-01	11
TM64	13048	WEANED PUP	FEMALE	7-Oct-01	26-Nov-02	49
TM34	13053	WEANED PUP	FEMALE	10-Oct-01	23-May-02	225
TM56	13054	WEANED PUP	FEMALE	8-Oct-01	23-Apr-02	197

Table 5. Details of geographic locations and diving information acquired from instrumented Hawaiian monk seals at Laysan Island; 2001-2002.

Seal ID	PTT	Age-Sex9	Days tracked	Daily maximum Dive depth (m)6	Number of locations7	Number of locations8					
						LC3	LC2	LC1	LC0	LCA	LCB
TC50	13031	AD-M	66	336	220	2	18	43	45	54	58
TJ58	13033	AD-M	351	456	323	1	11	77	54	63	117
TZ56	13044	AD-M	319	192	1096 (8)	7	44	191	351	467	725
TN40	24107	AD-M	225	124	983 (21)	4	9	45	170	213	521
TZ34	24109	AD-M	93	132	423 (4)	4	7	30	100	119	159
TJ70	13037	AD-F	250	488	1543 (23)	5	29	128	292	405	661
TT26	13040	AD-F	129	480	867 (7)	13	38	117	145	212	335
T84F	13041	AD-F	275	412	1626 (21)	8	50	153	294	416	684
Y608	13042	AD-F	291	428	1635 (27)	9	49	166	329	412	643
BF44	24112	AD-F	191	348	1078 (18)	2	15	59	210	290	494
TY78	13034	J-M	278	192	1096 (8)	7	44	158	190	227	462
TD28	13038	J-M	26	180	172 (4)	0	2	8	34	42	82
TD90	13039	J-M	295	96	819 (8)	6	35	117	137	170	346
TD84	13055	J-M	125	224	554 (11)	0	0	33	144	107	255
TY65	13059	J-M	185	156	780 (12)	2	14	64	194	181	313
TD78	5416	J-F	146	176	796 (9)	7	15	62	107	204	392
TD48	13043	J-F	279	480	1624 (14)	17	66	160	274	401	692
TD98	13046	J-F	256	160	865 (3)	7	35	110	140	245	325
TD82	13050	J-F	7	88	40 (0)	0	24	7	11	7	15
TD64	13052	J-F	189	72	774 (7)	10	32	68	122	211	342
TM24	5422	WP-M	132	276	1180 (24)	6	19	45	89	110	158
TM62	13049	WP-M	101	176	656 (13)	3	7	53	106	186	288
TM28	13051	WP-M	212	172	1227 (14)	3	14	83	244	304	555
TM20	13056	WP-M	244	60	948 (11)	5	18	57	166	241	450
TM16	13057	WP-M	190	124	1170 (20)	4	26	82	208	304	526
TM44	5412	WP-F	13	76	66 (0)	0	0	8	6	20	32
TM22	5421	WP-F	11	40	55 (1)	1	1	8	11	16	17
TM64	13048	WP-F	49	112	358 (6)	3	9	24	61	78	177
TM34	13053	WP-F	225	260	1180 (24)	3	27	84	214	303	520
TM56	13054	WP-F	197	228	1215 (15)	7	4	67	196	351	552

6 As reported in periodic status messages; as not all days were reported seals may have made dives to greater depths.
7 Paranthetical value is the number of locations that were unusable (LC=Z) and excluded from further location analyses.
8 LC = Location Class, as determined and assigned by the Argos Data Collection and Location Service (DCLS).
9 AD=adult; J=juvenile; WP=weaned pup.

Table 6. Locations used by foraging Hawaiian monk seals from Laysan Island, 2001-2002.

Seal ID	PTT	Age-Sex1	Area used by foraging Hawaiian monk seals4				
			Laysan Island	NH-W2	NH-E3	Maro Reef	Raita Bank
TC50	13031	AD-M	X	(X)	X		X
TJ58	13033	AD-M	X				
TZ56	13044	AD-M	X		X	X	
TN40	24107	AD-M	X			X	
TZ34	24109	AD-M	X			X	X
TJ70	13037	AD-F	X	X		X	
TT26	13040	AD-F	X			X	
T84F	13041	AD-F	X		X		
Y608	13042	AD-F	X	(X)	(X)	X	X
BF44	24112	AD-F	X			X	X
TY78	13034	J-M	X				
TD28	13038	J-M				X	X
TD90	13039	J-M	X			(X)	X
TD84	13055	J-M	X			X	
TY65	13059	J-M	X			X	X
TD78	5416	J-F	X			X	
TD48	13043	J-F	X		X		
TD98	13046	J-F	X				
TD82	13050	J-F	X			X	
TD64	13052	J-F	X	X	X		
TM24	5422	WP-M	X			X	
TM62	13049	WP-M	X		X	X	
TM28	13051	WP-M	X	X		X	X
TM20	13056	WP-M	X		(X)	X	X
TM16	13057	WP-M	X		(X)	X	
TM44	5412	WP-F	X				
TM22	5421	WP-F	X				
TM64	13048	WP-F	X		X		
TM34	13053	WP-F	X	(X)	(X)	X	X
TM56	13054	WP-F	X		(X)	(X)	

Table 7. Samples of dives collected from Hawaiian monk seals equipped with satellite-linked
Table 7. Samples of dives received from monk seals equipped with sattelite-linked diver recorders at Laysan Island, 2001-2002.

1 AD=adult, J=juvenile,WP=weaned pup.
2 Western Northhampton Seamount
3 Eastern Northhamptom Seamount
4 Parenthetical note indicates few locations at site

		# Seals	Dive depth		Dive duration	
			# histograms	# dives	# histograms	# dives
Weaned pups	Males	5	2,371	130,398	2,296	128,425
	Females	5	1,455	86,019	1,450	84,873
	Total	10	3,826	216,417	3,746	213,298
Juveniles	Males	5	1,952	164,730	1,919	166,439
	Females	5	2,115	139,870	2,081	142,098
	Total	10	4,067	304,600	4,000	308,537
Adults	Males	5	2,027	289,700	1,988	286,387
	Females	5	3,121	262,977	3,076	260,649
	Total	10	5,148	552,677	5,064	547,036
All Seals		30	13,041	1,073,694	12,810	1,068,871

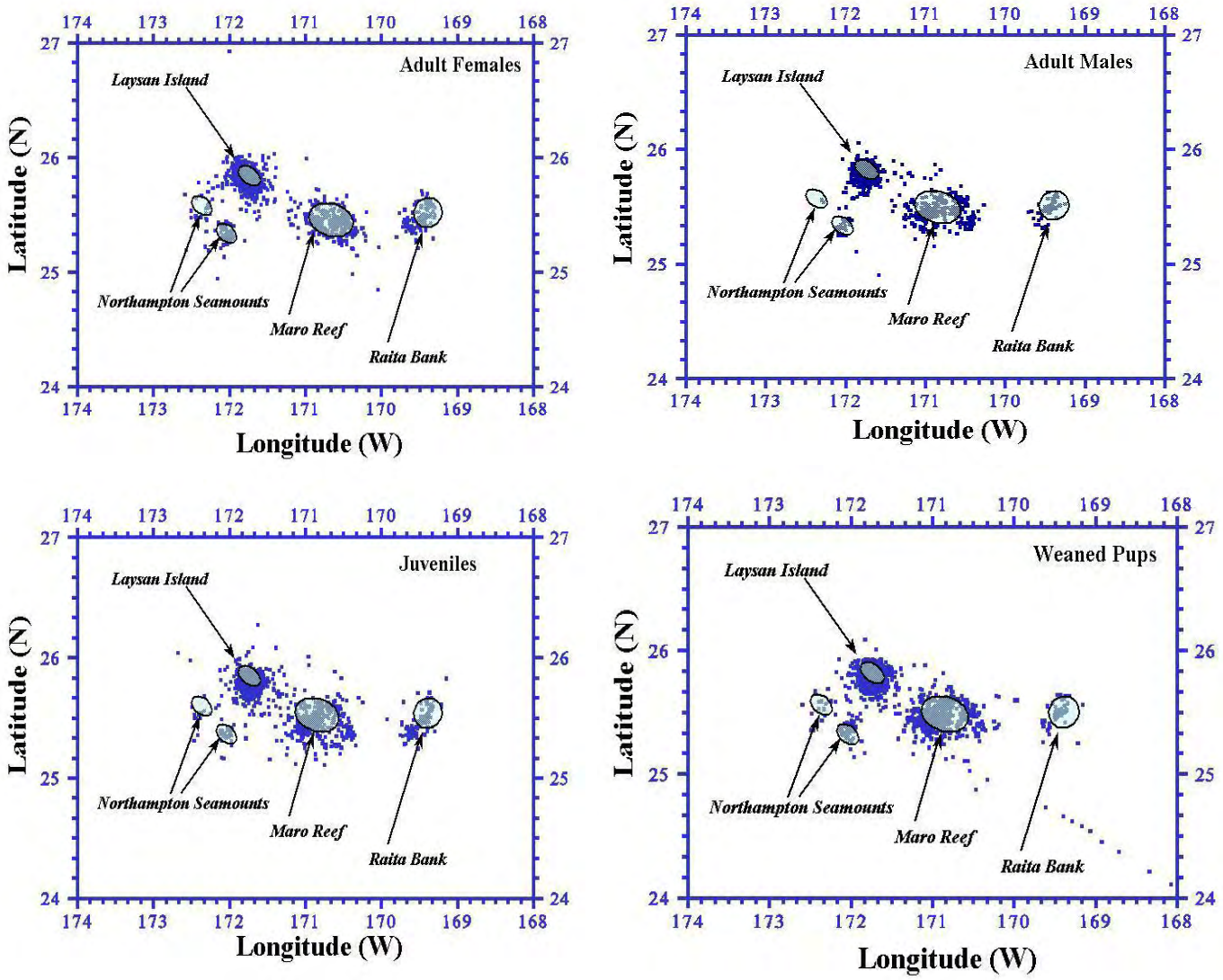


Figure 4. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: All seals by age.

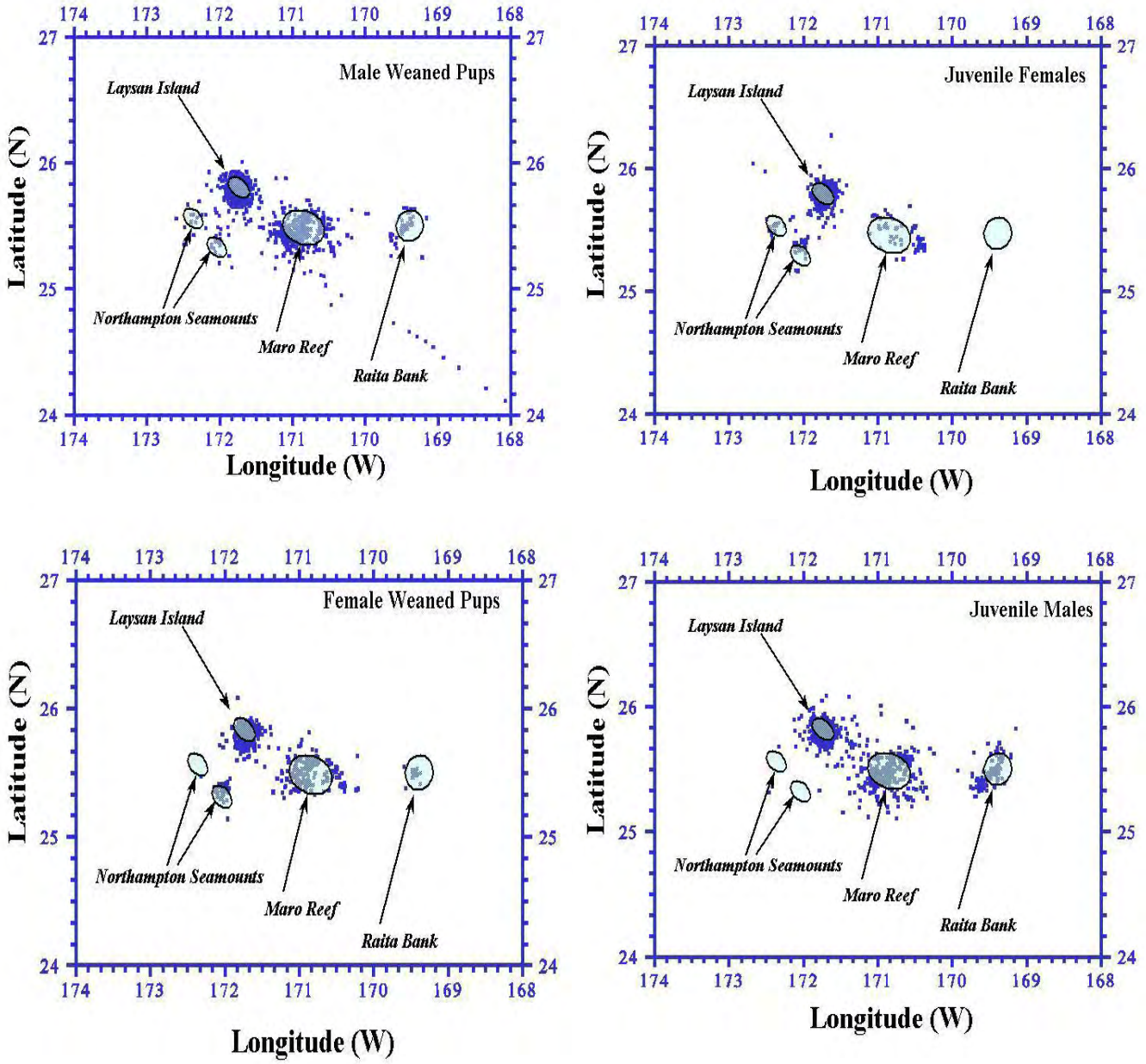
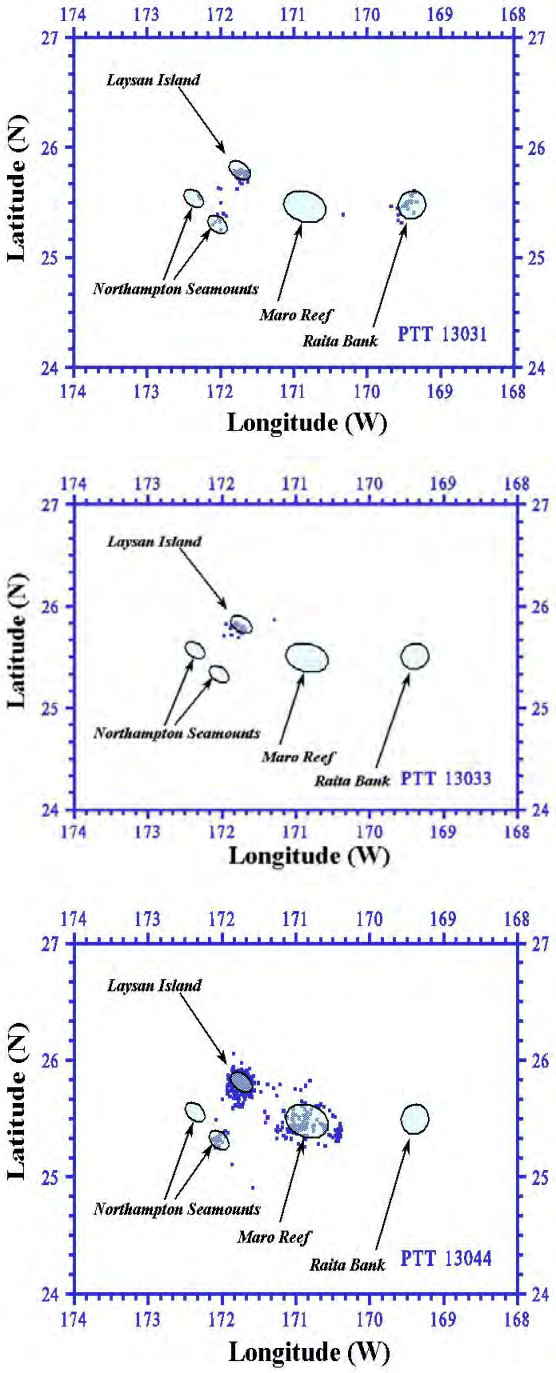


Figure 5. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Weaned pups and Juveniles by sex.



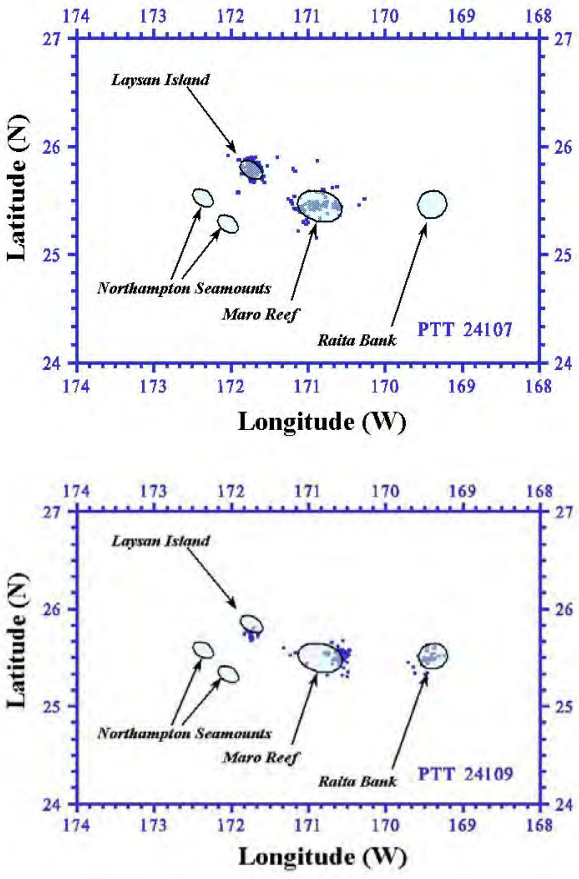
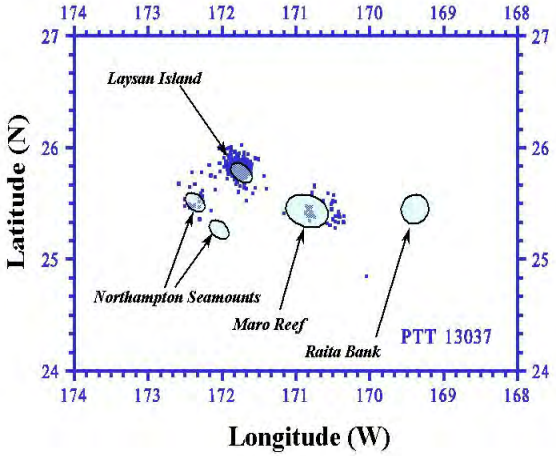
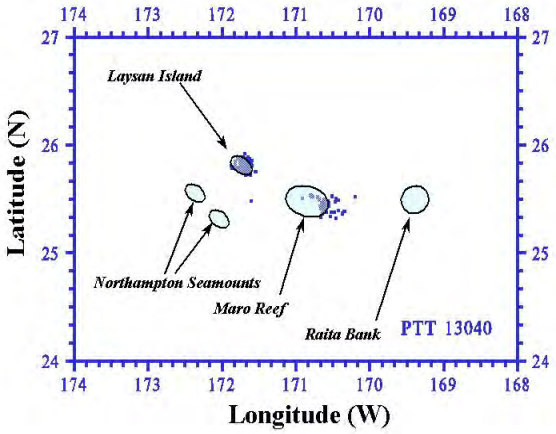
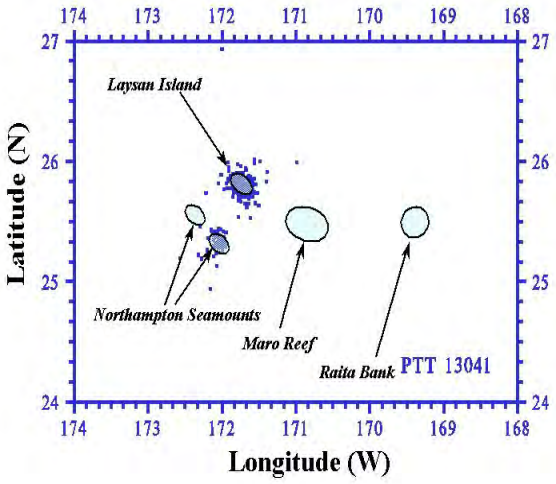
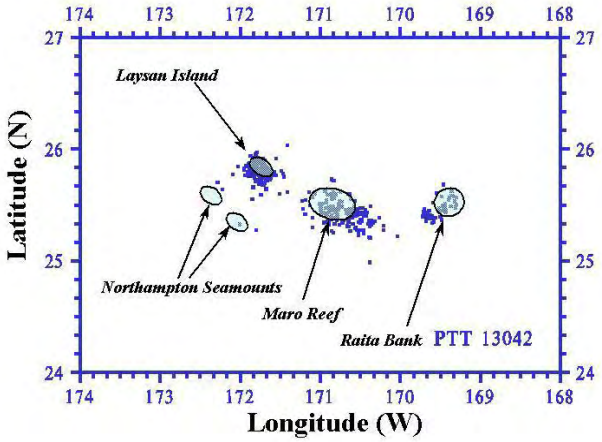


Figure 6. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Adult males.









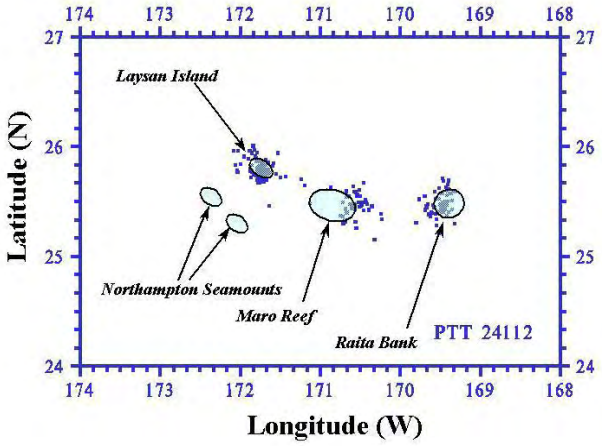
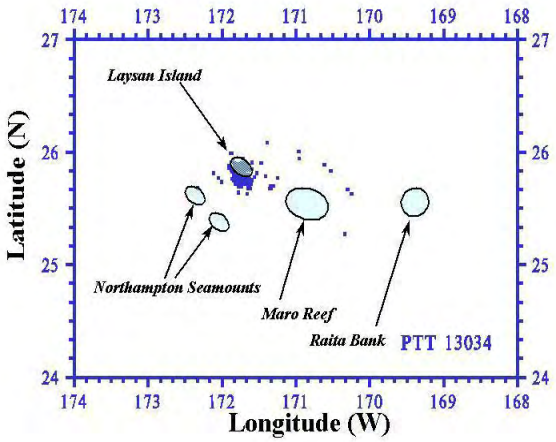
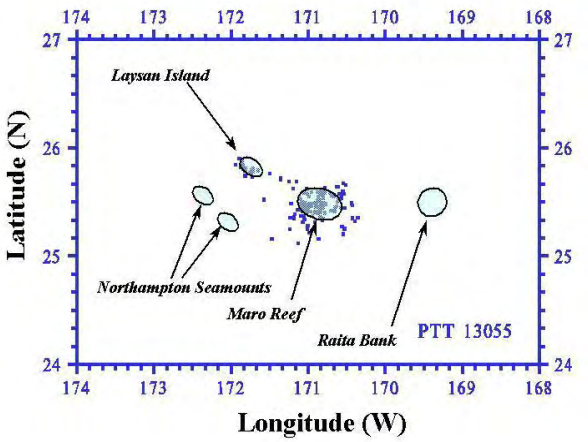
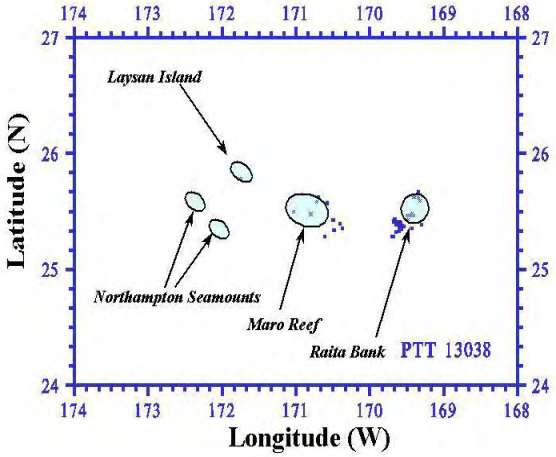
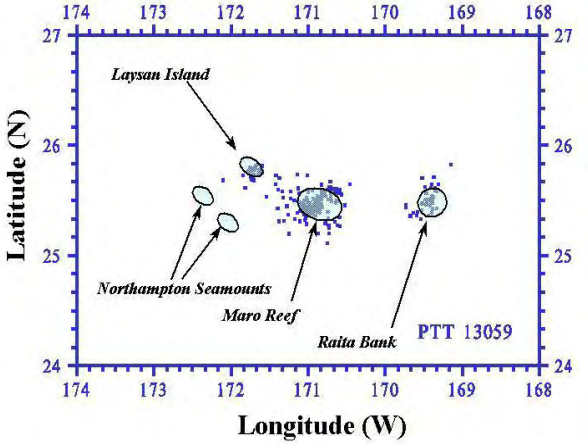


Figure 7. Geographic dispersion of foraging Hawiaiian monk seals from Laysan Island, 2001-2002: Adult females.









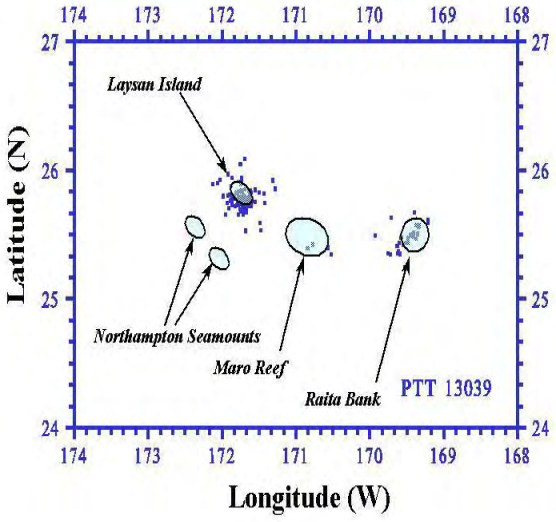
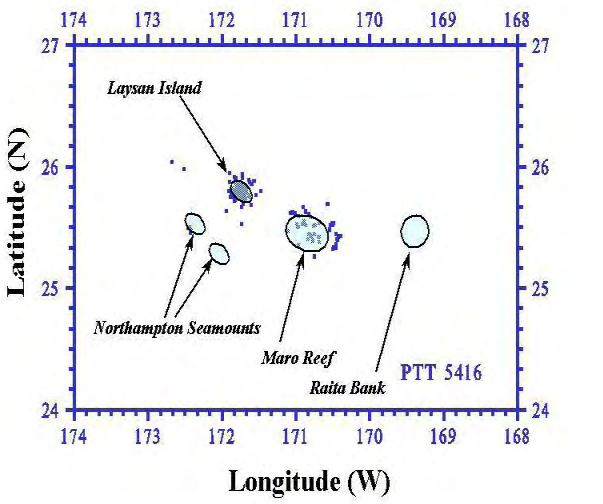
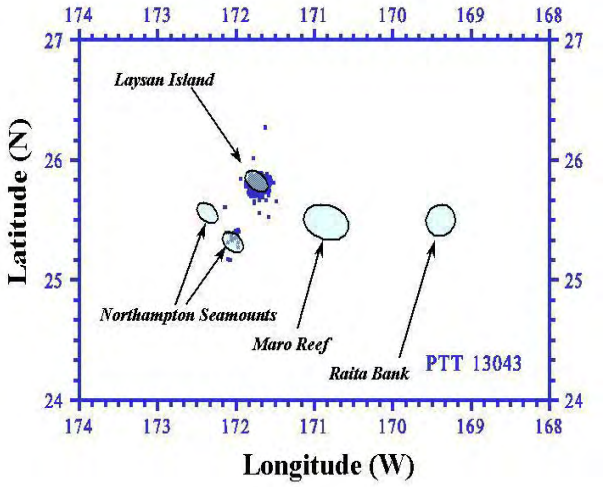
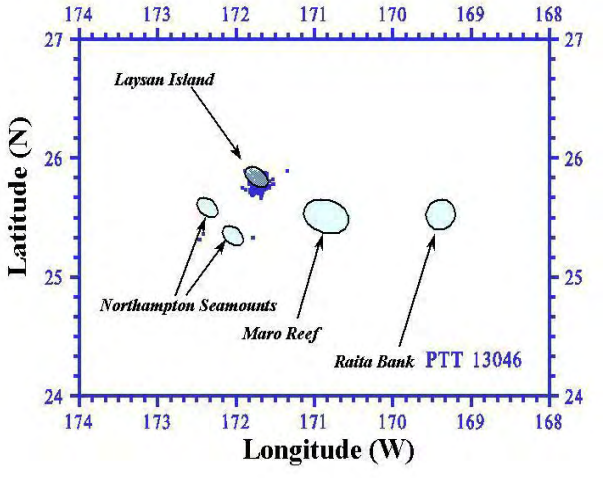
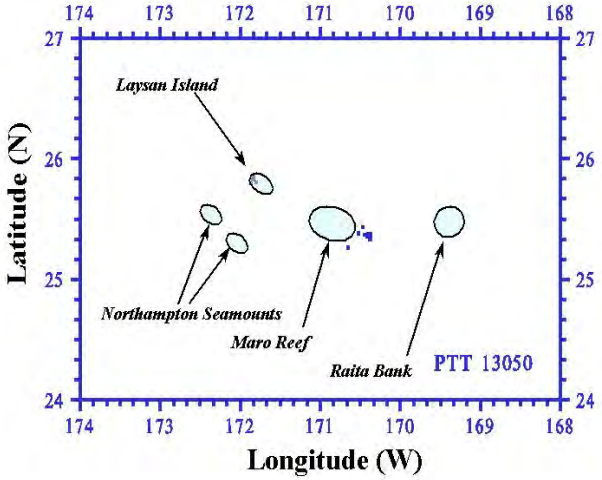


Figure 8. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Juvenile males.









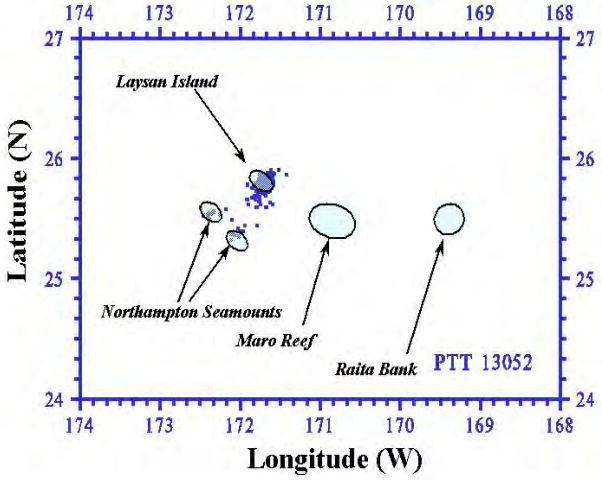


Figure 9. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Juvenile females.

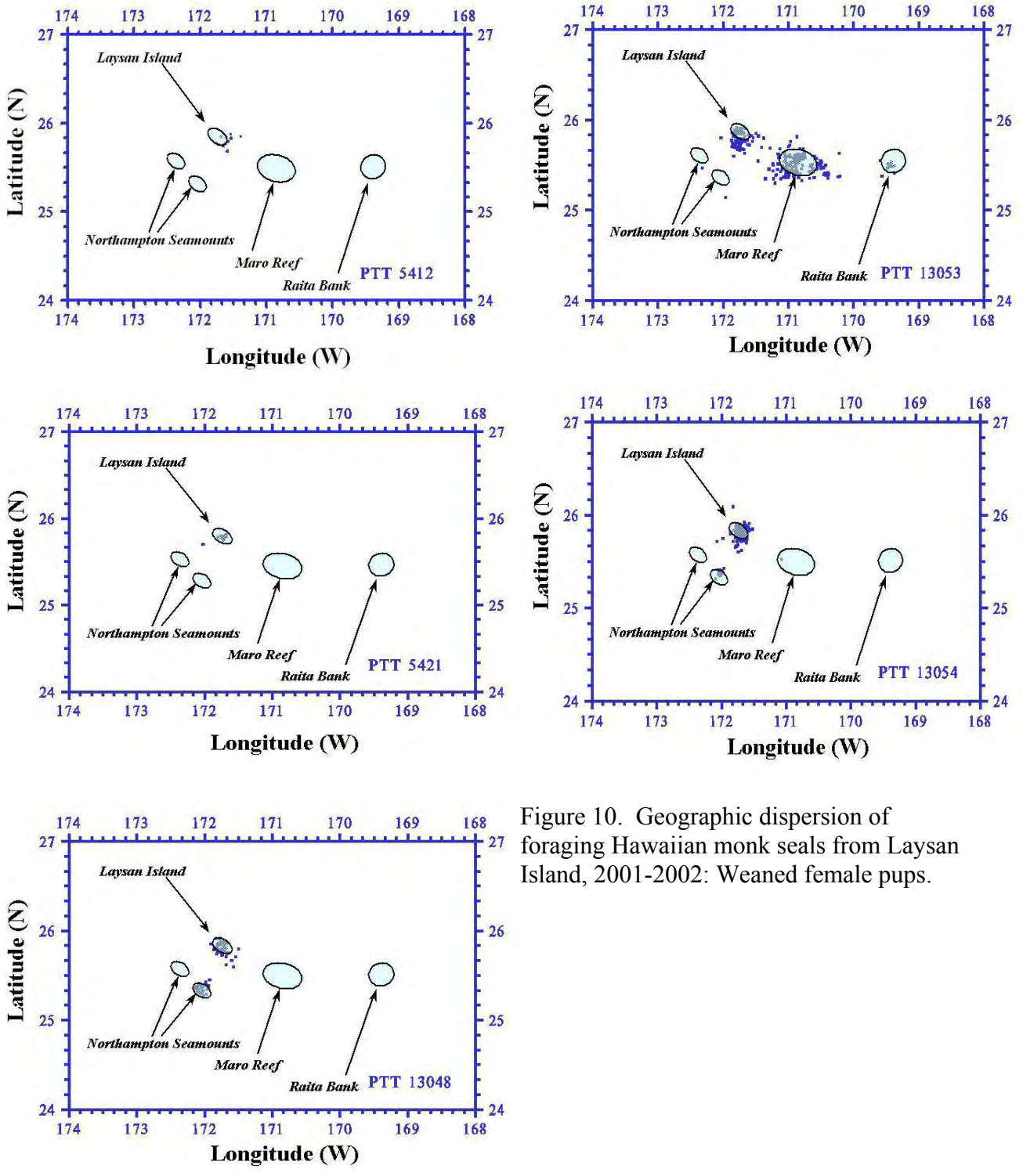


Figure 10. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Weaned female pups.

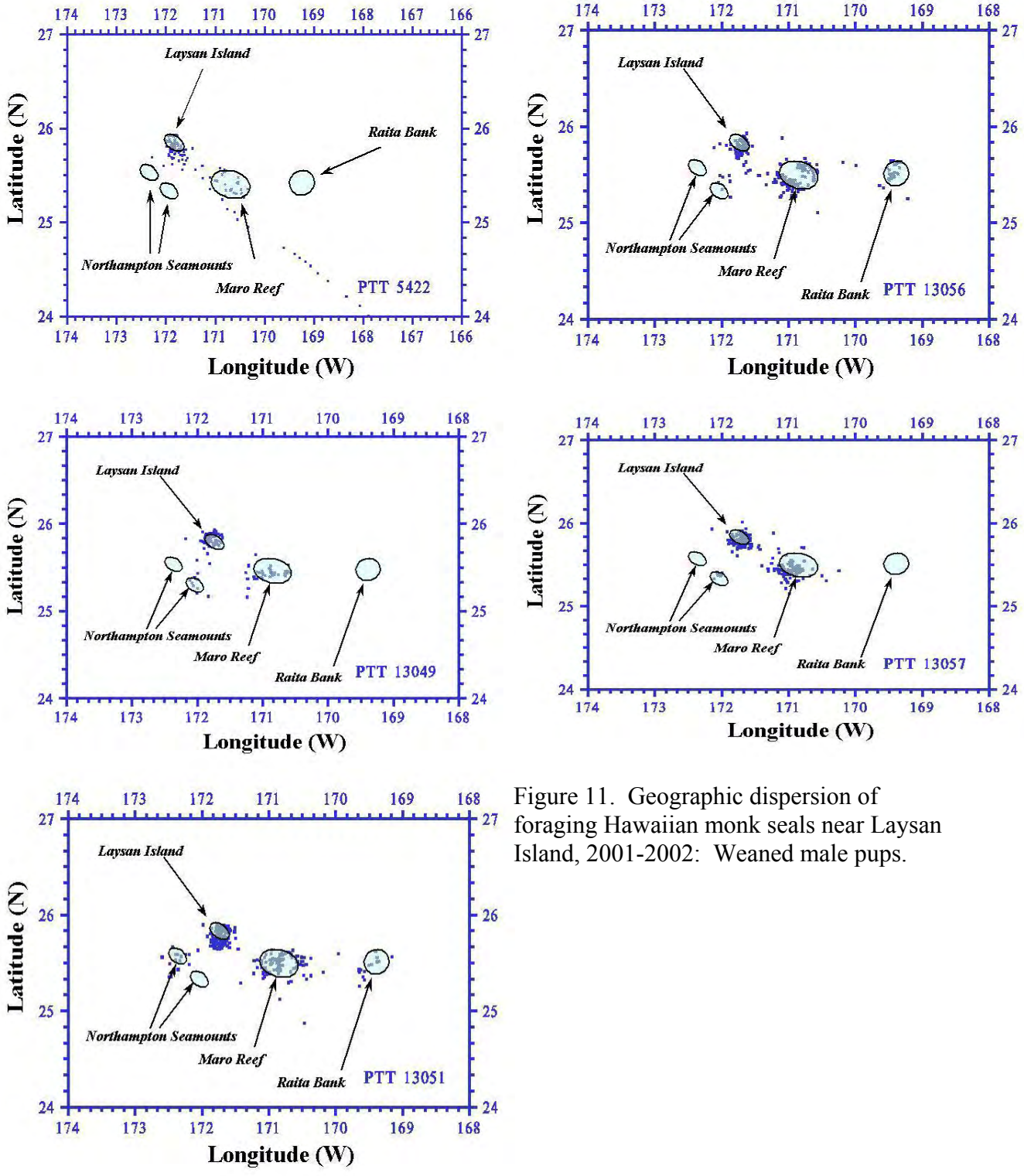


Figure 11. Geographic dispersion of foraging Hawaiian monk seals near Laysan Island, 2001-2002: Weaned male pups.

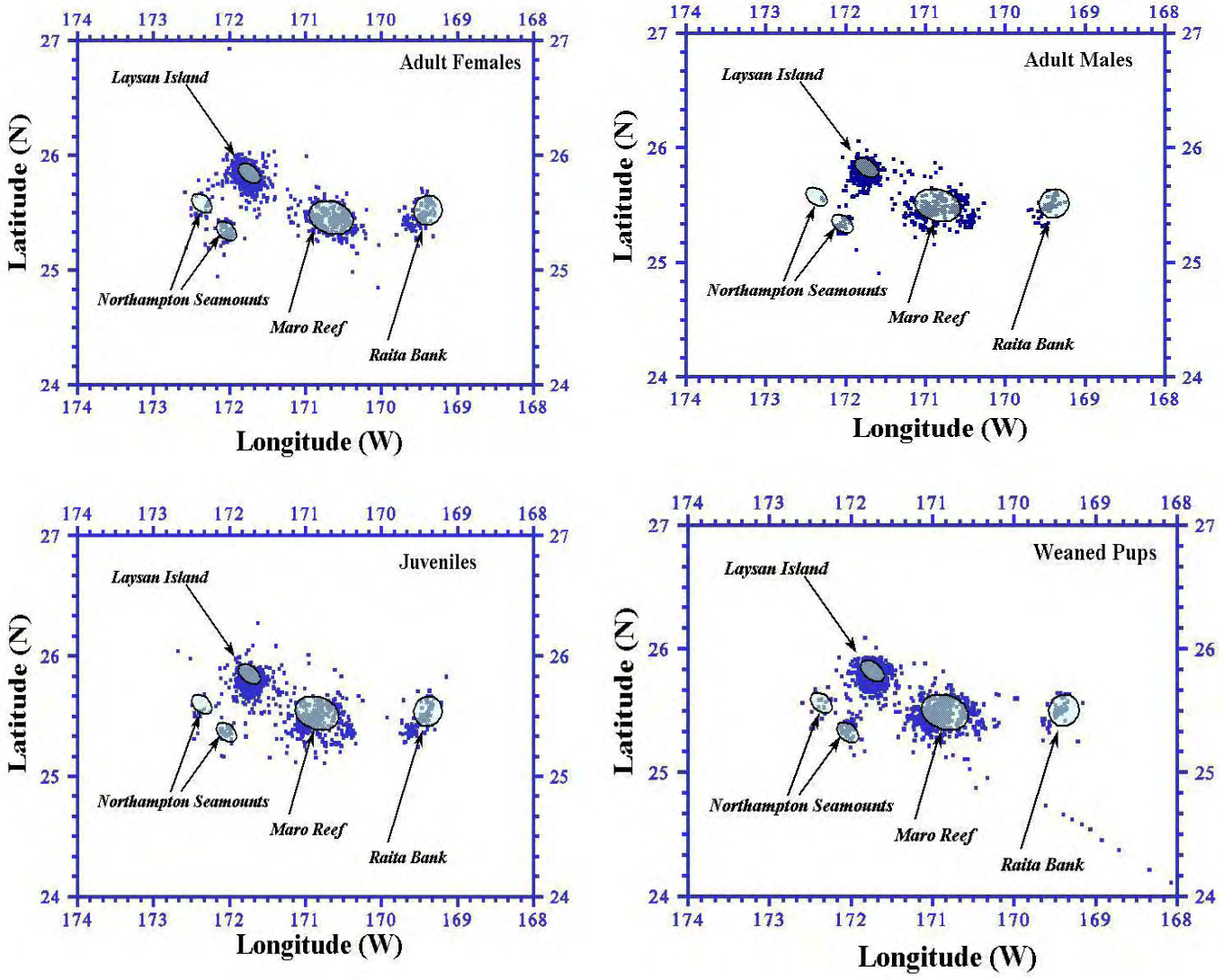


Figure 12. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: All seals by age.

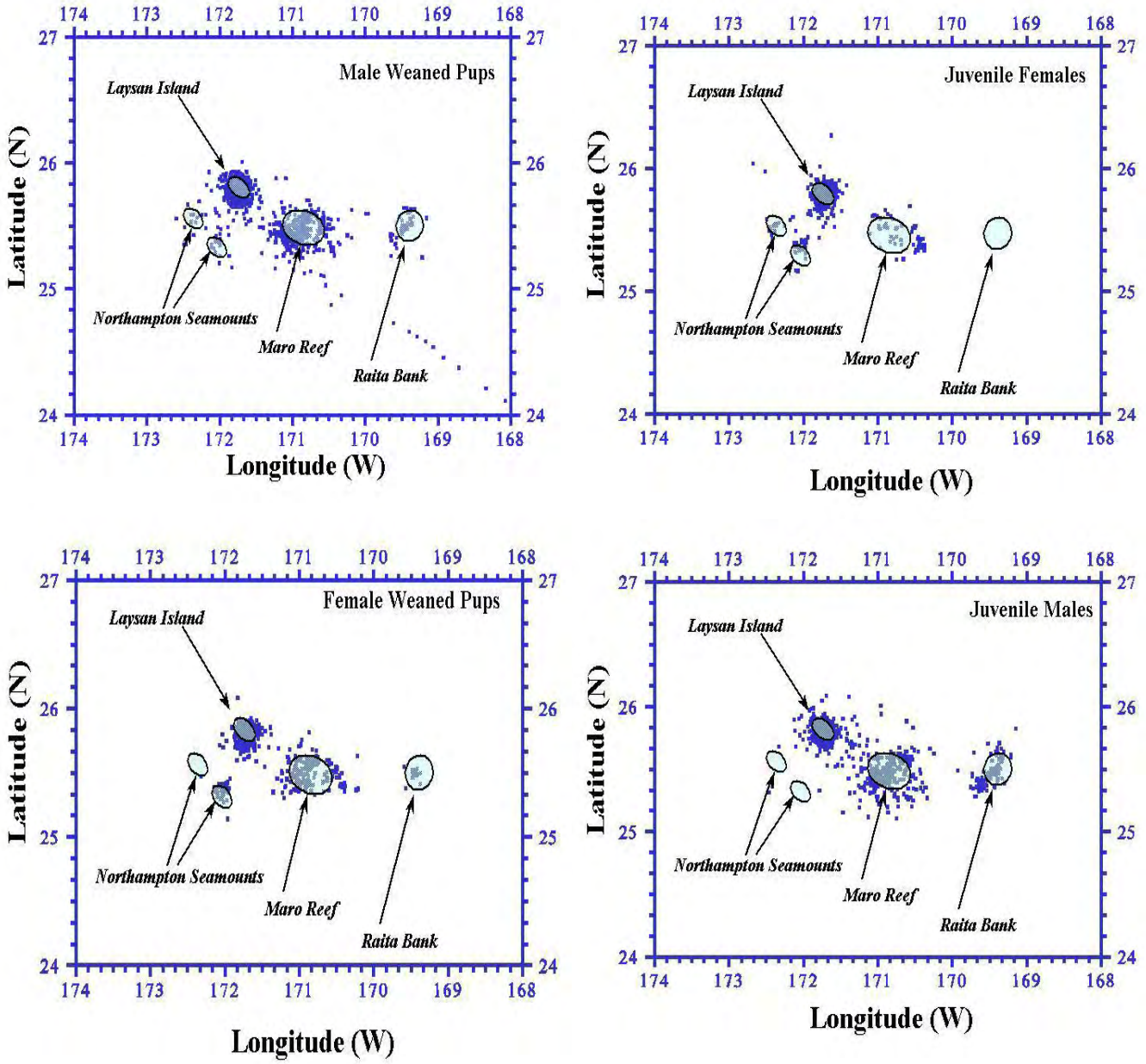


Figure 13. Geographic dispersion of foraging Hawaiian monk seals from Laysan Island, 2001-2002: Weaned pups and Juveniles by sex.

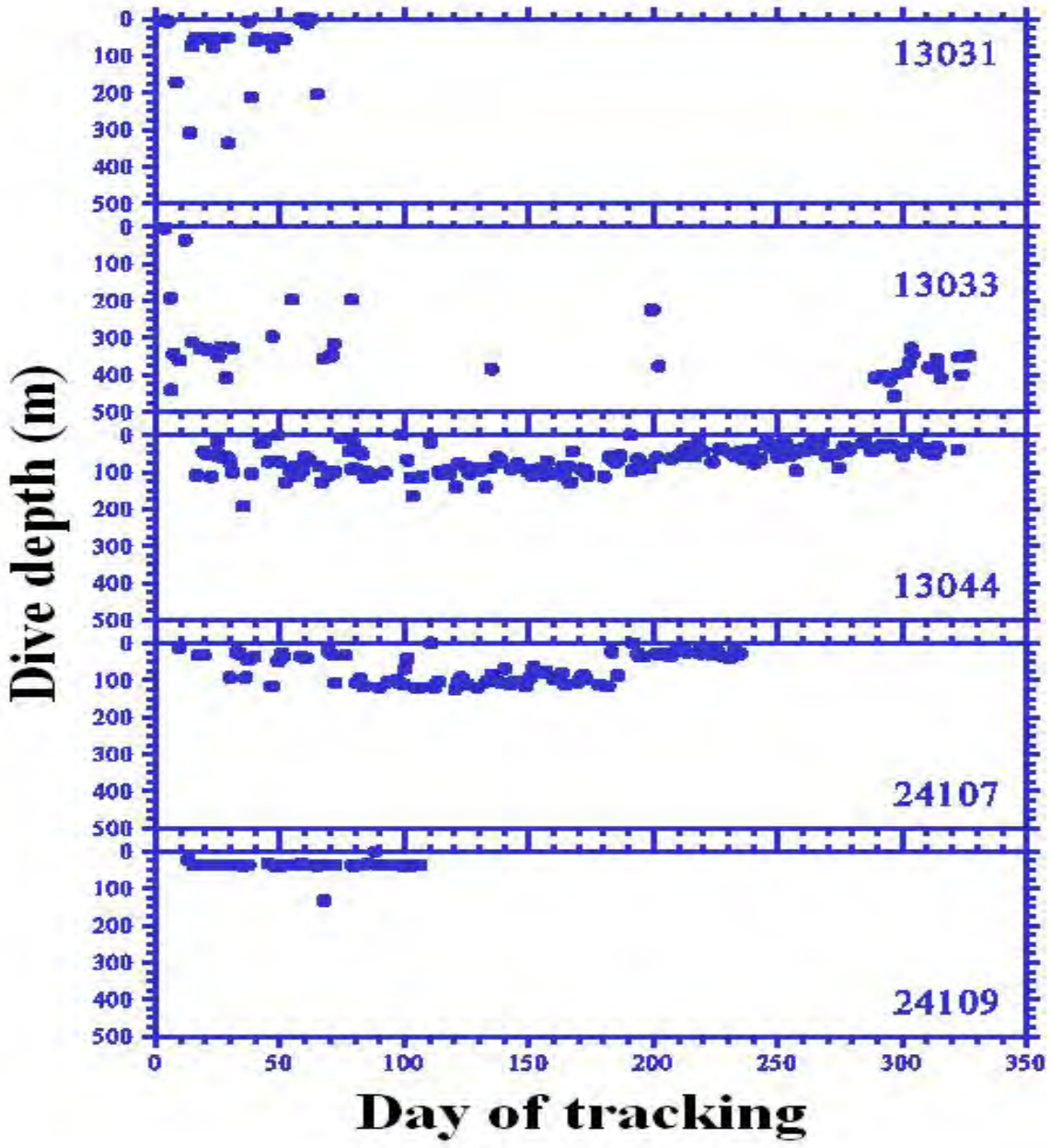


Figure 14. Daily maximum depths of dives of adult male Hawaiian monk seals from Laysan Island, 2001-2002.

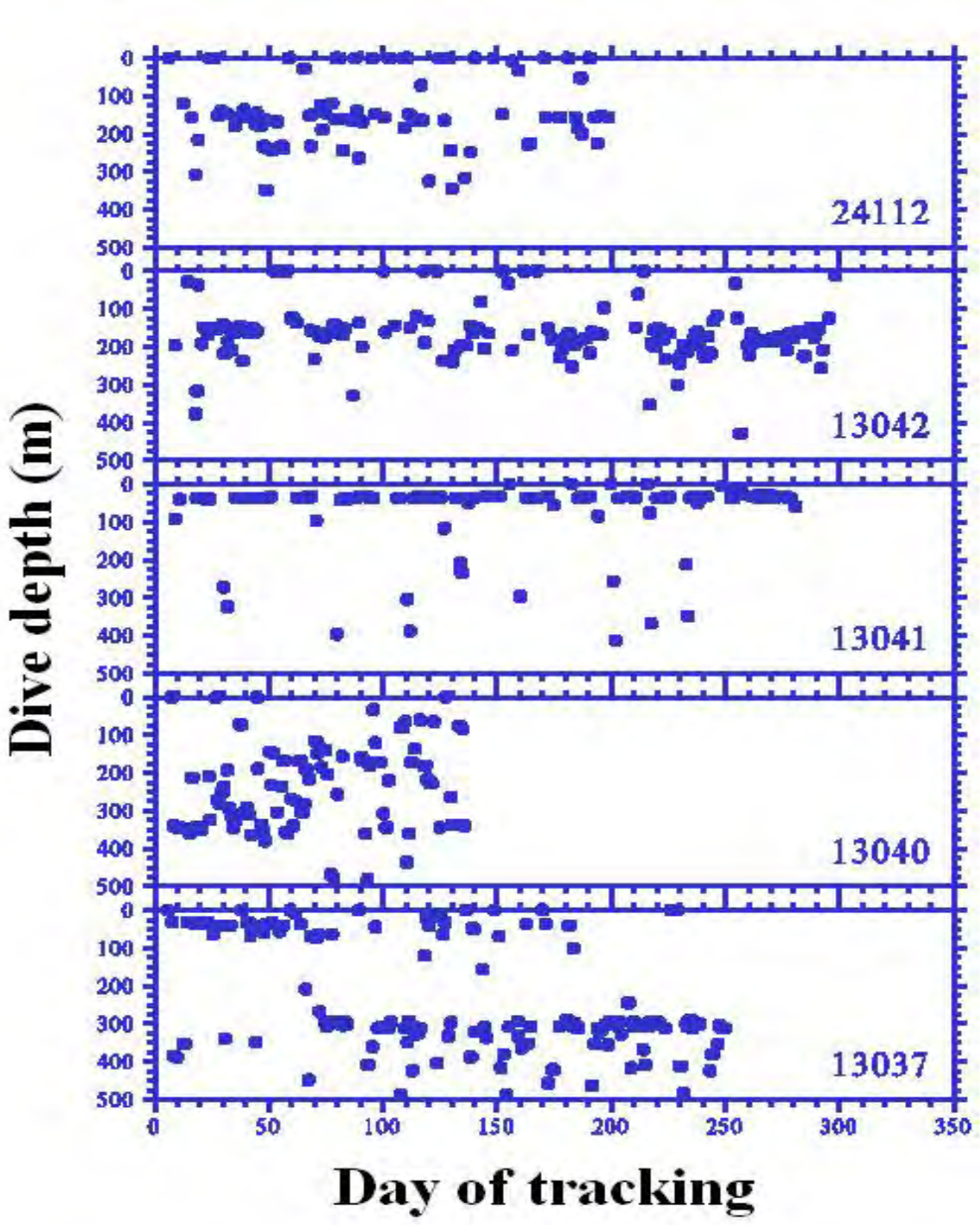


Figure 15. Daily maximum depths of dives of adult female Hawaiian monk seals from Laysan Island, 2001-2002.

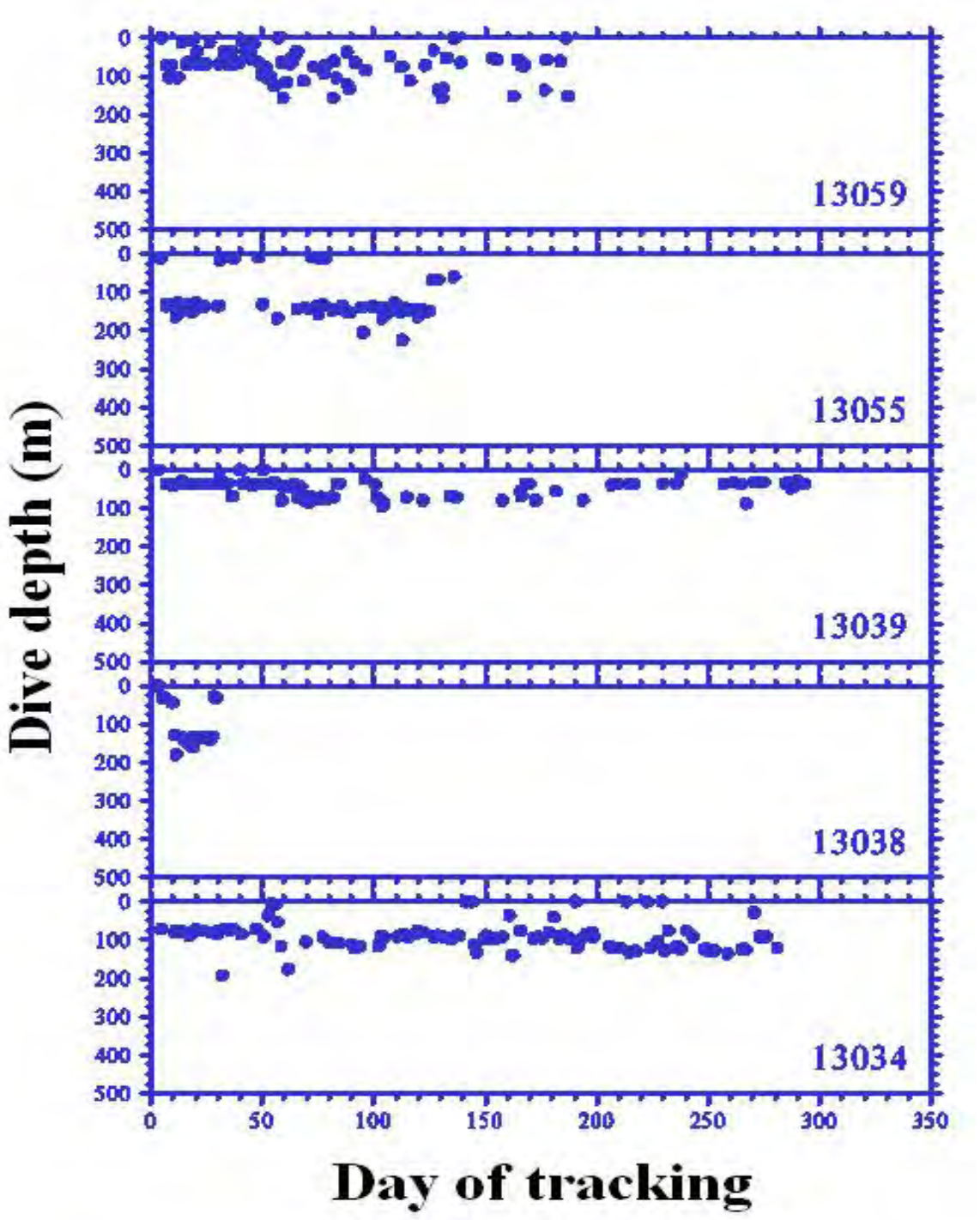


Figure 16. Daily maximum depths of dives of juvenile male Hawaiian monk seals from Laysan Island, 2001-2002.

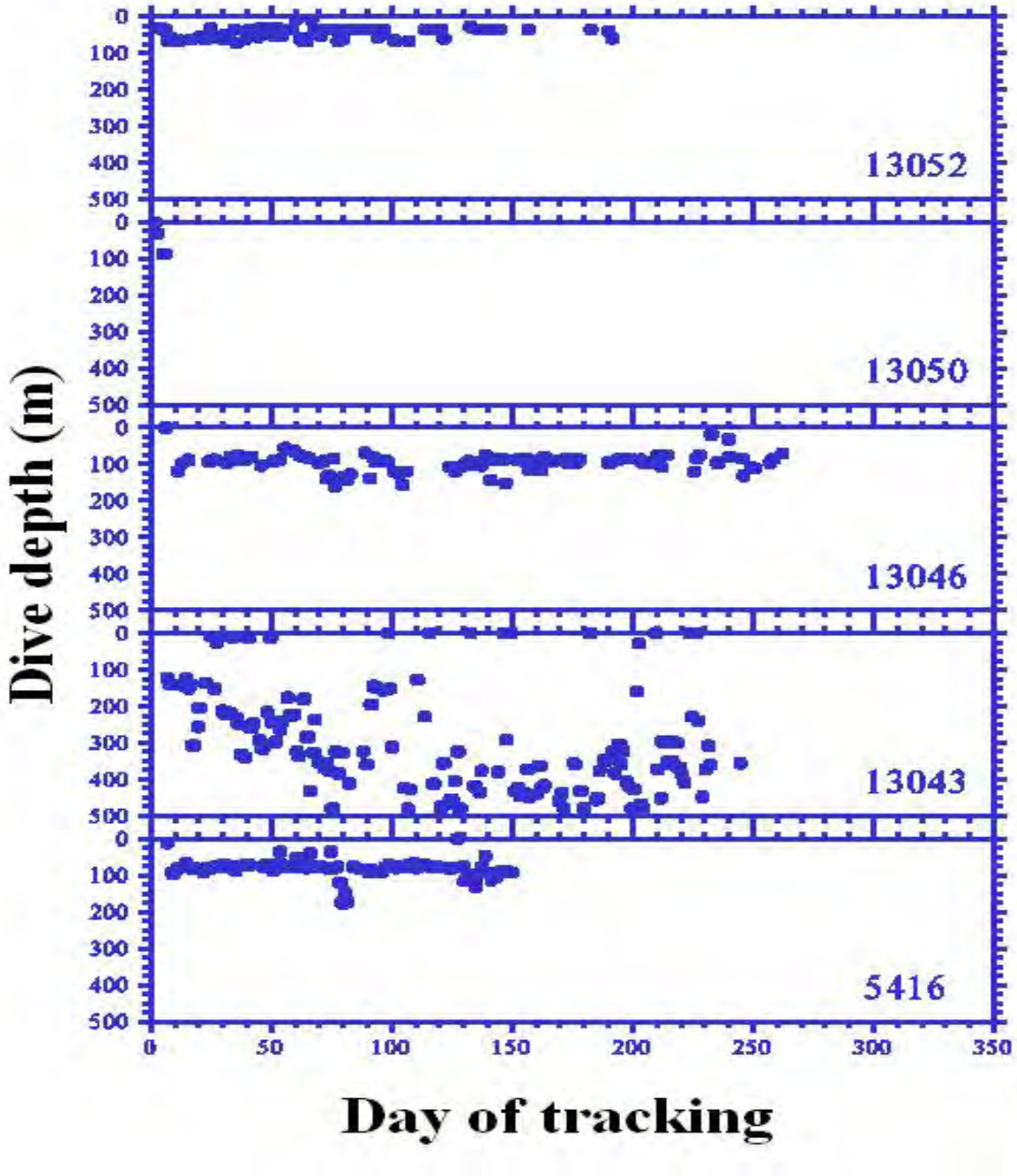


Figure 17. Daily maximum depths of dives of juvenile female Hawaiian monk seals from Laysan Island, 2001-2002.

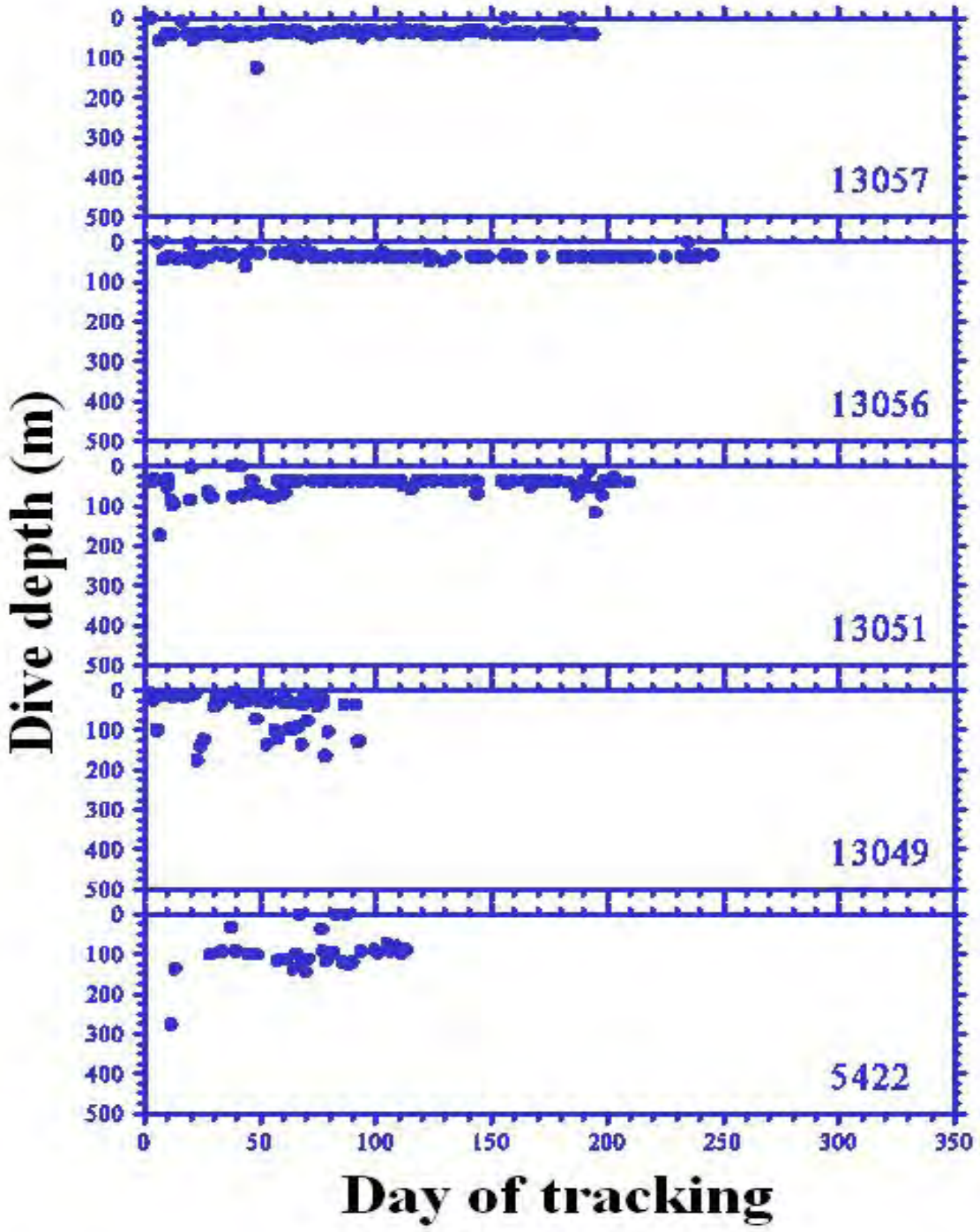


Figure 18. Daily maximum depths of dives of weaned male Hawaiian monk seal pups from Laysan Island, 2001-2002.

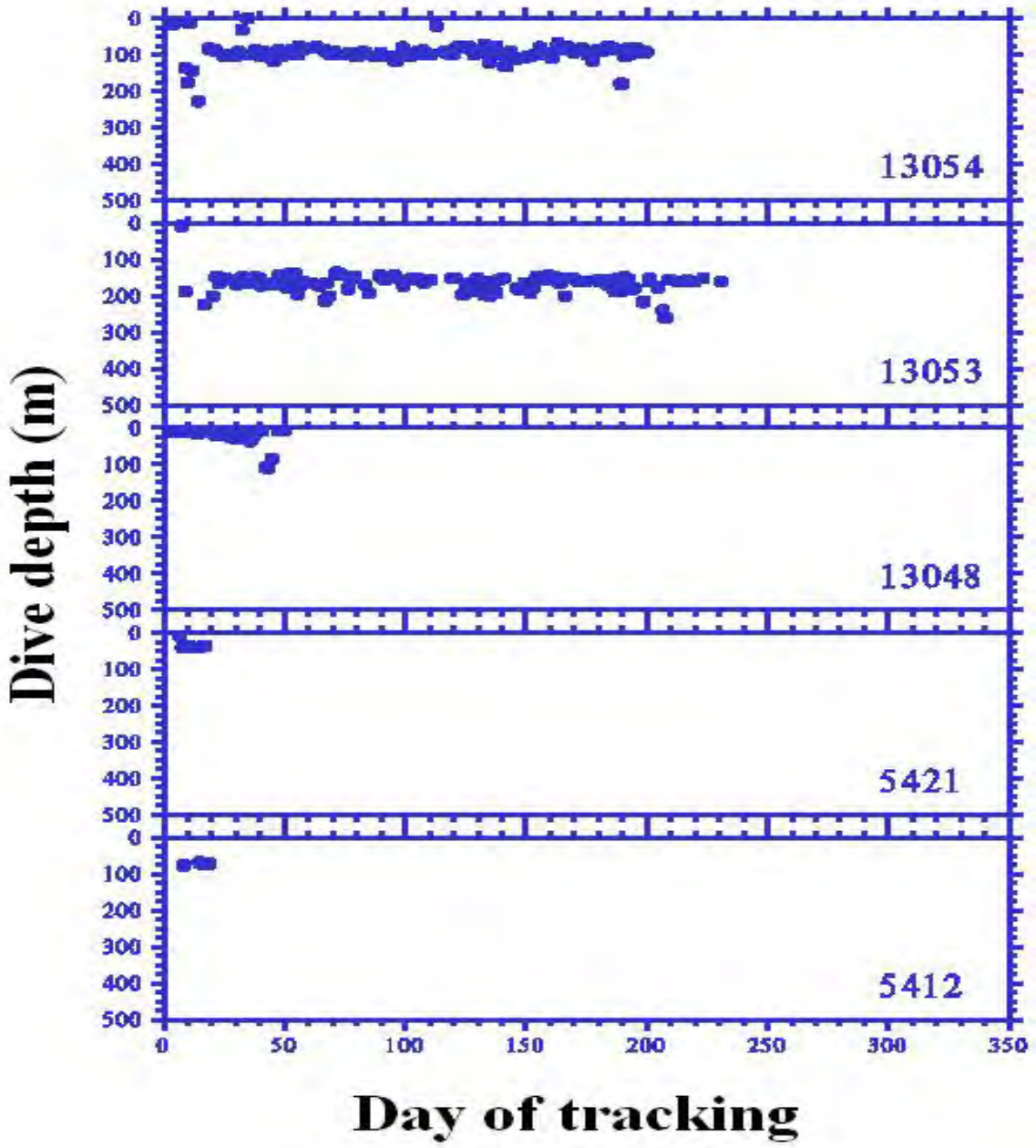


Figure 19. Daily maximum depths of dives of weaned female Hawaiian monk seal pups from Laysan Island, 2001-2002.

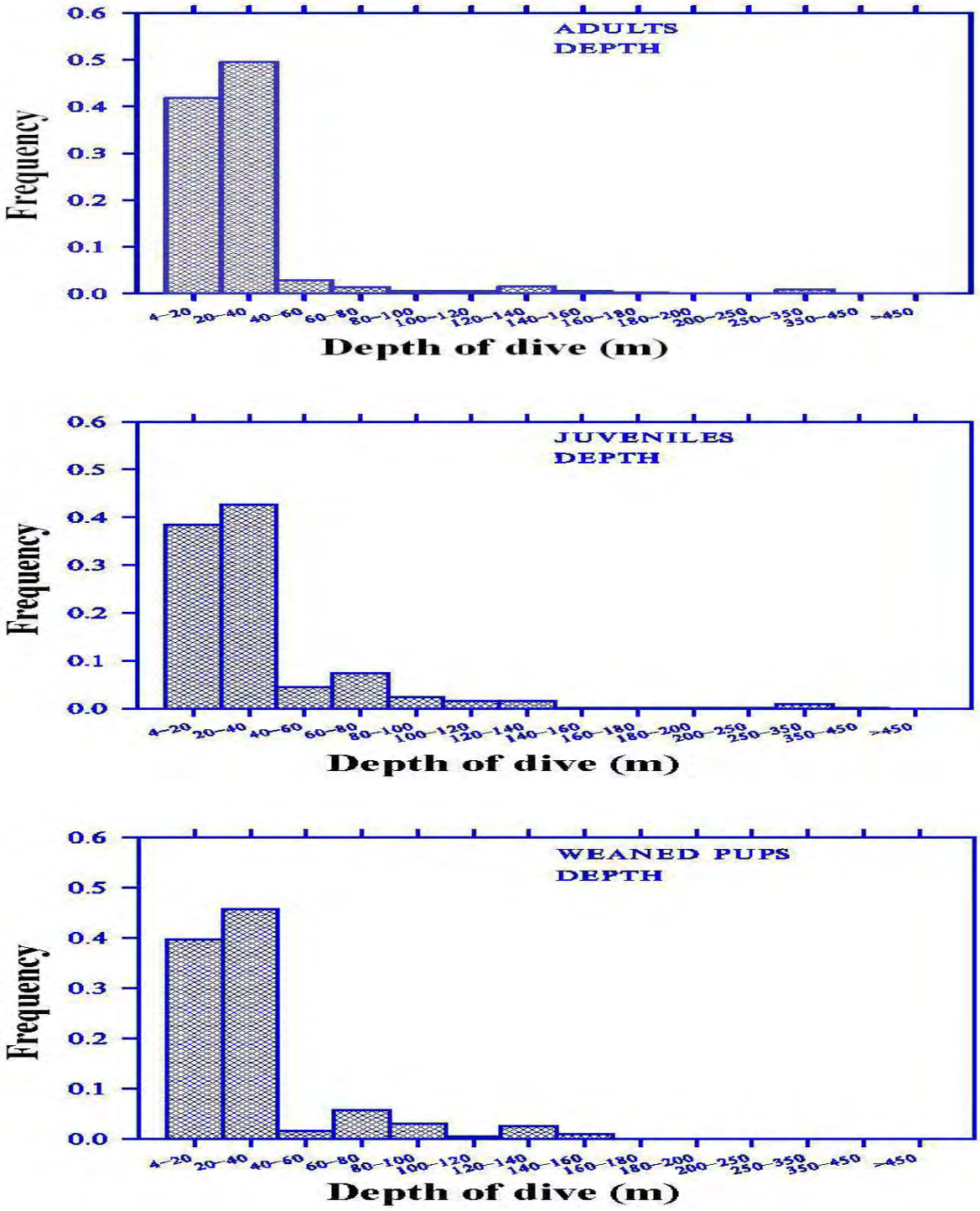


Figure 20. Dive depths of adult, juvenile and weaned pup Hawaiian monk seals from Laysan Island, 2001-2002.

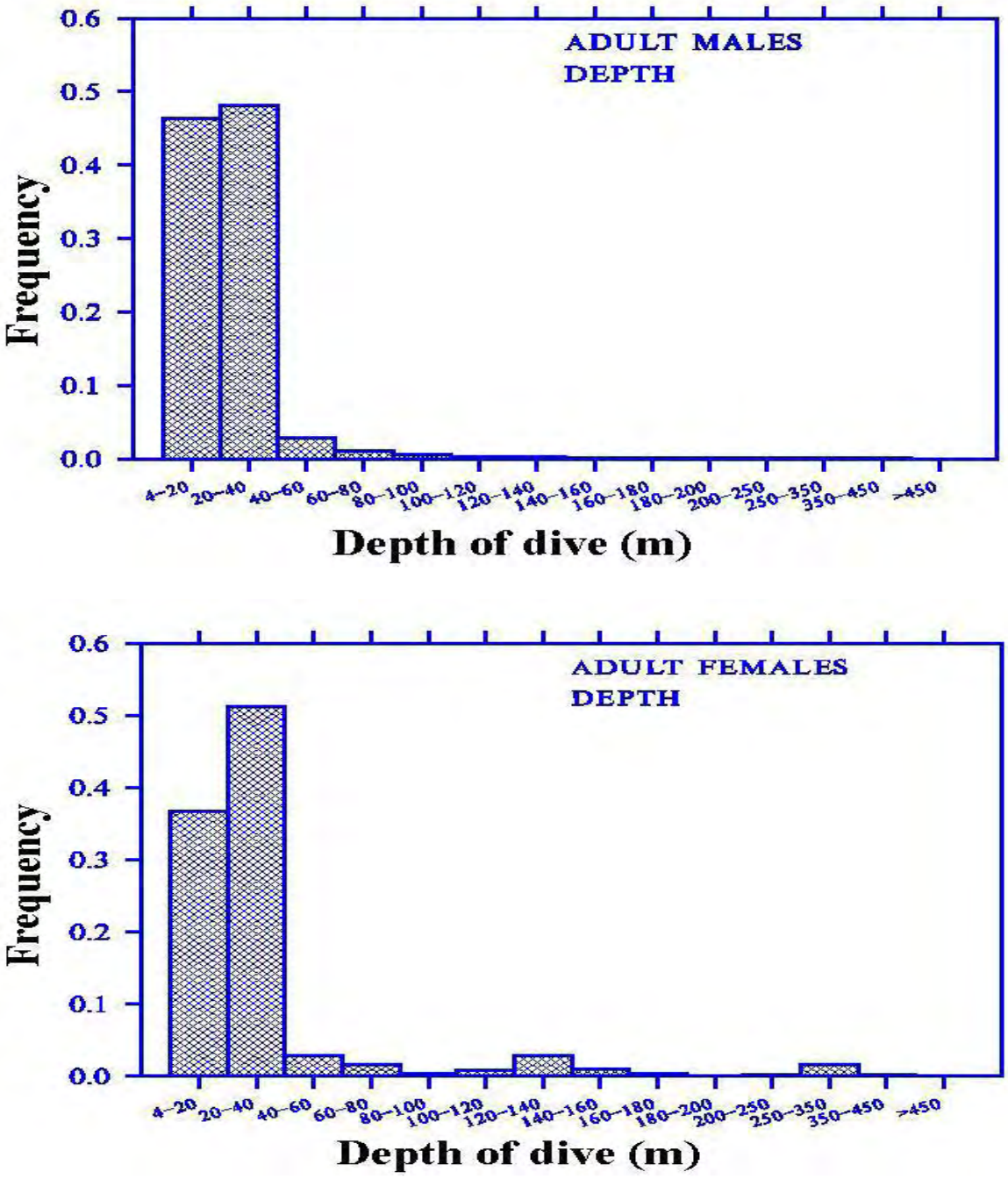


Figure 21. Dive depths of adult male and female Hawaiian monk seals from Laysan Island, 2001-2002.

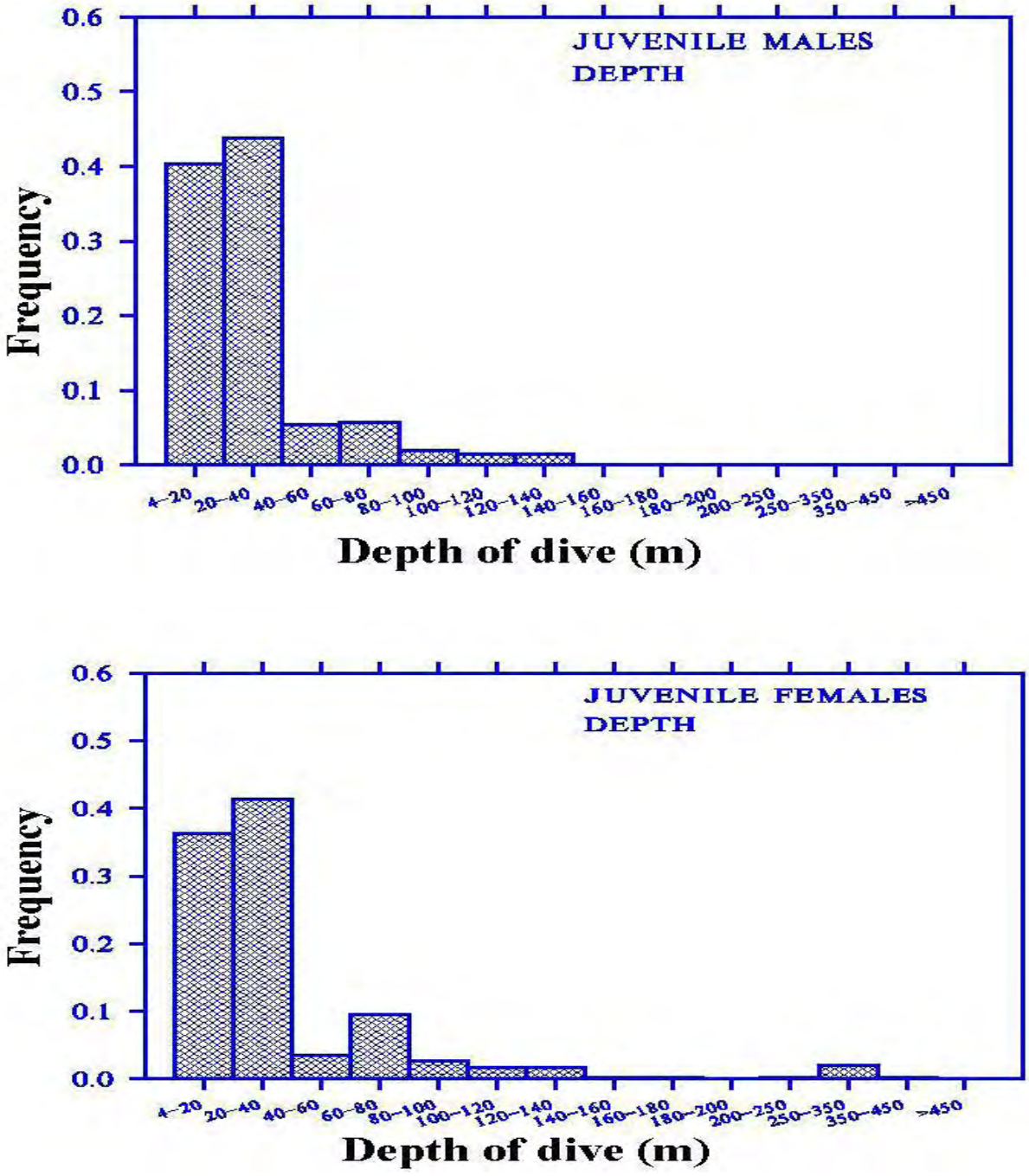


Figure 22, Dive depths of juvenile male and female Hawaiian monk seals from Laysan Island, 2001-2002.

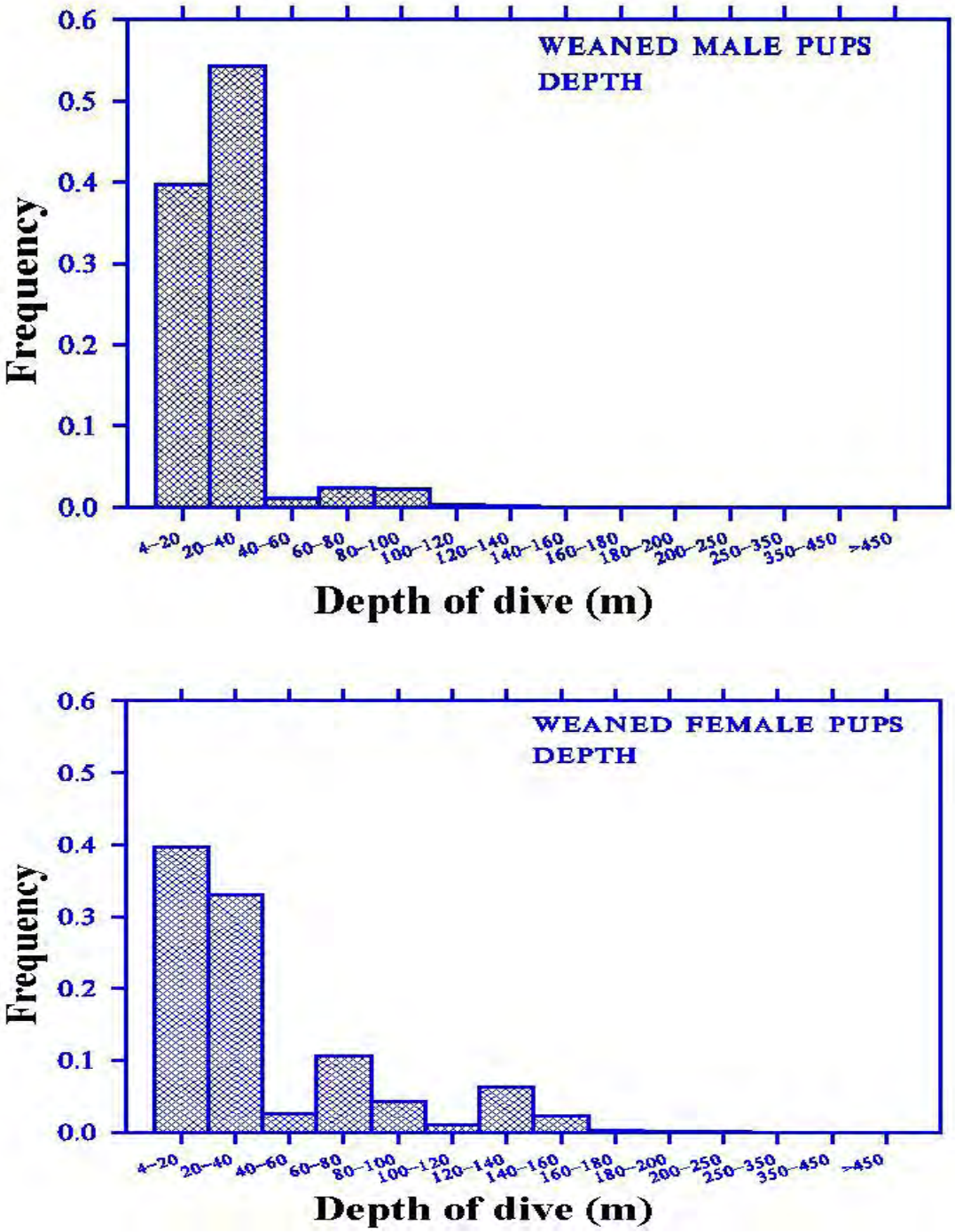


Figure 23. Dive depths of male and female weaned pups from Laysan Island, 2001-2002.

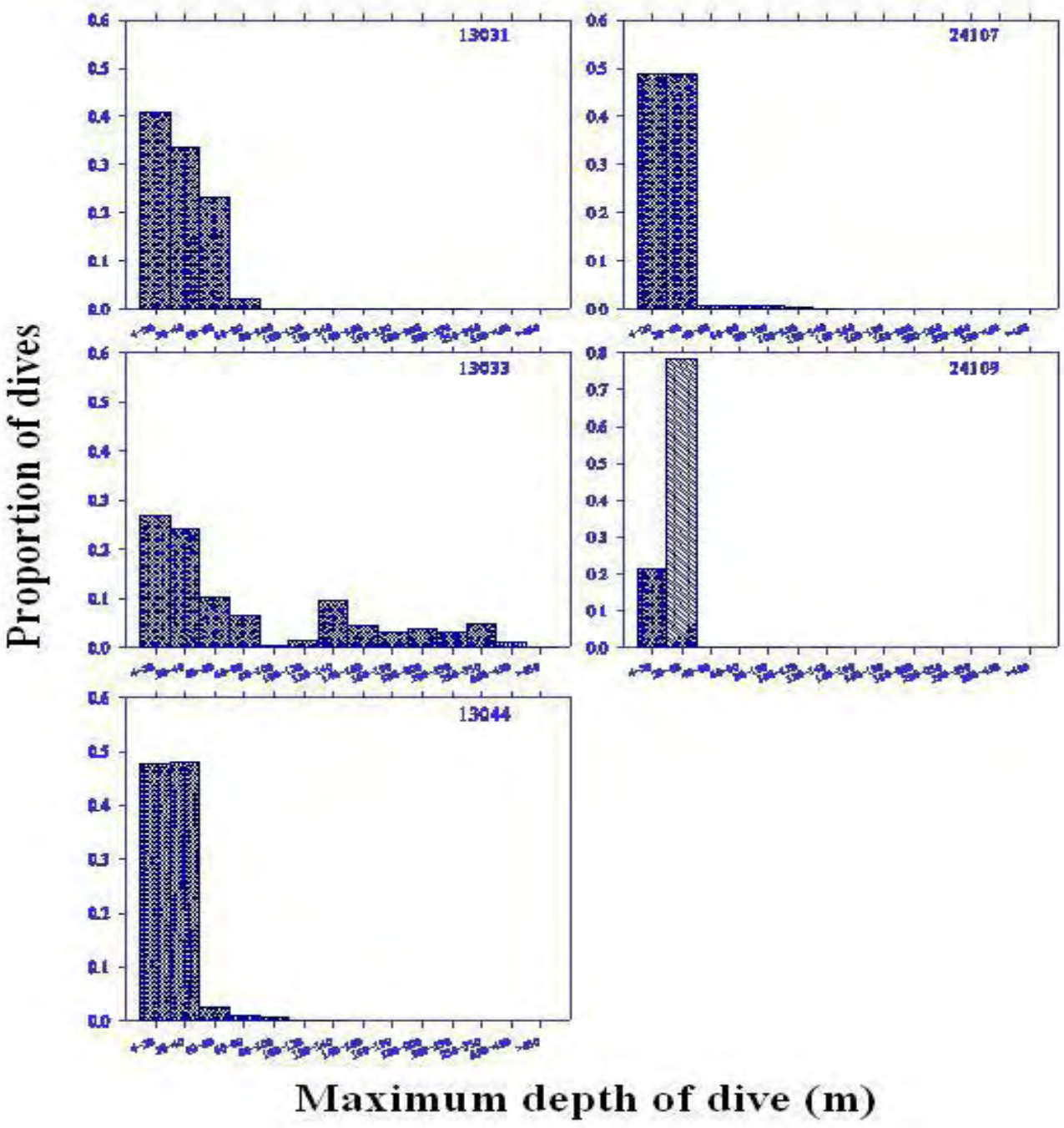


Figure 24. Dive depths of adult male Hawaiian monk seals from Laysan Island, 2001-2002.

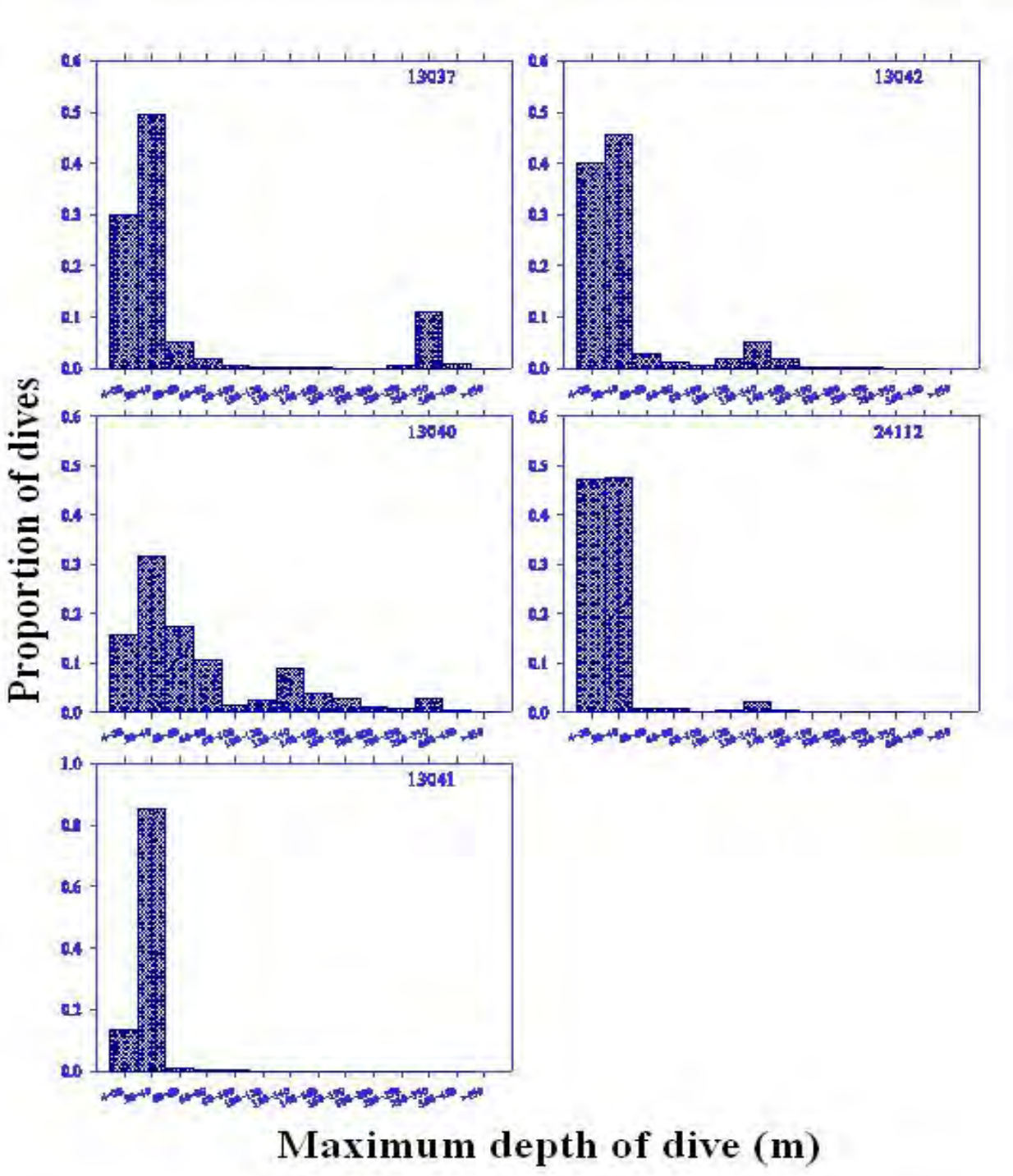


Figure 25. Dive depths of adult female Hawaiian monk seals from Laysan Island, 2001-2002.

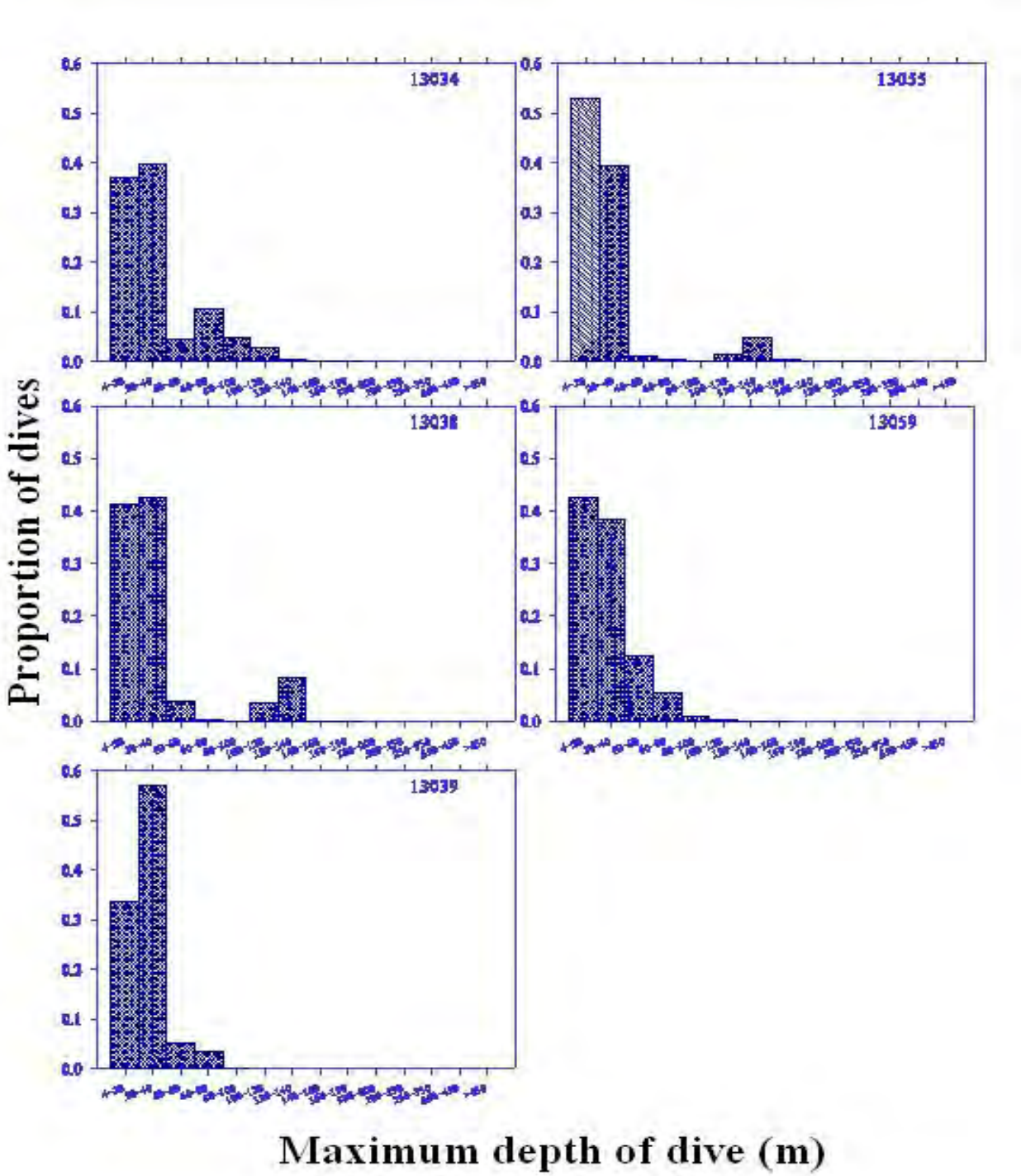


Figure 26. Dive depths of juvenile male Hawaiian monk seals from Laysan Island, 2001-2002.

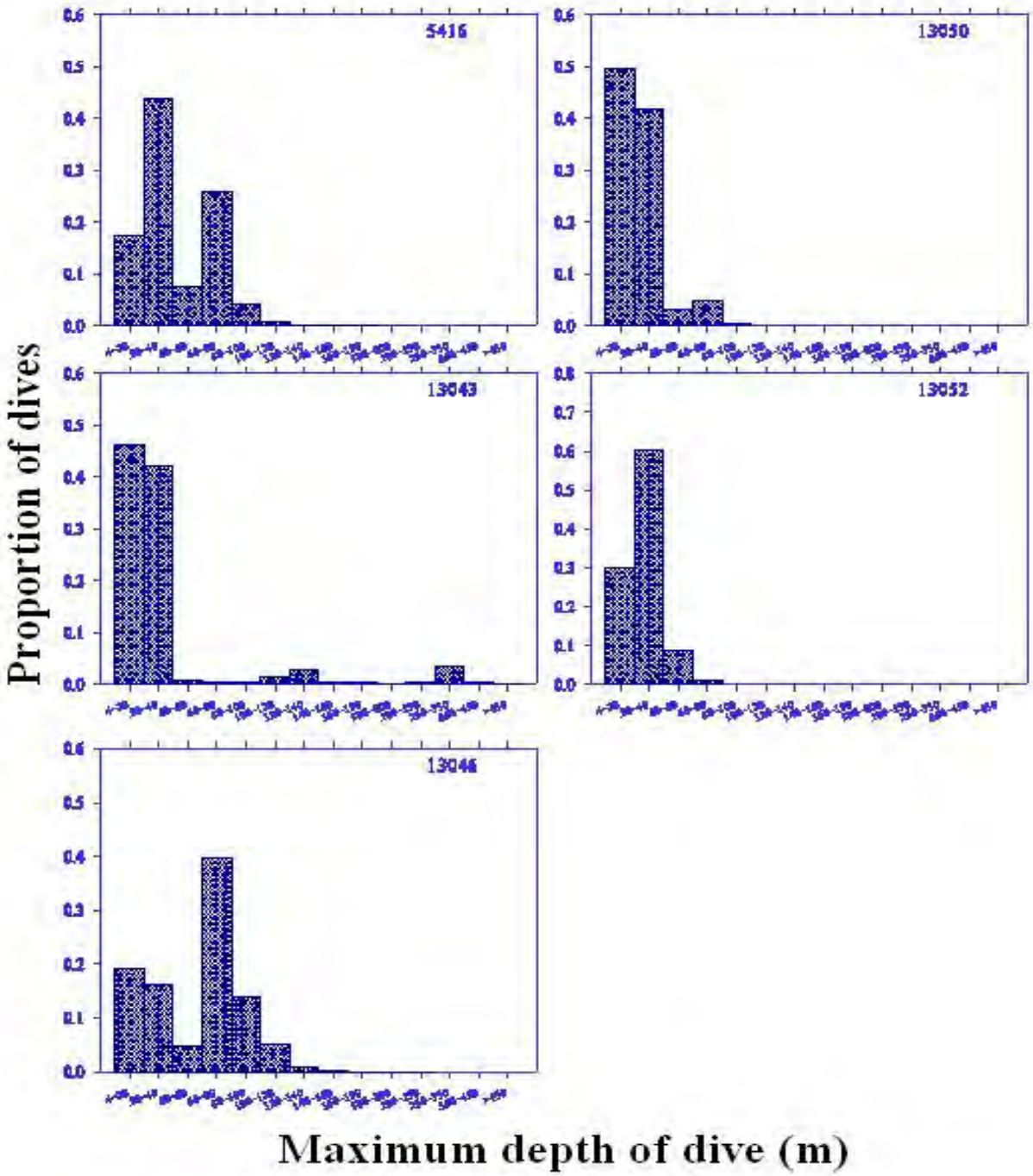


Figure 27. Dive depths of juvenile female Hawaiian monk seals from Laysan Island, 2001-2002.

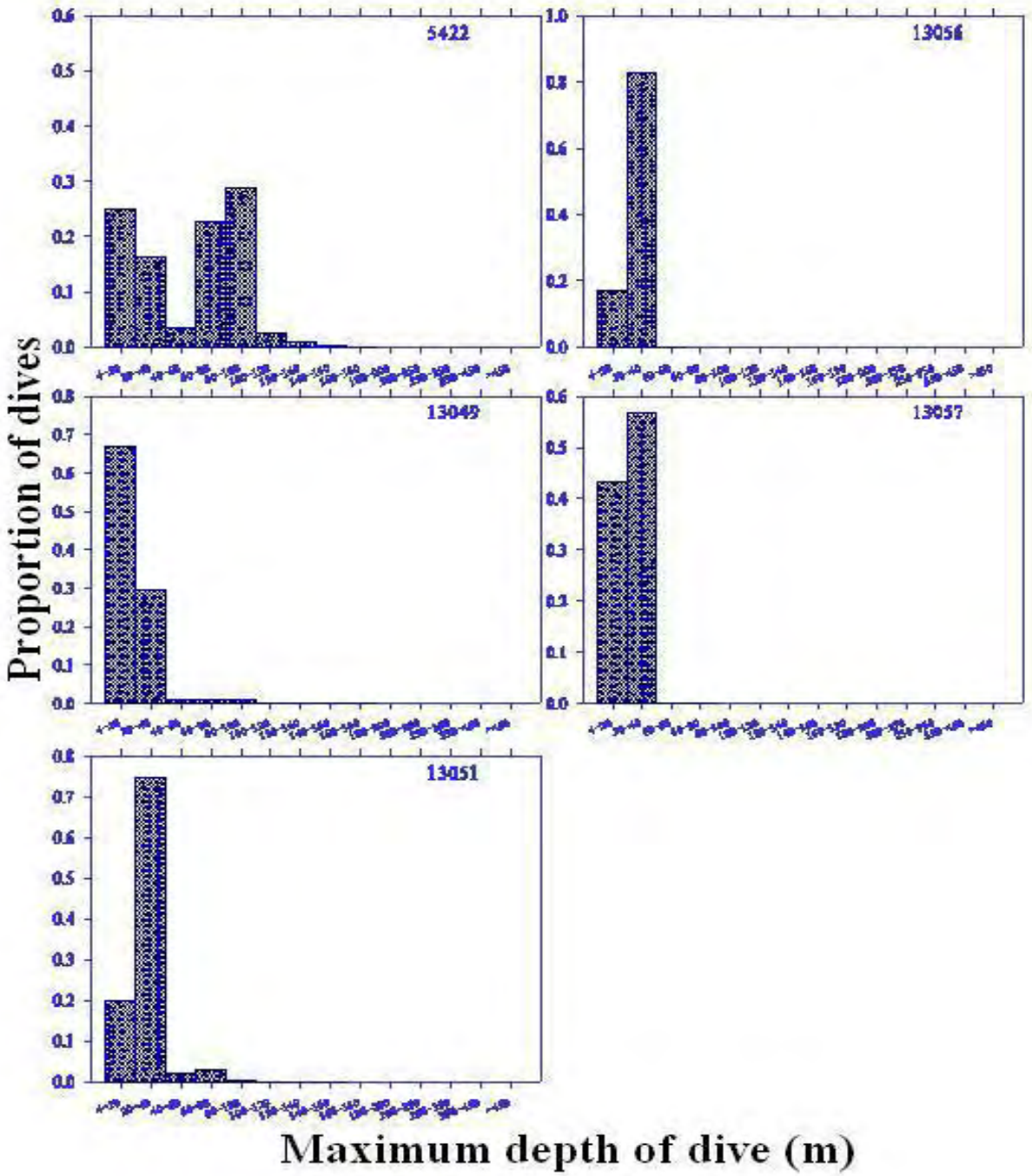


Figure 28. Dive depths of male weaned Hawaiian monk seal pups from Laysan Island, 2001-2002.

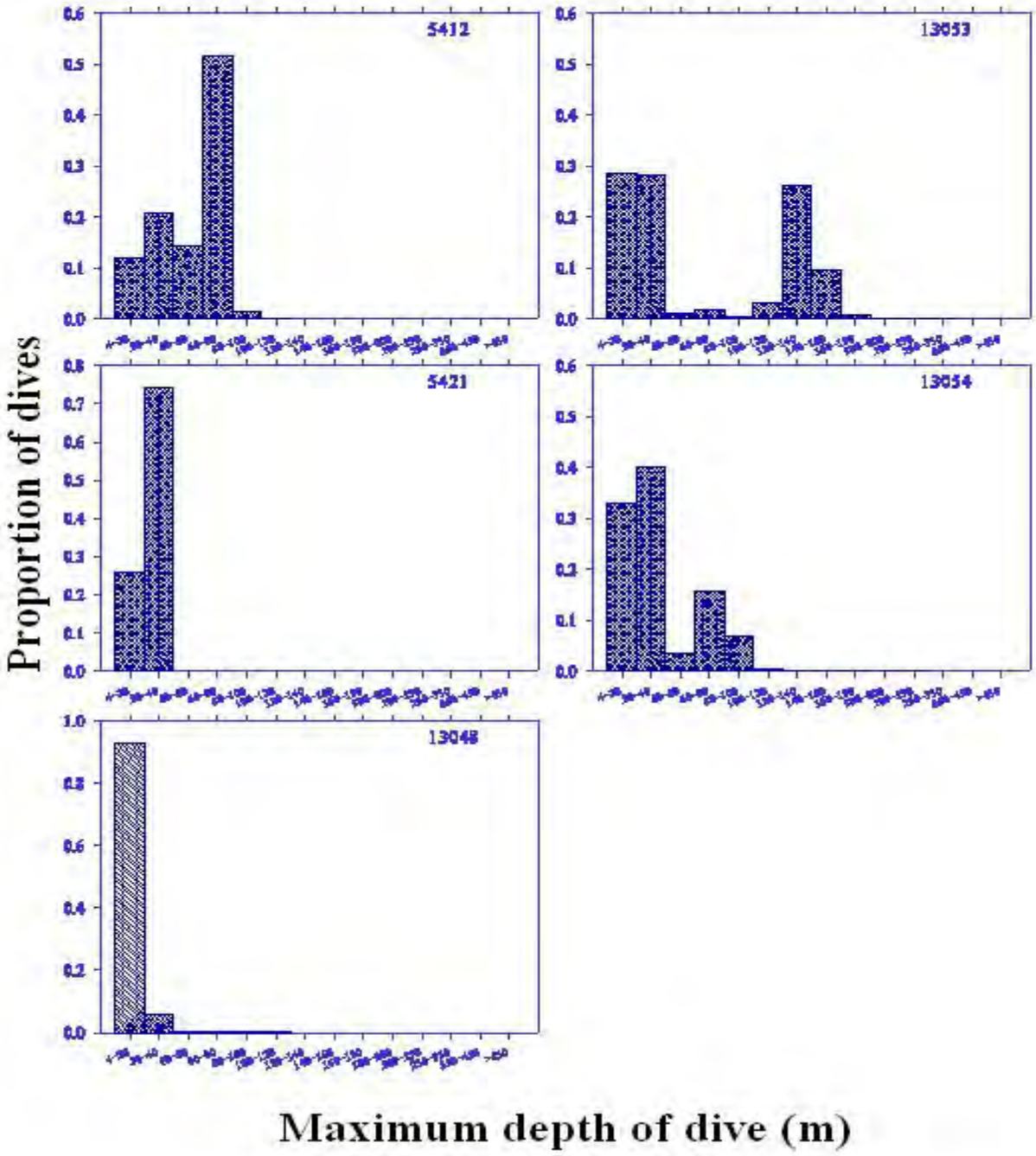


Figure 29. Dive depths of weaned female Hawaiian monk seal pups from Laysan Island, 2001-2002.

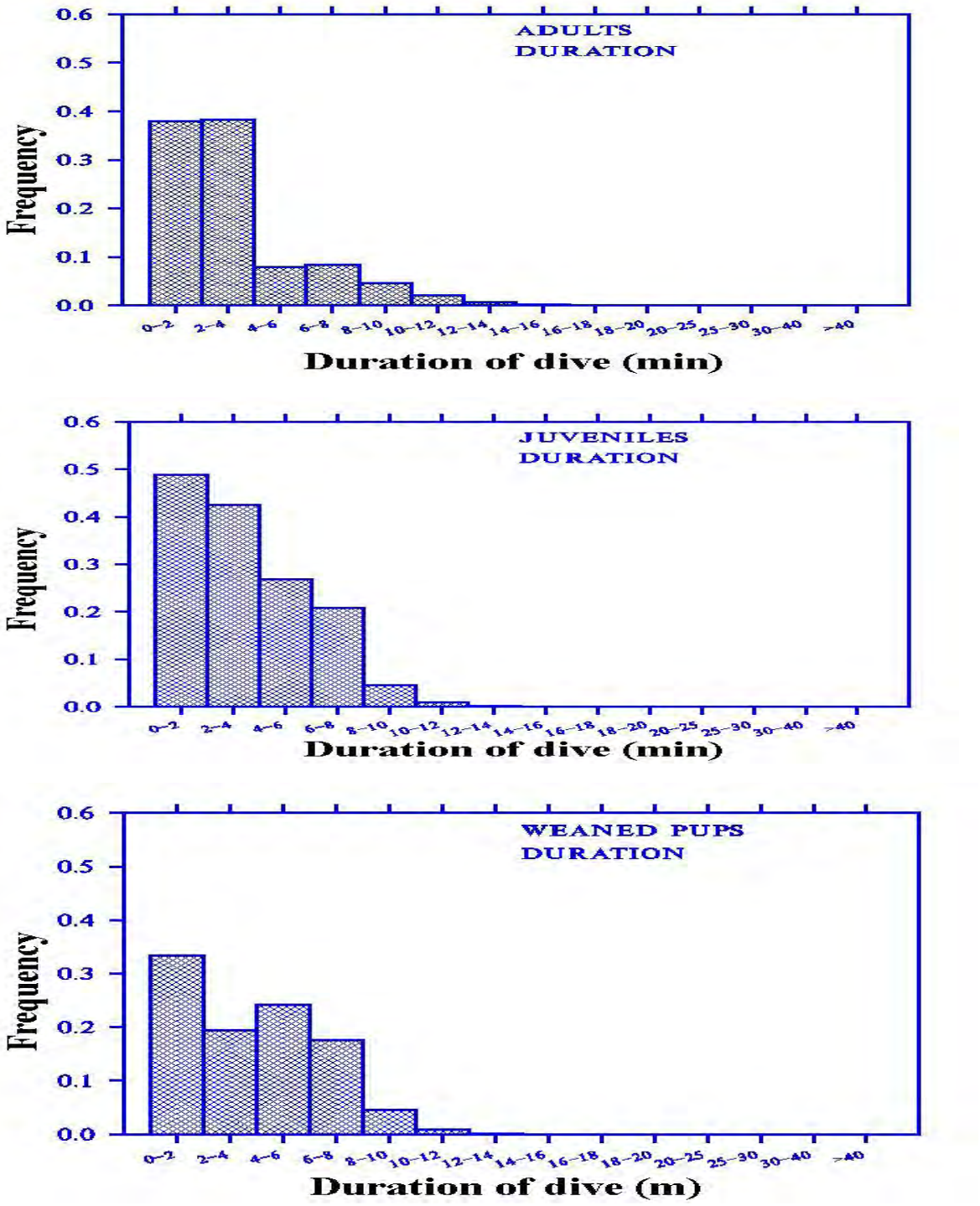


Figure 30. Durations of dives of adult, juvenile and weaned pup Hawaiian monk seals from Laysan Island, 2001-2002.

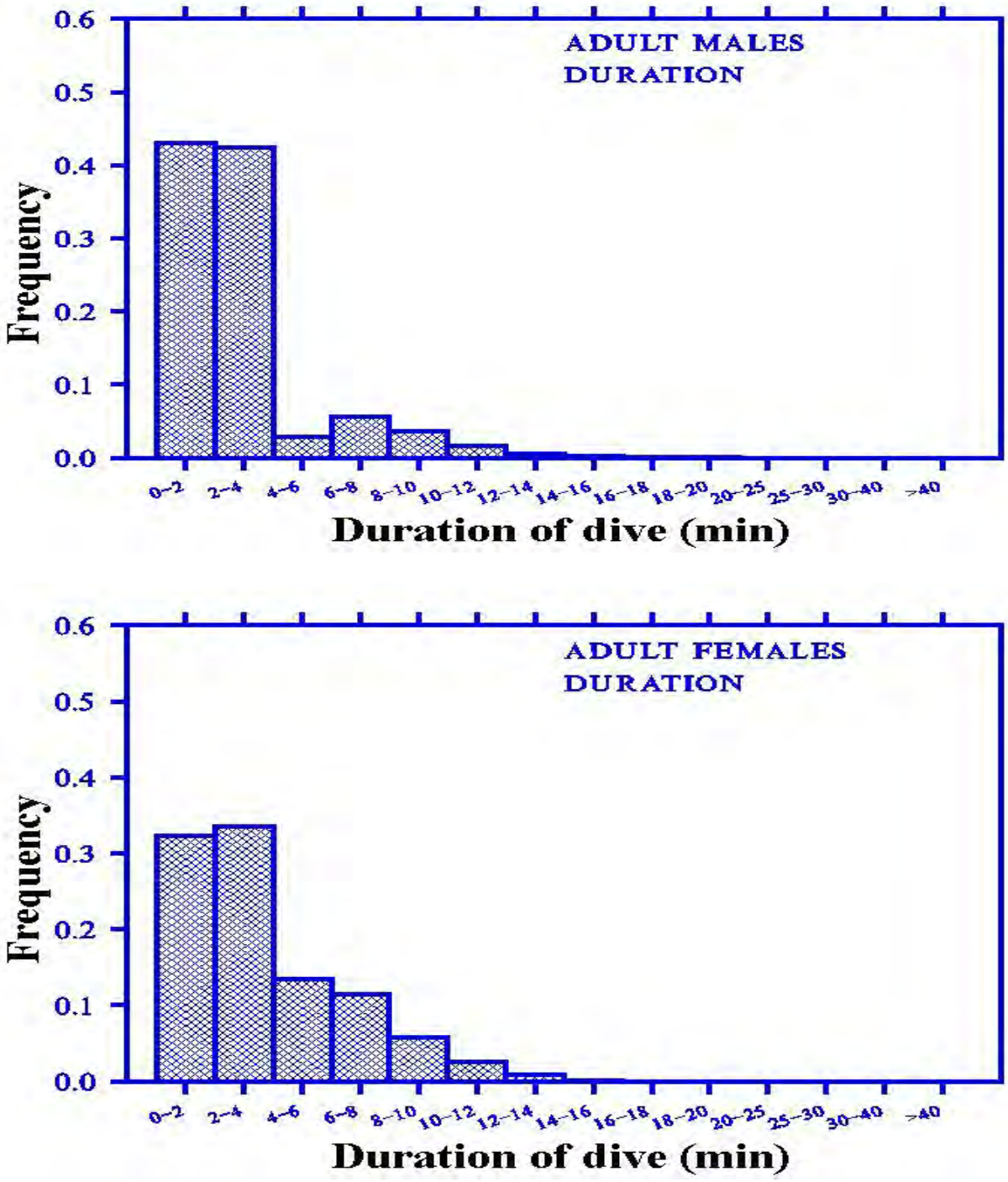


Figure 31. Durations of dive of adult male and female Hawaiian monk seals from Laysan Island, 2001-2002.

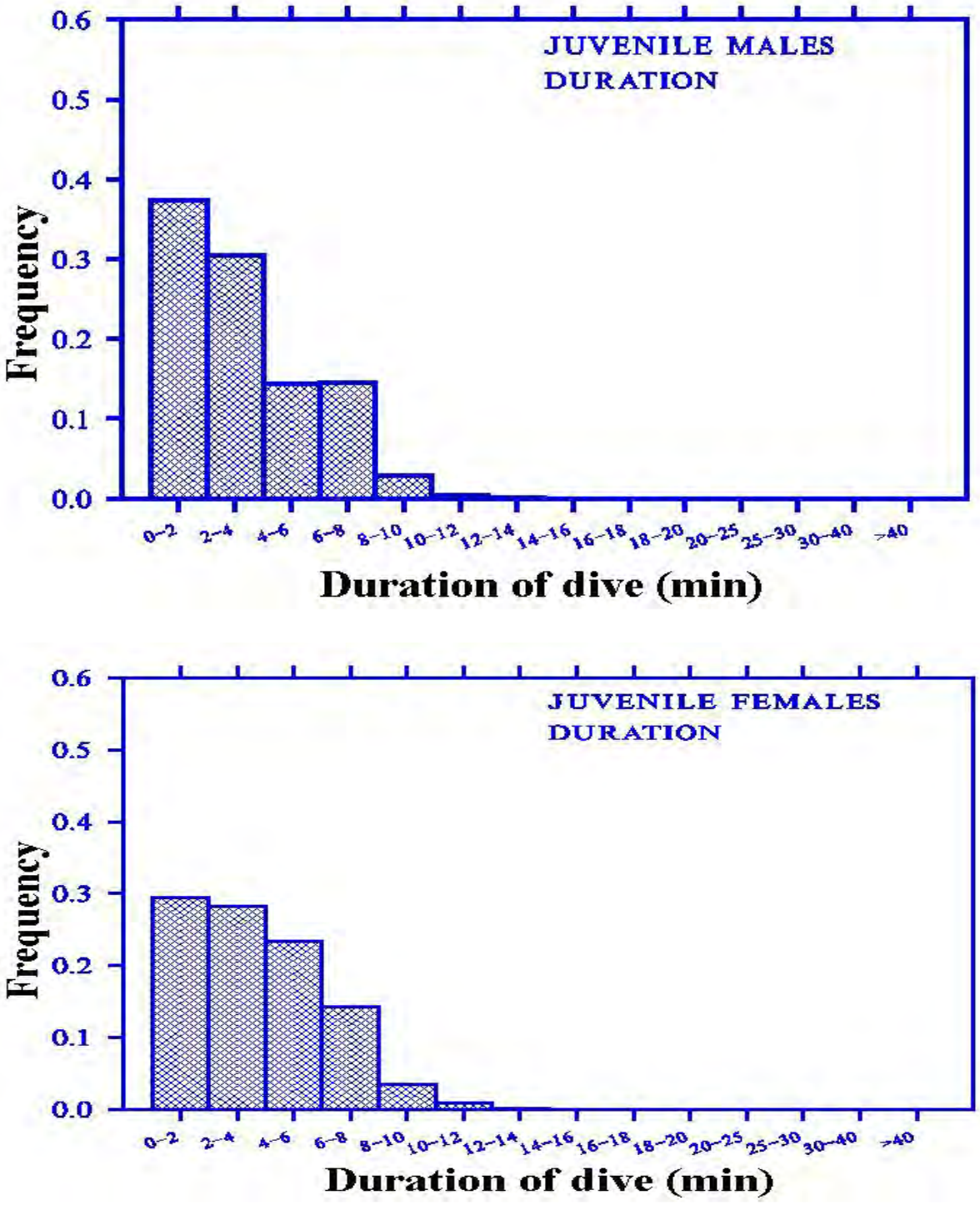


Figure 32. Durations of dive of juvenile male and female Hawaiian monk seals from Laysan Island, 2001-2002.

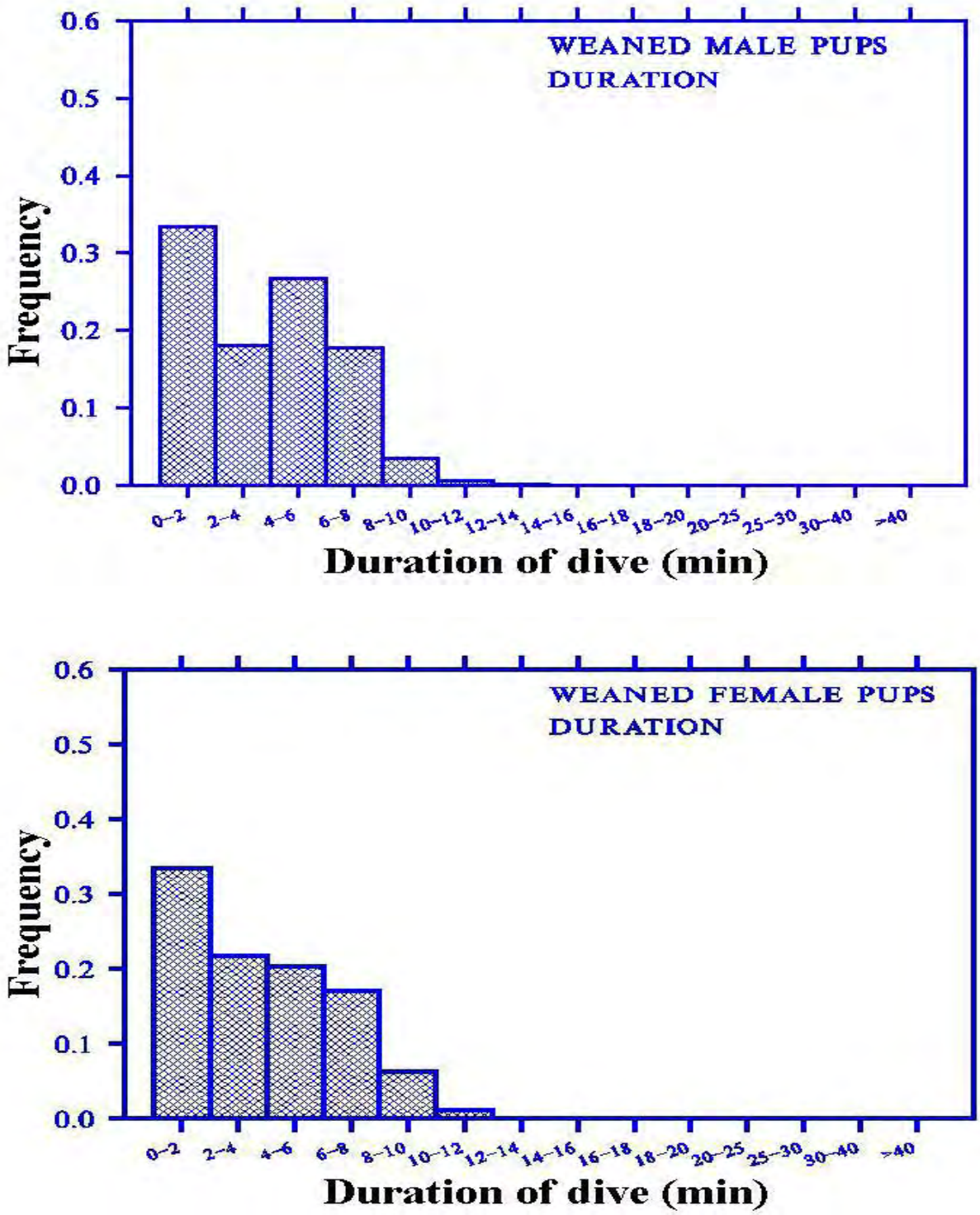


Figure 33. Durations of dives of male and female weaned pups from Laysan Island, 2001-2002.

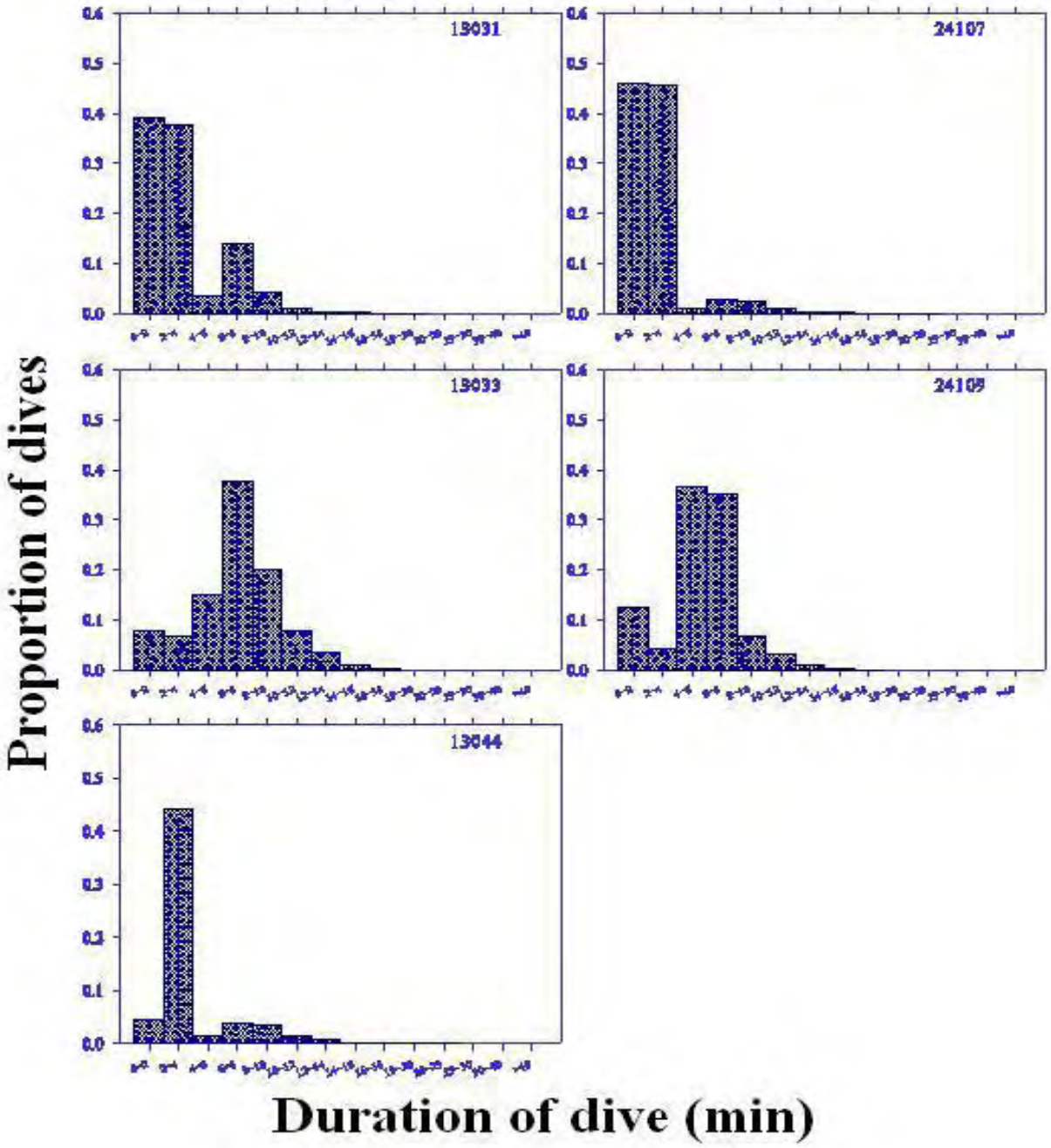


Figure 34. Durations of dives of adult male Hawaiian monk seals from Laysan Island, 2001-2002.

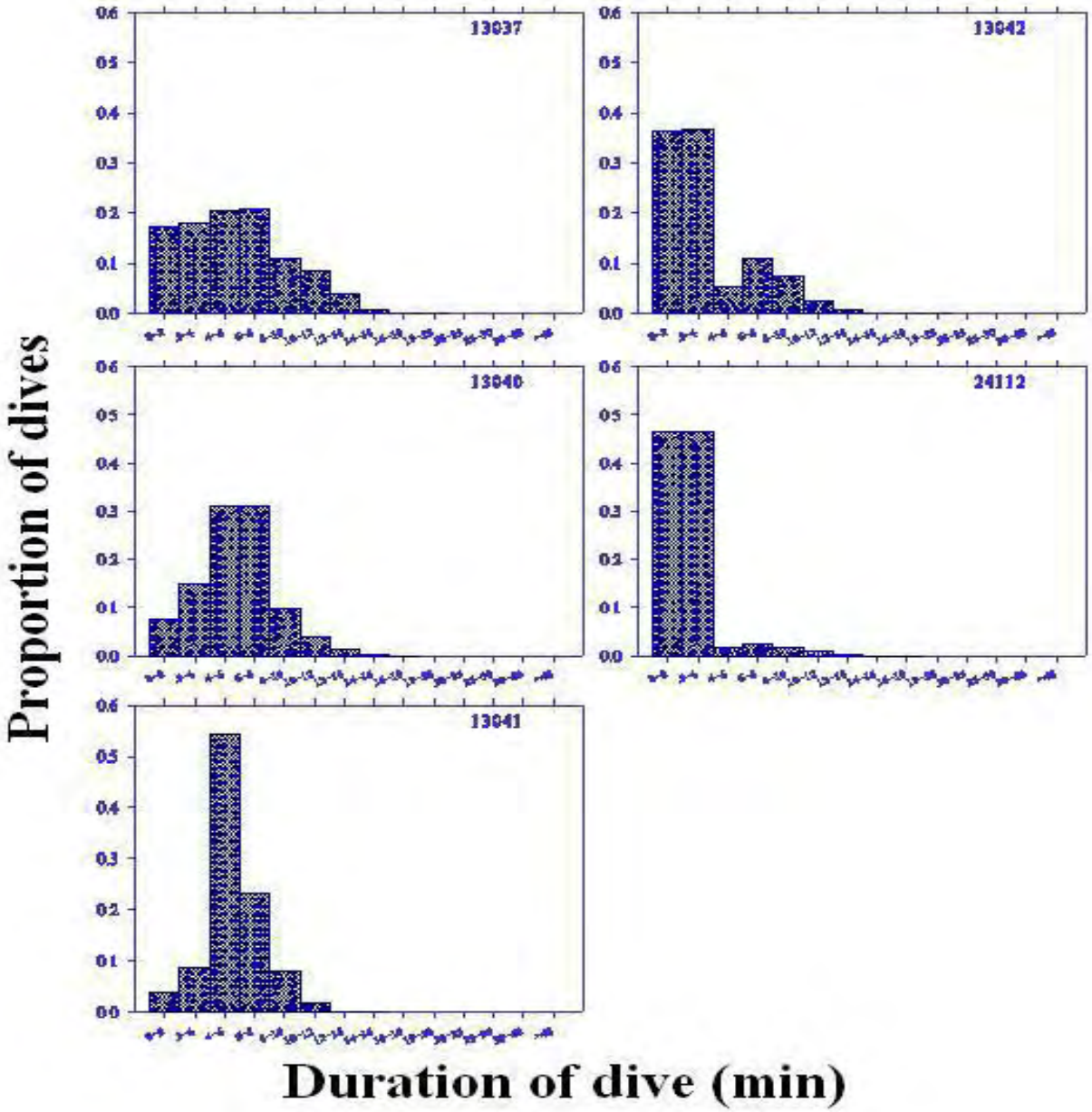


Figure 35. Durations of dives of adult female Hawaiian monk seals from Laysan Island, 2001-2002.

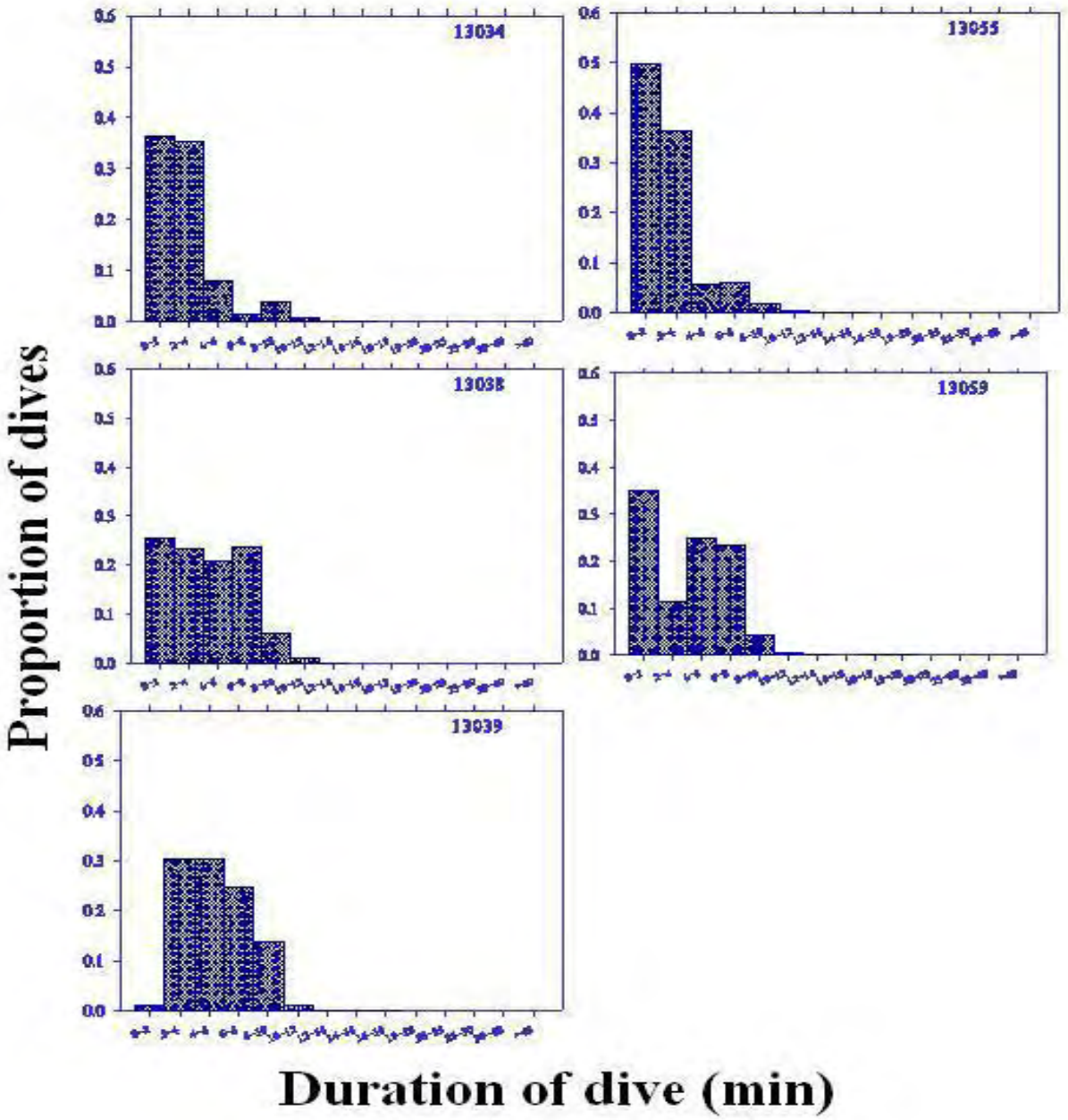


Figure 36. Durations of dives of juvenile male Hawaiian monk seals from Laysan Island, 2001-2002.

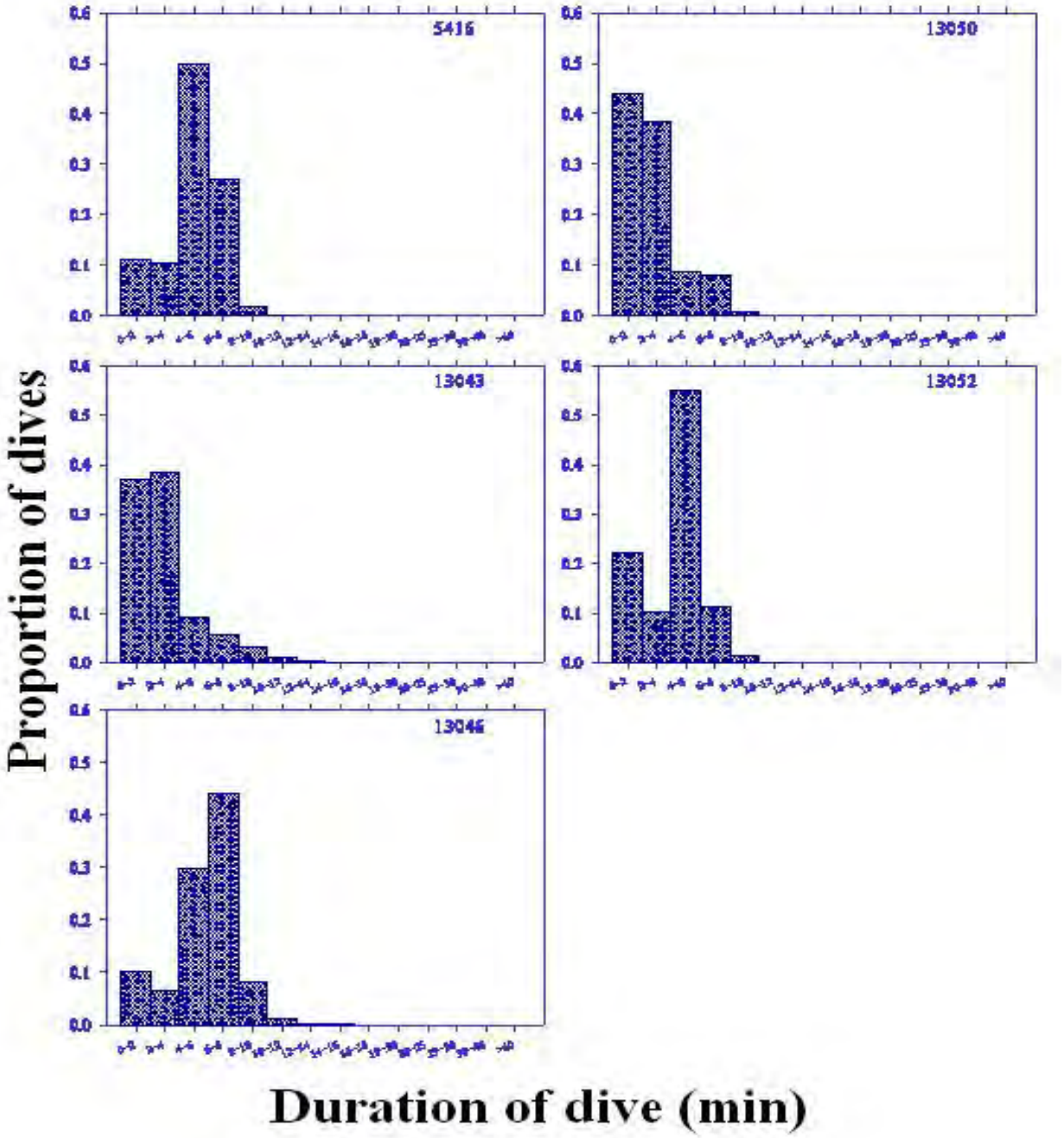


Figure 37. Durations of dives of juvenile female Hawaiian monk seals from Laysan Island, 2001-2002.

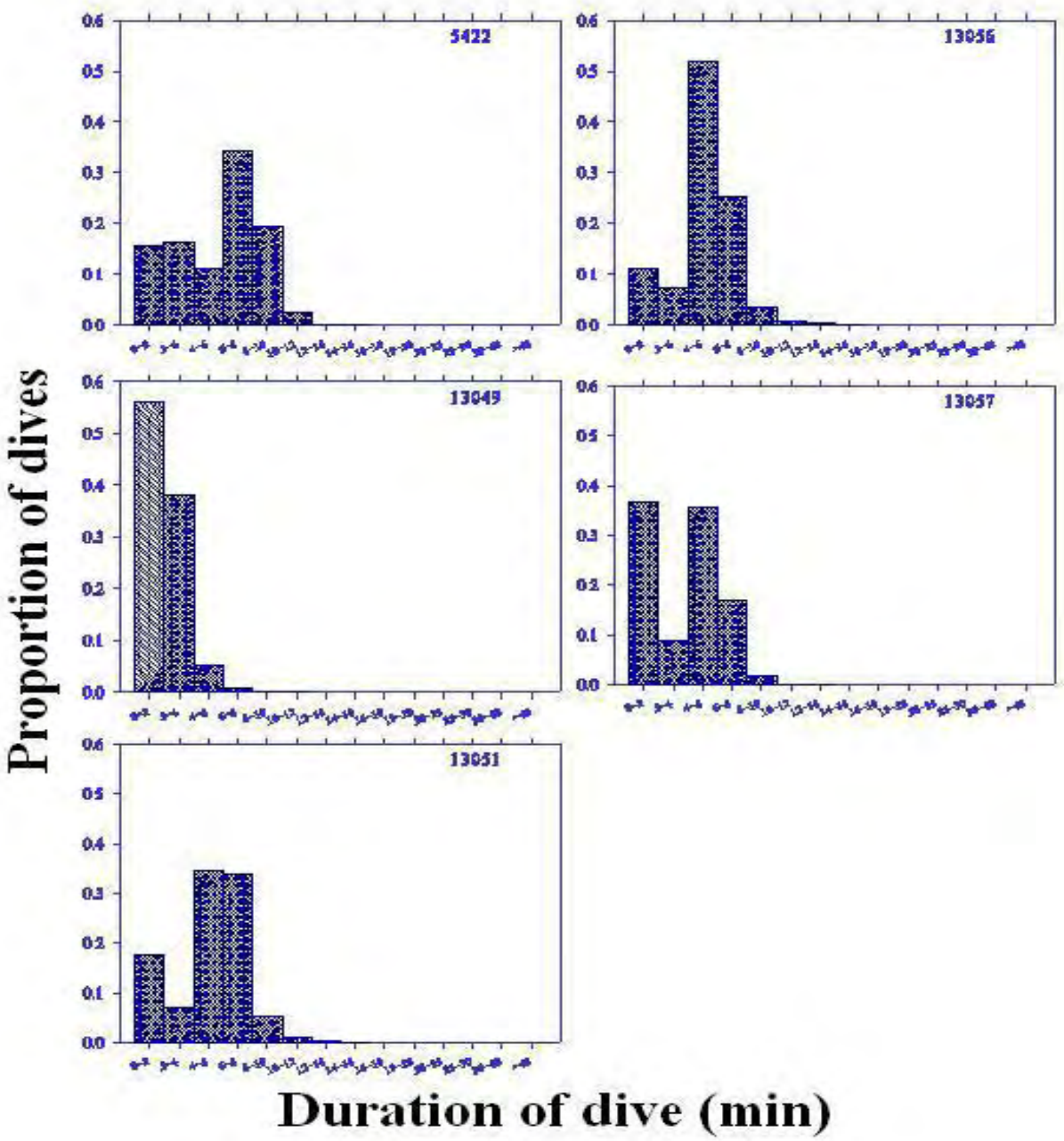


Figure 38. Durations of dives of weaned male Hawaiian monk seal pups from Laysan Island, 2001-2002.

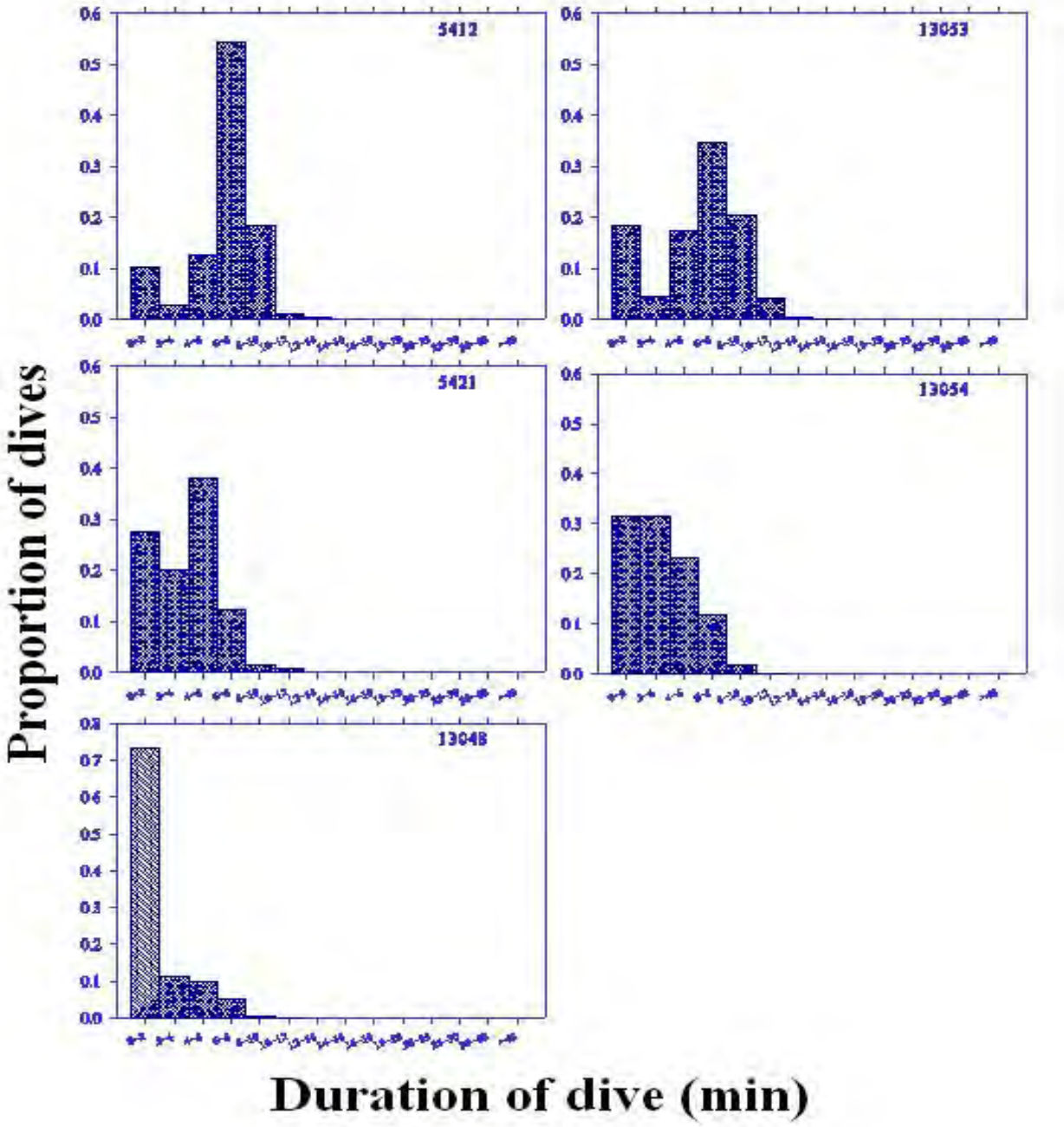


Figure 39. Durations of dives of weaned female Hawaiian monk seal pups from Laysan Island, 2001-2002.

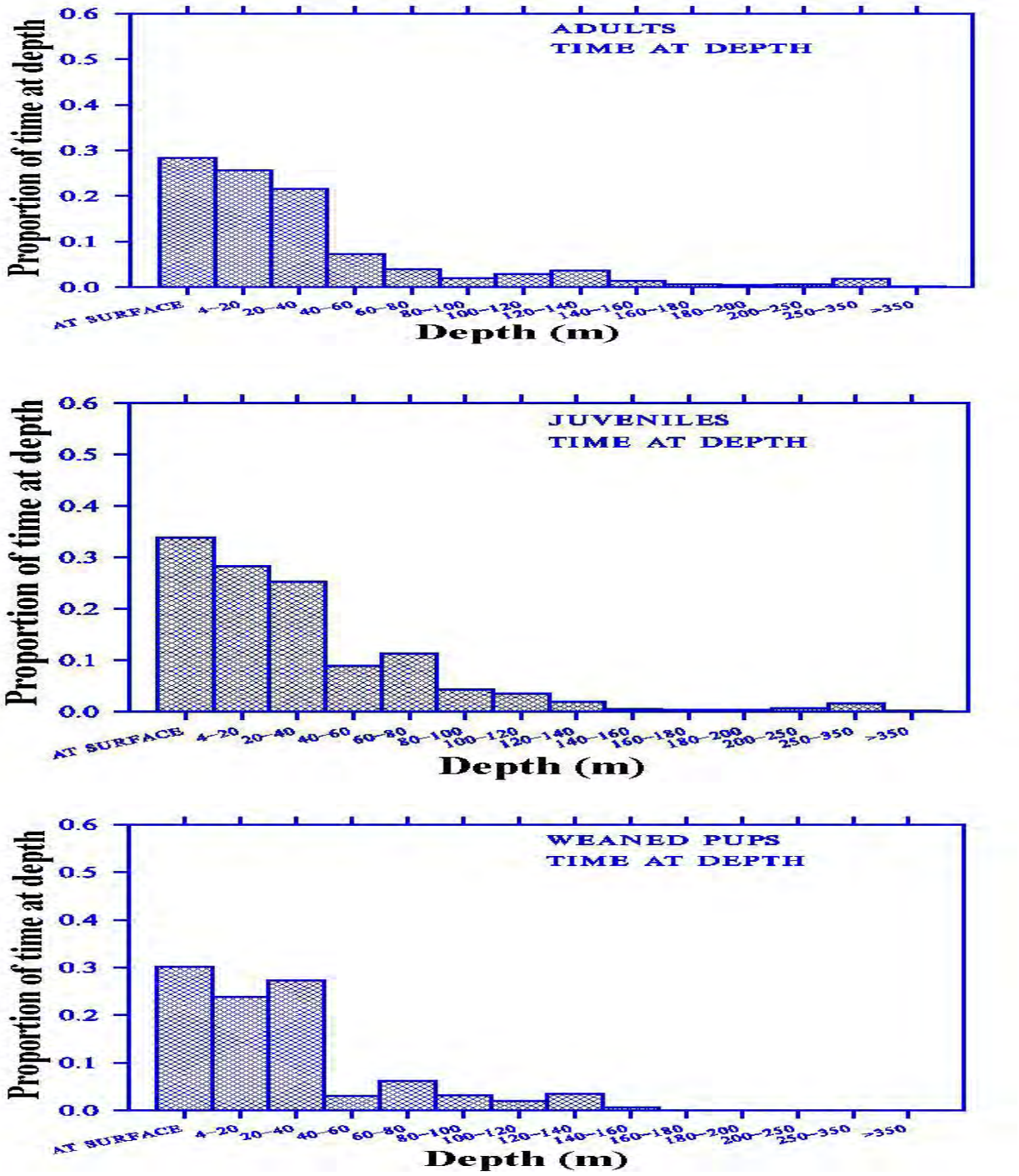


Figure 40. Proportion of time at depth during dives by adult, juvenile and weaned pup Hawaiian monk seals from Laysan Island, 2001-2002.

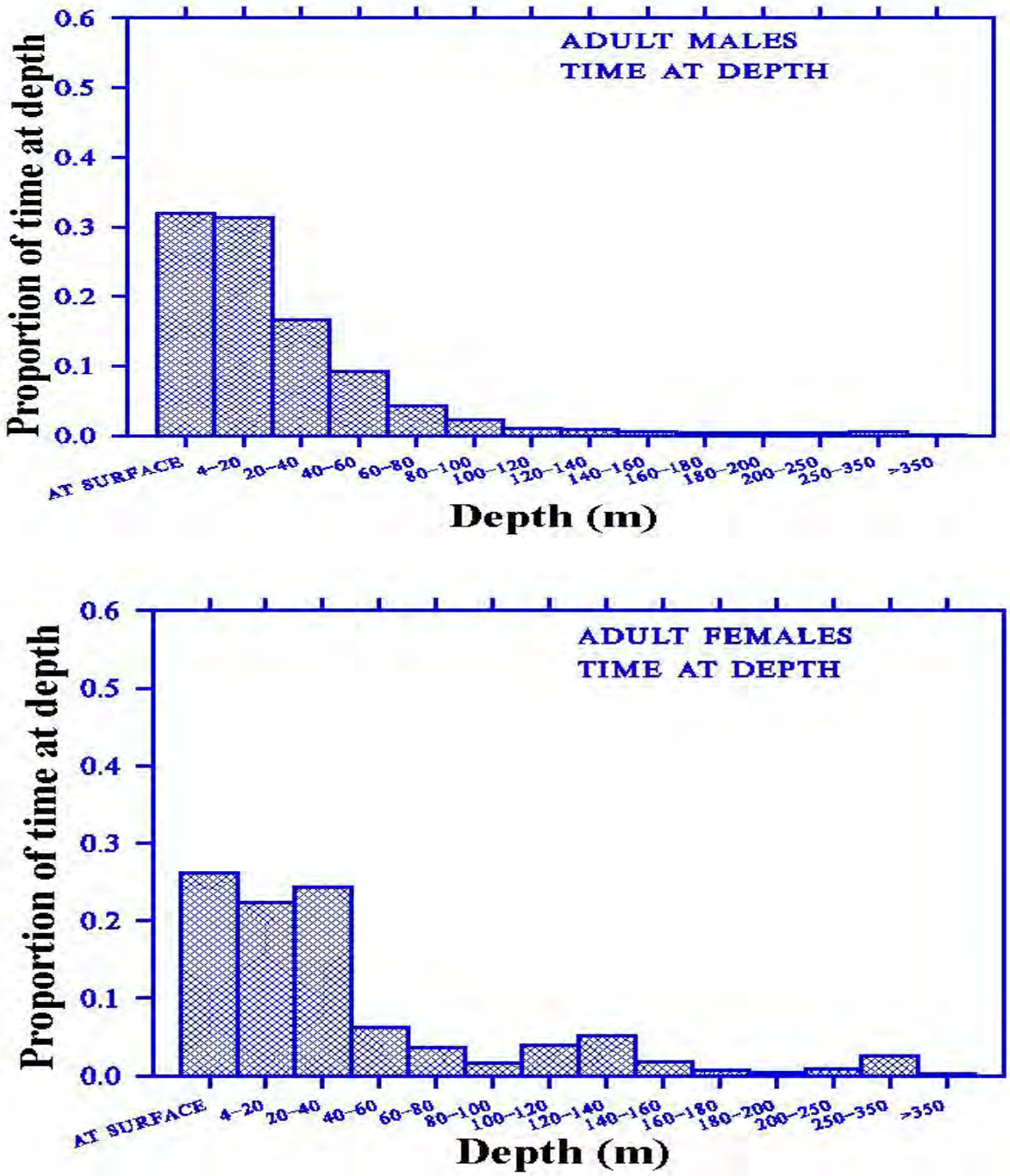


Figure 41. Proportion of time at depth during dives by adult male and female Hawaiian monk seals from Laysan Island, 2001-2002.

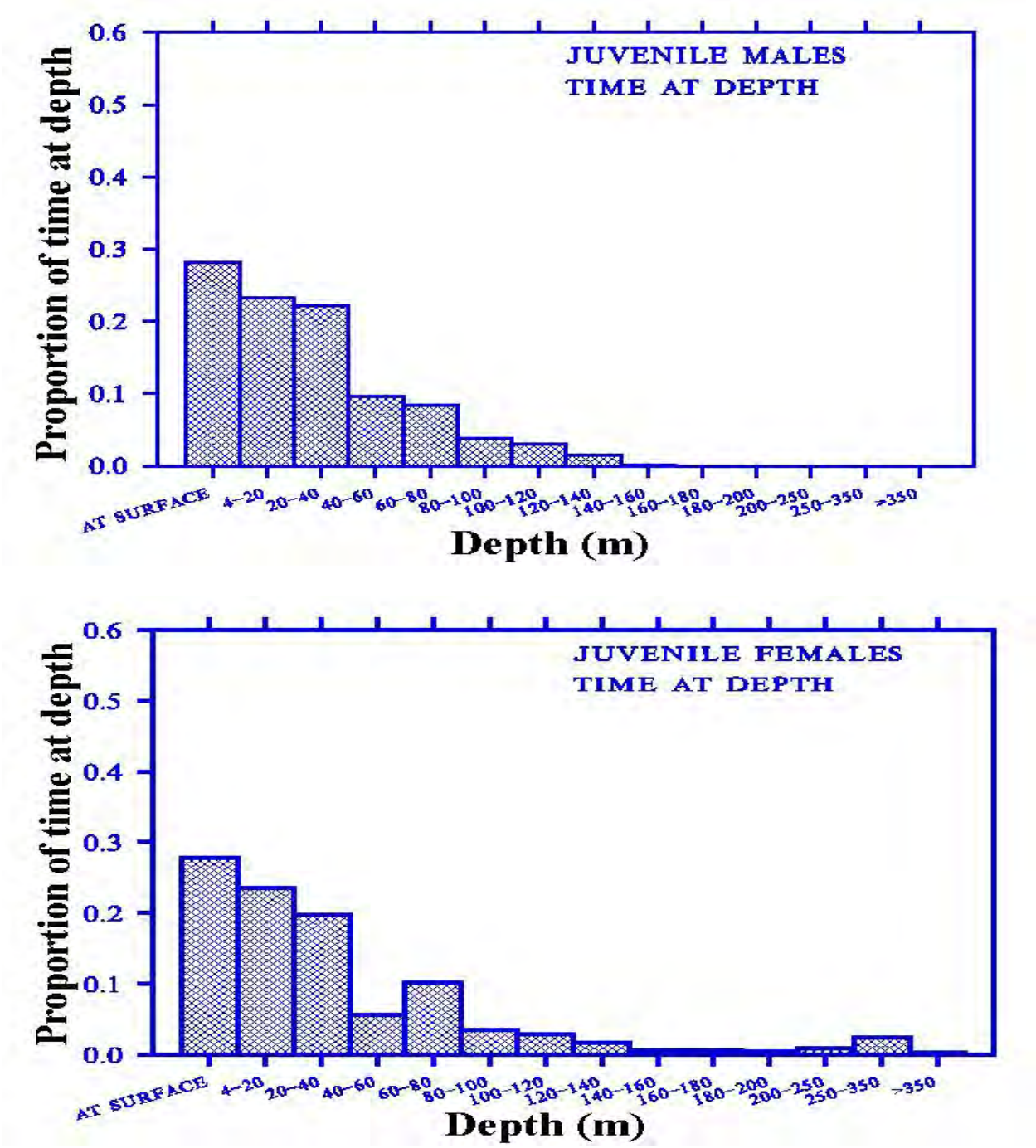


Figure 42. Proportion of time at depth during dives by juvenile male and female Hawaiian monk seals from Laysan, 2001-2002.

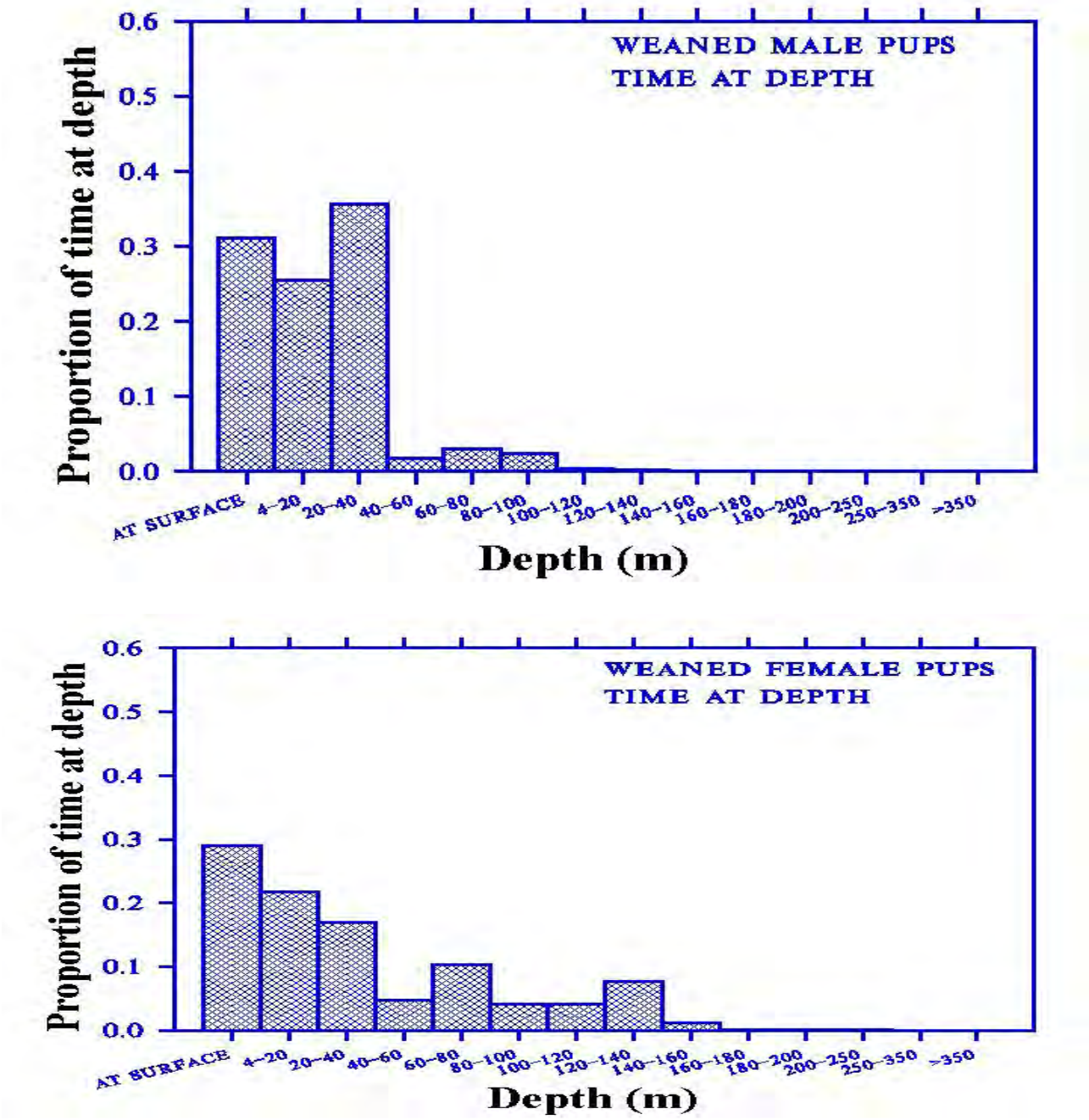


Figure 43. Proportion of time at depth during dives by male and female weaned Hawaiian monk seal pups from Laysan Island, 2001-2002.

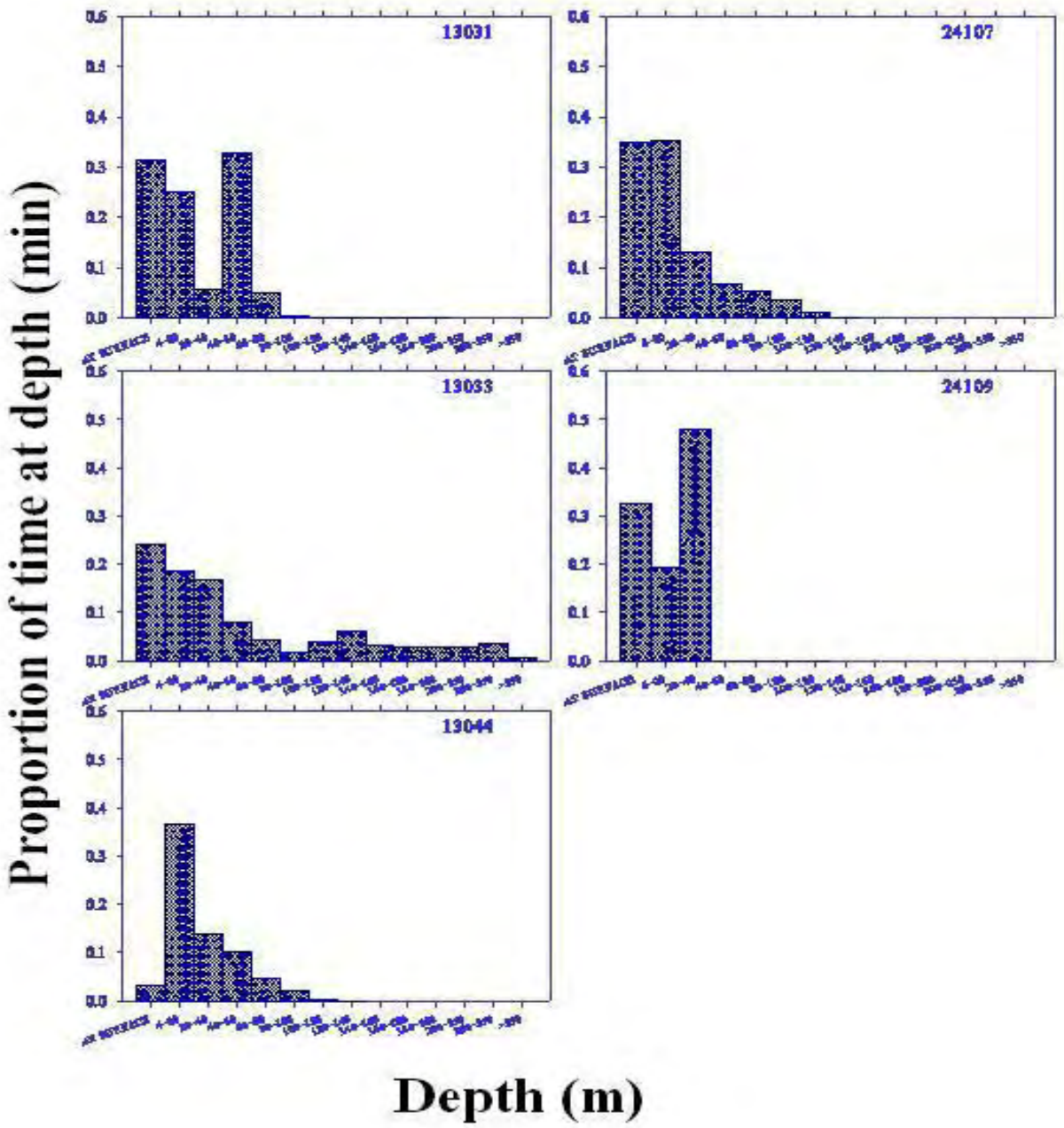


Figure 44. Proportion of time at depth during dives made by adult male Hawaiian monk seals from Laysan Island, 2001-2002.

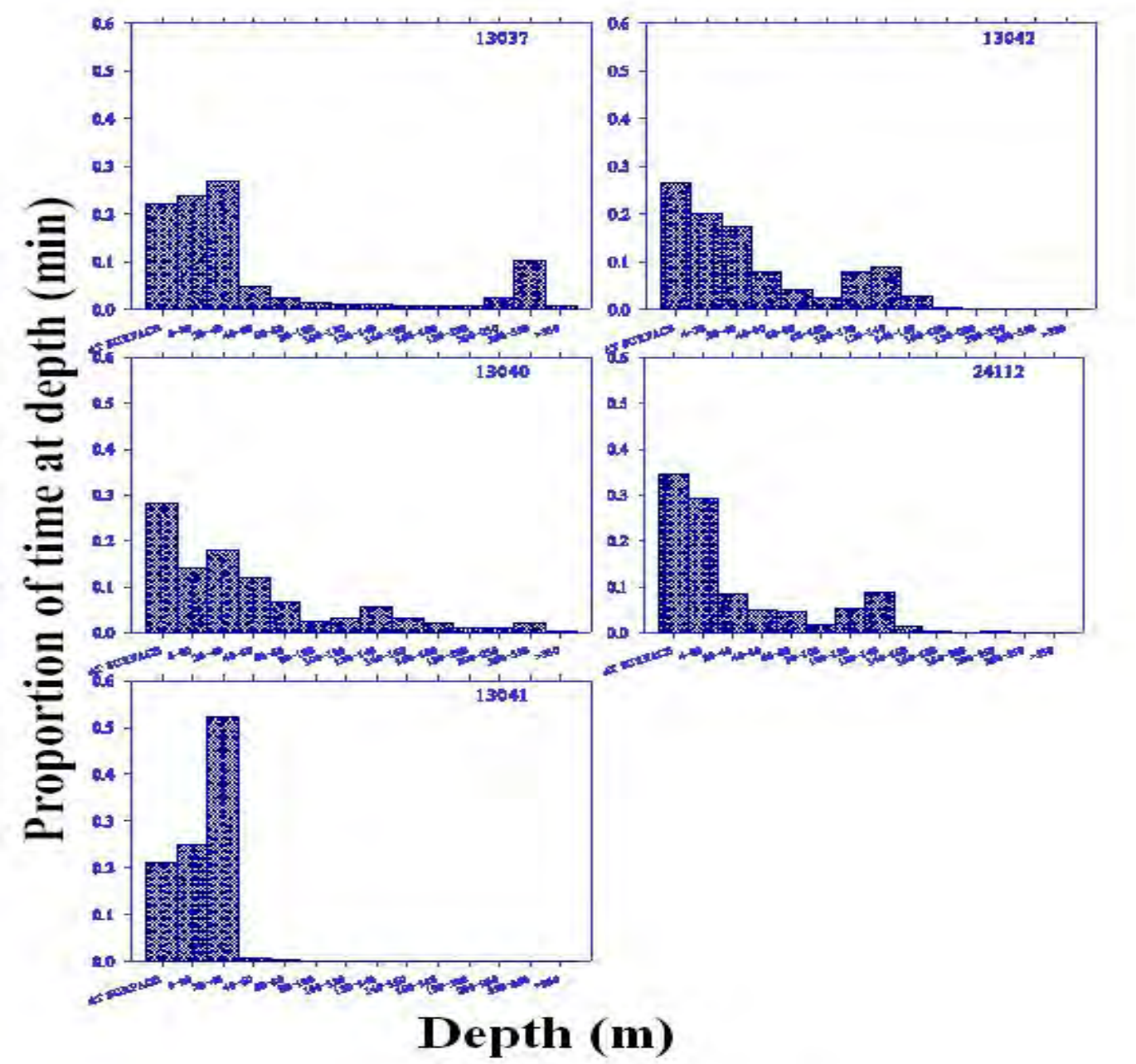


Figure 45. Proportion of time at depth during dives made by adult female Hawaiian monk seals from Laysan Island, 2001-2002.

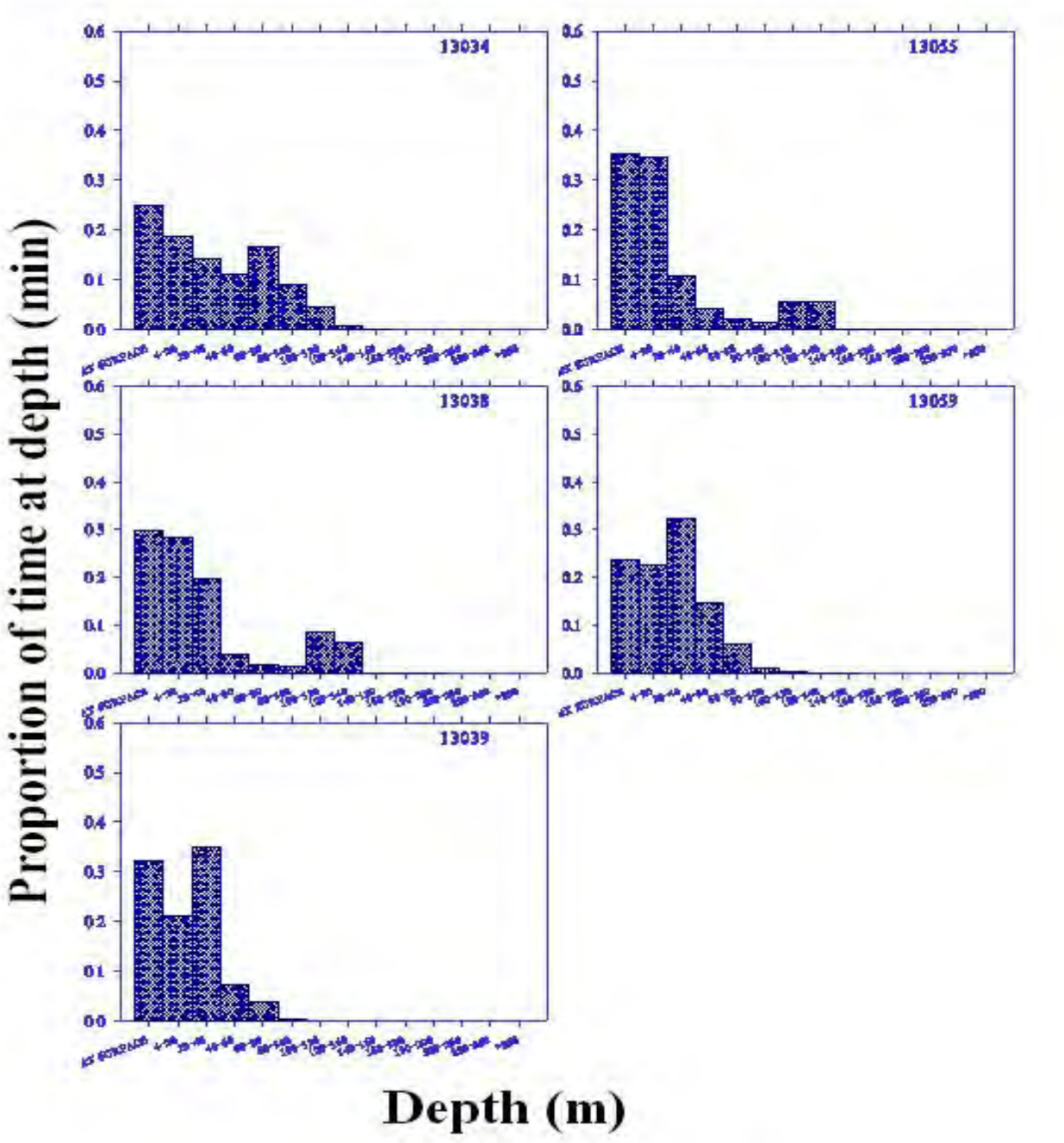


Figure 46. Proportion of time at depth during dives made by juvenile male Hawaiian monk seals from Laysan Island, 2001-2002.

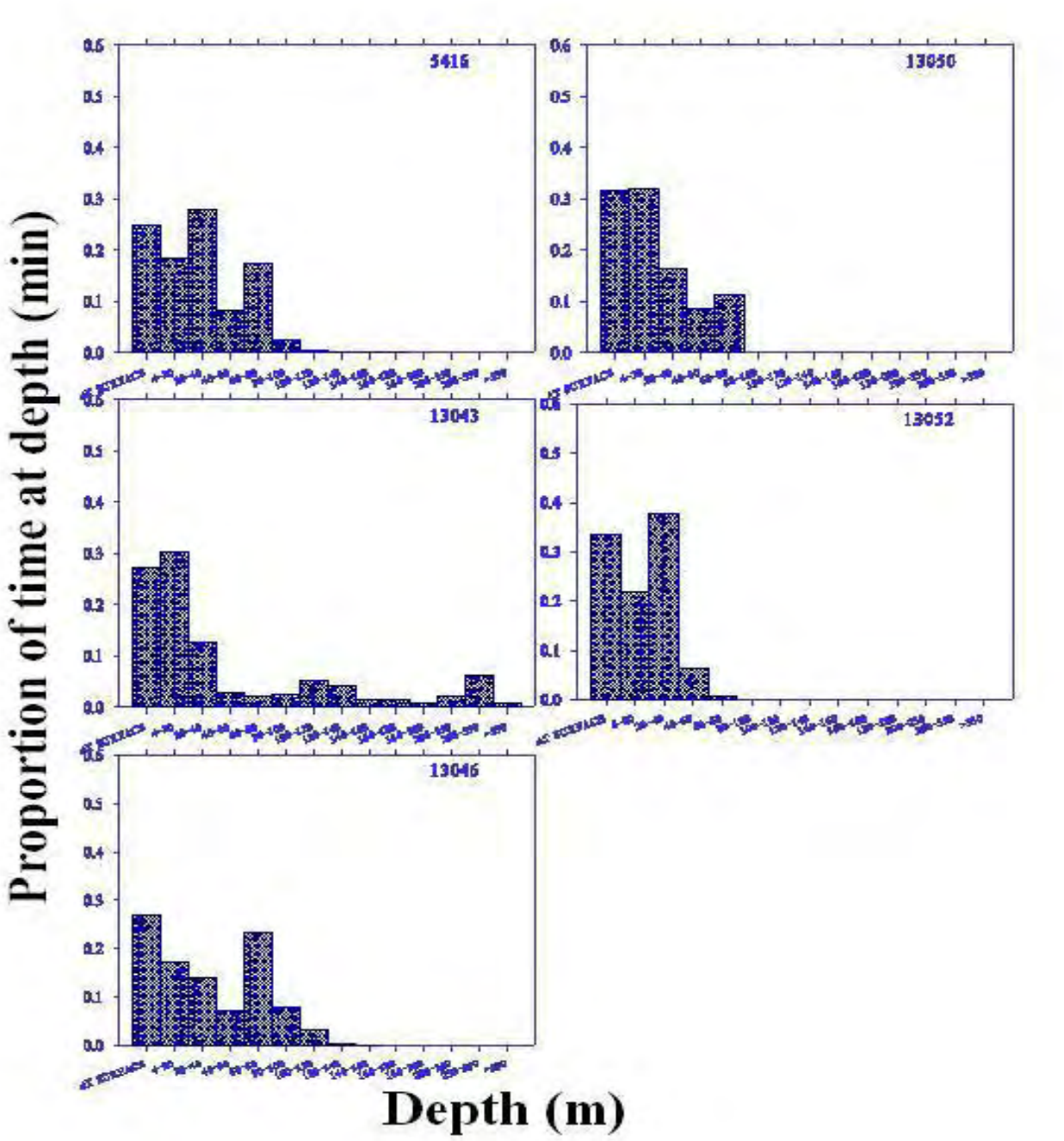


Figure 47. Proportion of time at depth during dives made by juvenile female Hawaiian monk seals from Laysan Island, 2001-2002.

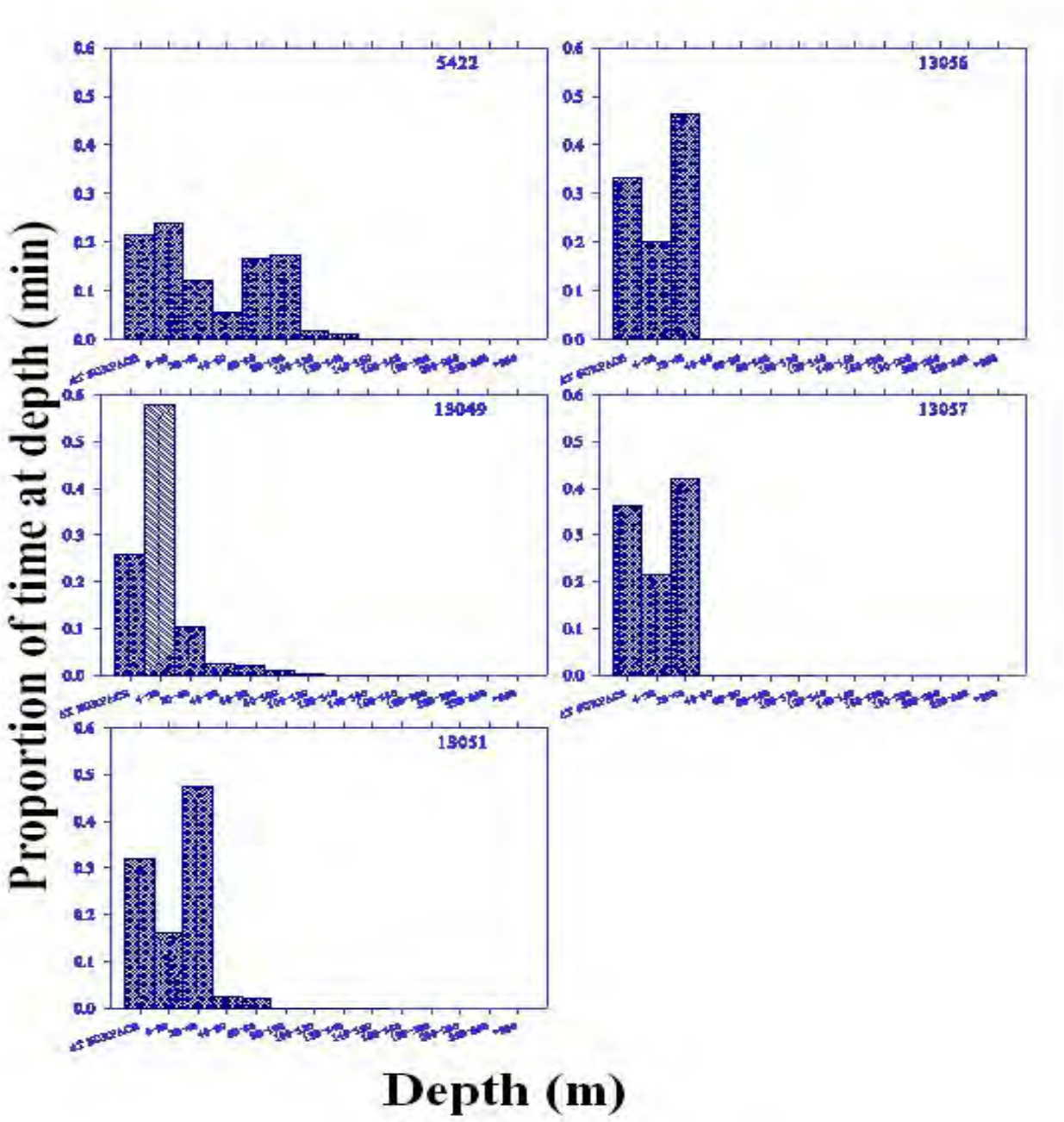


Figure 48. Proportion of time spent at depth during dives made by weaned male Hawaiian monk seal pups from Laysan Island, 2001-2002.

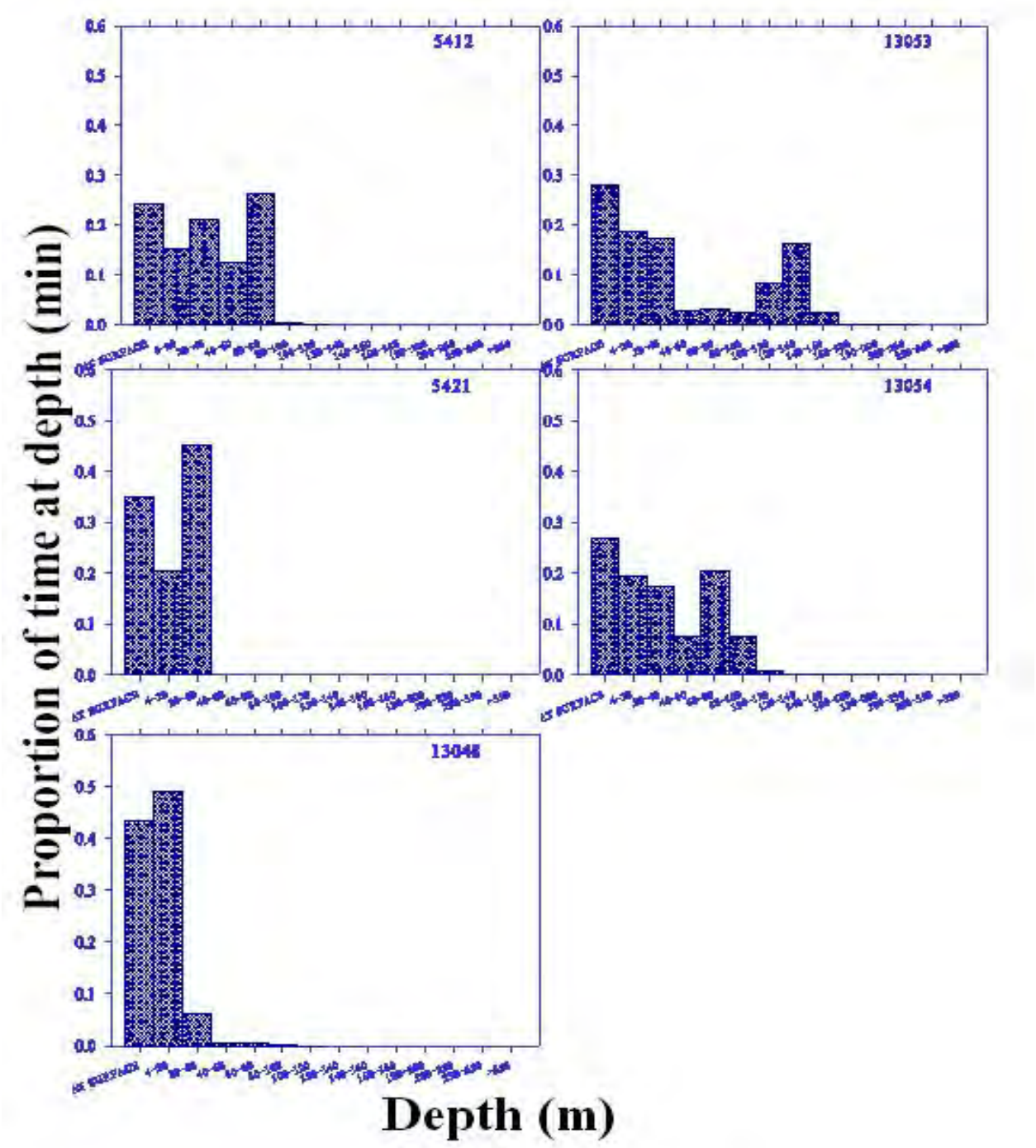


Figure 49. Proportion of time spent at depth during dives made by weaned female Hawaiian monk seal pups from Laysan Island, 2001-2002.

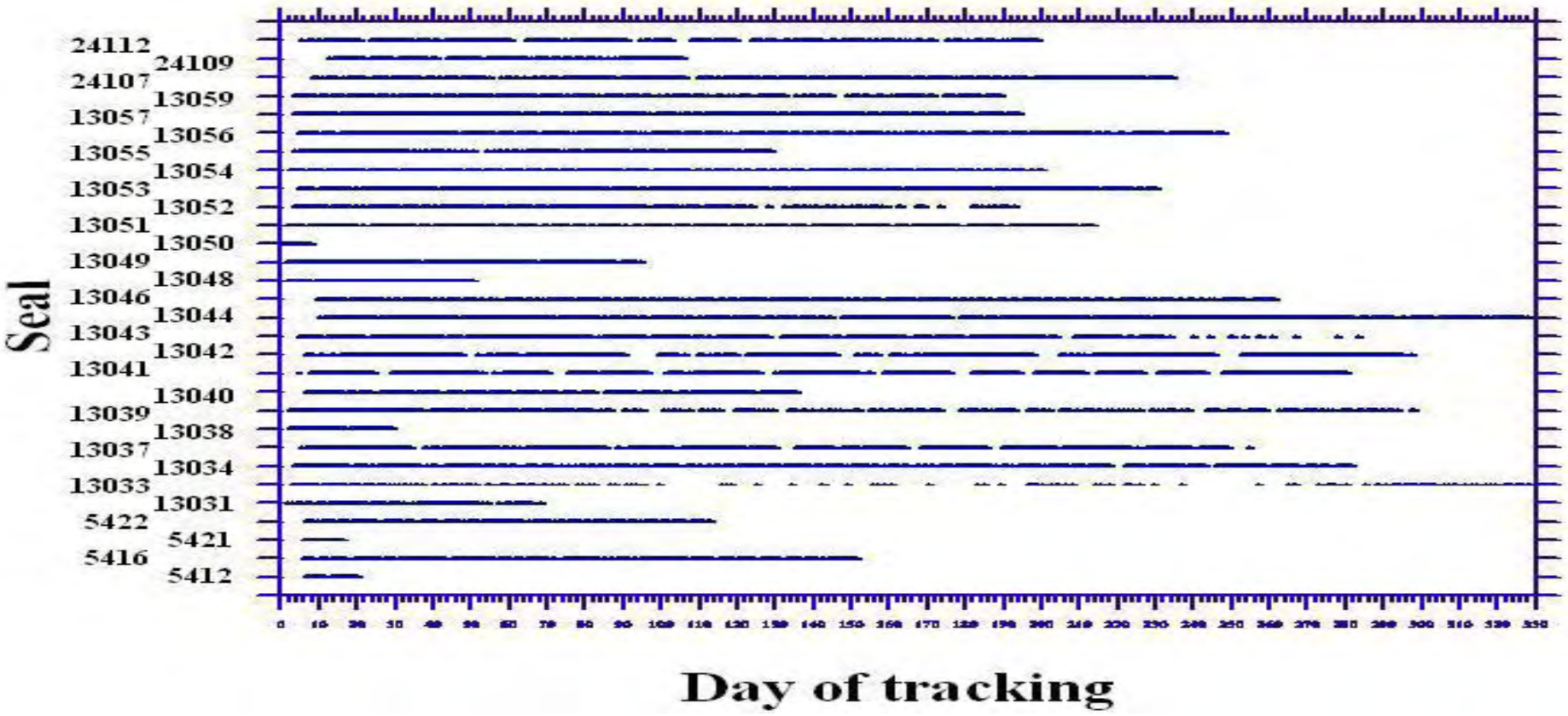


Figure 50. Apparent haulout patterns as indicated by timing of reception of radio transmissions from instrumented Hawaiian monk seals by ARGOS DCLS.

6.1. Appendix I: Setup protocols for satellite-linked data recorders (SLDRs) deployed on Hawaiian monk seals at Laysan Island, October 2001.

PTT ID 5412; SEAL ID TM44

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0077.  ARGOS geolocation id = 5412
Unit identifier = ms20015412.  Unit started
at 01:06:03 on 18/07/01
Time (GMT) is 03:43:00.95.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms20015412
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
```

```
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0077.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
72020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000000026010000410000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010020000000000
FA000000000000000000000000000000
00000000000000000000000040702002D
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020383FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF054907FF
6D733230303135343132FFFFFFFFFFF
FFFFFFFFFFFFFFF30315430303737FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0077.  ARGOS geolocation id = 5412
Unit identifier = ms20015412.  Unit started
at 01:06:03 on 18/07/01
Time (GMT) is 03:43:41.43.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 5416; SEAL ID TD78

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0079.  ARGOS geolocation id = 5416
Unit identifier = ms20015416.  Unit started
at 01:08:52 on 18/07/01
Time (GMT) is 16:40:11.86.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.00 / 01:28.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR>
SL-TDR> 0
Unrecognizable command.
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR>
SL-TDR> p
User-definable identification = ms20015416
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
```

```
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0079.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
78020C140102001401002BFD520A0100
000000010101010100000000000001
010101010000000000028010000430000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
000000000000000000000000407020003
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020383FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF054A26FF
6D733230303135343136FFFFFFFFFFF
FFFFFFFFFFFFFFF30315430303739FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0079.  ARGOS geolocation id = 5416
Unit identifier = ms20015416.  Unit started
at 01:08:52 on 18/07/01
Time (GMT) is 16:41:34.28.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.00 / 01:28.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 5421; SEAL ID TM22

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0080.  ARGOS geolocation id = 5421
Unit identifier = ms20015421.  Unit started
at 01:10:39 on 18/07/01
Time (GMT) is 16:48:53.19.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.00 / 01:29.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms20015421
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0080.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
FA020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000000029010000440000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010001000200000000000
FA000000000000000000000000000000000
000000000000000000000000004070200CB
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020380FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFF054B6AFF
6D733230303135343231FFFFFFFFFFF
FFFFFFFFFFFFFFF30315430303830FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0080.  ARGOS geolocation id = 5421
Unit identifier = ms20015421.  Unit started
at 01:10:39 on 18/07/01
Time (GMT) is 16:49:49.83.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.00 / 01:29.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8 10, 12, 14, 1618, 20, 25, 30, 40,
* minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 5422; SEAL ID TM24

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0081.  ARGOS geolocation id = 5422
Unit identifier = ms20015422.  Unit started
at 16:31:39 on 10/10/01
Time (GMT) is 16:31:57.99.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.00 / 01:30.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms20015422
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
```

```
               Current setting (1=good,
0=bad) |00011111000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0081.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
B2020C140102001401002AFD530A0100
00000001010101010000000000000001
01010101000000000030010000450000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000407020090
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037CFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF054B9FFF
6D733230303135343232FFFFFFFFFF
FFFFFFFFFFFFFFF30315430303831FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0081.  ARGOS geolocation id = 5422
Unit identifier = ms20015422.  Unit started
at 16:31:39 on 10/10/01
Time (GMT) is 16:35:27.04.  Date (GMT) is 10
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.00 / 01:30.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and g for it...
```

PTT ID 13031; SEAL ID TC50

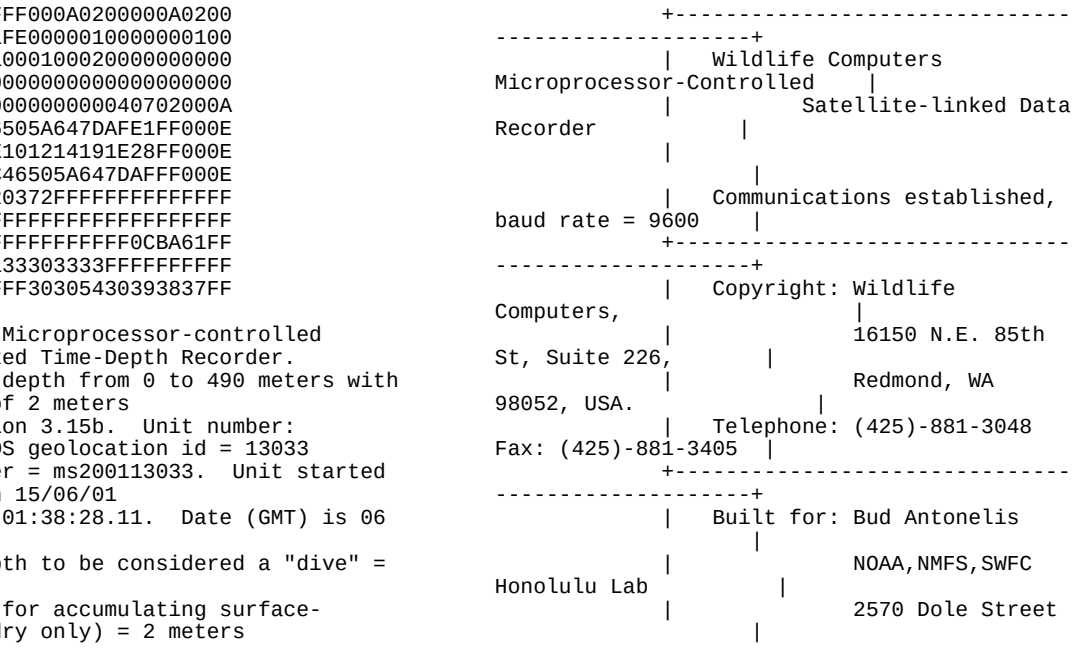
```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0985.  ARGOS geolocation id = 13031
Unit identifier = ms200113031.  Unit started
at 22:02:37 on 04/01/01
Time (GMT) is 01:35:42.08.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.50 / 01:24.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR>
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> 0
Unrecognizable command.
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113031
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
wheshallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
```

```
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0985.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
0A020C140102003C01002BFD510A0100
00000001010101010000000000000001
01010101000000005024010050390000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000004070200AB
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020359FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CB9E6FF
6D7332303031313330333 1FFFFFFFFF
FFFFFFFFFFFFFFF30305430393835FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0985.  ARGOS geolocation id = 13031
Unit identifier = ms200113031.  Unit started
at 22:02:37 on 04/01/01
Time (GMT) is 01:36:36.35.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.50 / 01:24.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13033; SEAL ID TJ58

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0987.  ARGOS geolocation id = 13033
Unit identifier = ms200113033.  Unit started
at 15:49:23 on 15/06/01
Time (GMT) is 01:37:56.22.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:40.50 / 01:25.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113033
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> va3
Battery voltage under light load = 7.224
Volts.
Battery voltage under light load = 7.224
Volts.
Battery voltage under light load = 7.224
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0987.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7E020C140102003C01002AFD520A0100
00000001010101010000000000000001
01010101000000005025010050400000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000407702000A
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020372FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBA61FF
6D7332303031313303033FFFFFFFFF
FFFFFFFFFFFFFFF30305430393837FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0987.  ARGOS geolocation id = 13033
Unit identifier = ms200113033.  Unit started
at 15:49:23 on 15/06/01
Time (GMT) is 01:38:28.11.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:40.50 / 01:25.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allownce (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
  è
```



```
            |              Honolulu, HI
96822-2396              |
            +------------------------------
--------------------+
            |   Revision date: 28th October
1999.            |
+-----------+------------------------------
--------------------+------------+
| Limit of Liability.  This unit may only be
used with the understanding that |
| its value is its retail cost and that
responsibility of Wildlife Computers  |
| from whatever cause arising is limited to
its repair or replacement.        |
+-----------------------------------------
---------------------------------+

Press return to accept this limit of
liability and to continue...



Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0988.  ARGOS geolocation id = 13034
Unit identifier = ms200113034.  Unit started
at 19:32:47 on 14/11/00
Time (GMT) is 01:41:34.63.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 400
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 01-09,12-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR>
```

PTT ID 13034; SEAL ID TY78

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0988.  ARGOS geolocation id = 13034
Unit identifier = ms200113034.  Unit started
at 01:42:41 on 06/10/01
Time (GMT) is 01:45:38.57.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR>
SL-TDR> p
User-definable identification = ms200113034
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
```

```
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.
Se the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0988.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
E2020C140102003C01002BFD520A0100
00000001010101010000000000000001
01010101000000000026010000410000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010020000000000
5E010000000000000000000000000000
00000000000000000000000407020075
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102036FFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBA94FF
6D7332303031313303303334FFFFFFFFF
FFFFFFFFFFFFFFF30305430393838FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0988.  ARGOS geolocation id = 13034
Unit identifier = ms200113034.  Unit started
at 01:42:41 on 06/10/01
Time (GMT) is 01:46:52.01.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13037; SEAL ID TJ70

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0991.  ARGOS geolocation id = 13037
Unit identifier = ms200113037.  Unit started
at 02:44:58 on 07/10/01
Time (GMT) is 23:56:07.02.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:42.50 / 01:27.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the itrument be deployed in an area whee
fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113037
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0991.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
BA020C140102003C01002BFD520A0100
00000001010101010000000000000001
01010101000000005027010050420000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000004070200DD
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037DFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBB7EFF
6D7332303031313330333 7FFFFFFFFF
FFFFFFFFFFFFFFFF30305430393931FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0991.  ARGOS geolocation id = 13037
Unit identifier = ms200113037.  Unit started
at 02:44:58 on 07/10/01
Time (GMT) is 00:01:13.00.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:42.50 / 01:27.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13038; SEAL ID TD28

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0992.  ARGOS geolocation id = 13038
Unit identifier = ms200113038.  Unit started
at 02:54:12 on 07/10/01
Time (GMT) is 00:05:21.74.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.00 / 01:28.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113038
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.267
Volts.
SL-TDR> v
Battery voltage under light load = 7.267
Volts.
SL-TDR> v
Battery voltage under light load = 7.267
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0992.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
E6020C140102003C01002BFD510A0100
00000001010101010000000000000001
01010101000000000028010000430000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000407020079
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020371FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBB8BFF
6D7332303031313330333 8FFFFFFFFF
FFFFFFFFFFFFFFFF30305430393932FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0992.  ARGOS geolocation id = 13038
Unit identifier = ms200113038.  Unit started
at 02:54:12 on 07/10/01
Time (GMT) is 00:05:58.64.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.00 / 01:28.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13039; SEAL ID TD90

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0993.  ARGOS geolocation id = 13039
Unit identifier = ms200113039.  Unit started
at 02:52:10 on 07/10/01
Time (GMT) is 00:10:44.14.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.50 / 01:28.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR>
SL-TDR> p
User-definable identification = ms200113039
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
seconden shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT(GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
```

```
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR>
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0993.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
46020C140102003C01002BFD510A0100
00000001010101010000000000000001
01010101000000005028010050430000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE00000100000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000407020080
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037BFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBBD8FF
6D7332303031313330333 9FFFFFFFFF
FFFFFFFFFFFFFFFF30305430393933FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0993.  ARGOS geolocation id = 13039
Unit identifier = ms200113039.  Unit started
at 02:52:10 on 07/10/01
Time (GMT) is 00:12:32.79.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:43.50 / 01:28.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350
```

PTT ID 13040; SEAL ID TT26

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0994.  ARGOS geolocation id = 13040
Unit identifier = ms200113040.  Unit started
at 20:52:15 on 14/11/00
Time (GMT) is 17:02:16.88.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.00 / 01:29.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113040
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0994.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
1E020C140102003C01002AFD530A0100
00000001010101010000000000000001
01010101000000000029010000440000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE00000100000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000004070200D1
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020382FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBC23FF
6D7332303031313330343 0FFFFFFFFF
FFFFFFFFFFFFFFF303054303939 34FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0994.  ARGOS geolocation id = 13040
Unit identifier = ms200113040.  Unit started
at 20:52:15 on 14/11/00
Time (GMT) is 17:03:13.04.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.00 / 01:29.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13041; SEAL ID T84F

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0995.  ARGOS geolocation id = 13041
Unit identifier = ms200113041.  Unit started
at 20:54:04 on 14/11/00
Time (GMT) is 16:58:28.34.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.50 / 01:29.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113041
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0995.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
84020C140102003C01002BFD520A0100
00000001010101010000000000000001
01010101000000005029010050440000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000004070200E7
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037DFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBC70FF
6D7332303031313303431FFFFFFFFF
FFFFFFFFFFFFFFF30305430393935FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0995.  ARGOS geolocation id = 13041
Unit identifier = ms200113041.  Unit started
at 20:54:04 on 14/11/00
Time (GMT) is 16:59:19.80.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.50 / 01:29.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13042; SEAL ID Y608

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0996.  ARGOS geolocation id = 13042
Unit identifier = ms200113042.  Unit started
at 01:22:50 on 03/10/01
Time (GMT) is 17:06:07.03.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.00 / 01:30.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113042
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines 0=dr only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 10
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 8
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0996.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
2A020C140102003C01002AFD530A0100
00000001010101010000000000000001
01010101000000000030010000450000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000040702005E
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020387FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBC85FF
6D7332303031313303303432FFFFFFFFF
FFFFFFFFFFFFFFF30305430393936FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0996.  ARGOS geolocation id = 13042
Unit identifier = ms200113042.  Unit started
at 01:22:50 on 03/10/01
Time (GMT) is 17:07:02.45.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.00 / 01:30.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13043; SEAL ID TD48

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T0997.  ARGOS geolocation id = 13043
Unit identifier = ms200113043.  Unit started
at 20:57:31 on 14/11/00
Time (GMT) is 16:56:02.70.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.50 / 01:30.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 02-06,14-18
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113043
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual fr formula to determine
actual battery capcity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |001111100000001111100000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 6
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T0997.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
A8020C140102003C01002BFD510A0100
00000101010101000000000000000101
01010100000000005030010050450000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000040702007E
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020375FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBCD6FF
6D7332303031313330343FFFFFFFFF
FFFFFFFFFFFFFFF30305430393937FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T0997.  ARGOS geolocation id = 13043
Unit identifier = ms200113043.  Unit started
at 20:57:31 on 14/11/00
Time (GMT) is 16:56:54.94.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:45.50 / 01:30.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 02-06,14-18
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13044; SEAL ID TZ56

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0127.  ARGOS geolocation id = 13044
Unit identifier = ms200113044.  Unit started
at 17:38:50 on 06/09/01
Time (GMT) is 01:13:00.03.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 metes
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00UT
(GMT): 12
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113044
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR>
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0127.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7A020C140102003C01002BFD520A0100
0000000101010101000000000000001
0101010100000000003101000046000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
0000000000000000000000004070200A2
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020394FFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBD3CFF
6D7332303031313330343 4FFFFFFFFF
FFFFFFFFFFFFFFF30315430313237FF
uarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0127.  ARGOSeolocation d = 13044
Unit identifier = ms200113044.  Unit started
at 17:38:50 on 06/09/01
Time (GMT) is 01:13:50.50 Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? n
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = -2
S.W. Resistance = 255, Depth (m) = -2
S.W. Resistance = 255, Depth (m) = -2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0127.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7A020C140102003C01002BFD520A0100
0000000101010101000000000000001
0101010100000000003101000046000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
0000000000000000000000004070200A2
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020394FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBD3CFF
6D7332303031313330343 4FFFFFFFFF
FFFFFFFFFFFFFFF30315430313237FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0127.  ARGOS geolocation id = 13044
Unit identifier = ms200113044.  Unit started
at 01:13:51 on 11/10/01
Time (GMT) is 01:14:03.68.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
```

```
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy?
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0127.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7A020C140102003C01002BFD520A0100
00000001010101010000000000000001
01010101000000000031010000460000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000004070200A2
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020394FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBD3CFF
6D7332303031313303034 34FFFFFFFFF
FFFFFFFFFFFFFFF30315430313237FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0127.  ARGOS geolocation id = 13044
Unit identifier = ms200113044.  Unit started
at 01:14:04 on 11/10/01
Time (GMT) is 01:14:09.62.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transsion intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
aily allowance (1-messagransmissions; unused
xmits don't accumulate) = 350
STATUS will  transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13046; SEAL ID TD98

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0129.  ARGOS geolocation id = 13046
Unit identifier = ms200113046.  Unit started
at 17:42:51 on 06/09/01
Time (GMT) is 01:18:10.98.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:48.00 / 01:33.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113046
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0129.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
C4020C140102003C01002BFD530A0100
00000001010101010000000000000001
01010101000000000033010000480000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000407020056
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020379FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBD9AFF
6D7332303031313303436FFFFFFFFF
FFFFFFFFFFFFFFF30315430313239FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0129.  ARGOS geolocation id = 13046
Unit identifier = ms200113046.  Unit started
at 17:42:51 on 06/09/01
Time (GMT) is 01:19:11.19.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:48.00 / 01:33.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
 0
```

PTT ID 13048; SEAL ID TM64

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1002.  ARGOS geolocation id = 13048
Unit identifier = ms200113048.  Unit started
at 01:18:26 on 06/10/01
Time (GMT) is 01:19:43.36.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:48.00 / 01:33.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> v
Battery voltage under light load = 7.224
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 10
S.W. Resistance = 255, Depth (m) = 10
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 10
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113048
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
```

```
               Current setting (1=good,
0=bad) |00011111000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1002.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
38020C140102001401002AFD530A0100
00000001010101010000000000000001
0101010100000000003301000048000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000407020053
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102038EFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBE1DFF
6D7332303031313303438FFFFFFFFF
FFFFFFFFFFFFFFF30305431303032FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1002.  ARGOS geolocation id = 13048
Unit identifier = ms200113048.  Unit started
at 01:18:26 on 06/10/01
Time (GMT) is 01:20:10.74.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:48.00 / 01:33.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13049; SEAL ID TM62

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1003.  ARGOS geolocation id = 13049
Unit identifier = ms200113049.  Unit started
at 20:26:49 on 02/01/01
Time (GMT) is 01:24:53.80.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transission intervals (at- / on-la = 00:48.50
/ 01:33.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hed-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> v
Battery voltage under light load = 7.310
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 6
S.W. Resistance = 255, Depth (m) = 8
S.W. Resistance = 255, Depth (m) = 6
S.W. Resistance = 255, Depth (m) = 6
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113049
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
```

```
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1003.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
58020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000005033010050480000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000407020098
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020376FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBE4EFF
6D7332303031313303439FFFFFFFFF
FFFFFFFFFFFFFFF30305431303033FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1003.  ARGOS geolocation id = 13049
Unit identifier = ms200113049.  Unit started
at 20:26:49 on 02/01/01
Time (GMT) is 01:25:48.39.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:48.50 / 01:33.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13050; SEAL ID TD82

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1004.  ARGOS geolocation id = 13050
Unit identifier = ms200113050.  Unit started
at 15:54:27 on 15/06/01
Time (GMT) is 01:27:25.76.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.00 / 01:34.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
trasmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113050
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1004.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
CC020C140102001401002AFD530A0100
00000001010101010000000000000001
01010101000000000034010000490000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000004070200E4
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020362FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBEBBFF
6D7332303031313330353OFFFFFFFFF
FFFFFFFFFFFFFFFF303054313030034FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1004.  ARGOS geolocation id = 13050
Unit identifier = ms200113050.  Unit started
at 15:54:27 on 15/06/01
Time (GMT) is 01:27:54.62.  Date (GMT) is 06
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.00 / 01:34.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13051; SEAL ID TM28

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1005.  ARGOS geolocation id = 13051
Unit identifier = ms200113051.  Unit started
at 02:25:09 on 07/10/01
Time (GMT) is 02:49:24.22.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.50 / 01:34.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) =250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113051
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1005.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
6E020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000005034010050490000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000004070200E7
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020390FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBEE8FF
6D733230303131333033531FFFFFFFFF
FFFFFFFFFFFFFFF30305431303035FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1005.  ARGOS geolocation id = 13051
Unit identifier = ms200113051.  Unit started
at 02:25:09 on 07/10/01
Time (GMT) is 02:49:48.42.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.50 / 01:34.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy?
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1005.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
6E020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000005034010050490000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000004070200E7
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020390FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBEE8FF
6D733230303131333033531FFFFFFFFF
FFFFFFFFFFFFFFF30305431303035FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1005.  ARGOS geolocation id = 13051
Unit identifier = ms200113051.  Unit started
at 02:49:49 on 07/10/01
Time (GMT) is 02:49:59.08.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.50 / 01:34.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
```

```
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13052; SEAL ID TD64

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1006.  ARGOS geolocation id = 13052
Unit identifier = ms200113052.  Unit started
at 21:13:19 on 16/11/00
Time (GMT) is 02:00:27.21.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:50.00 / 01:35.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> b

Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1006.  ARGOS geolocation id = 13052
Unit identifier = ms200113052.  Unit started
at 21:13:19 on 16/11/00
Time (GMT) is 02:04:04.95.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:50.00 / 01:35.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-dep histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113052
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
```

```
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
               Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 6
S.W. Resistance = 255, Depth (m) = 6
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1006.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
E6020C140102001401002BFD530A0100
00000001010101010000000000000001
01010101000000000035010000500000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010020000000000
FA0000000000000000000000000000000
00000000000000000000000040702007F
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020372FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBF02FF
6D7332303031313303532FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303036FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1006.  ARGOS geolocation id = 13052
Unit identifier = ms200113052.  Unit started
at 21:13:19 on 16/11/00
Time (GMT) is 02:20:55.32.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:50.00 / 01:35.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
```

```
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13053; SEAL ID TM34

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1007.  ARGOS geolocation id = 13053
Unit identifier = ms200113053.  Unit started
at 21:11:06 on 02/01/01
Time (GMT) is 01:57:37.80.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:50.50 / 01:35.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]

Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113053
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
ATS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
```

```
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> v
Battery voltage under light load = 7.308
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1007.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
40020C140102001401002AFD530A0100
00000001010101010000000000000001
01010101000000005035010050500000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000407020085
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037CFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CBF51FF
6D7332303031313330353 3FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303037FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1007.  ARGOS geolocation id = 13053
Unit identifier = ms200113053.  Unit started
at 21:11:06 on 02/01/01
Time (GMT) is 01:58:07.39.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:50.50 / 01:35.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13054; SEAL ID TM56

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1008.  ARGOS geolocation id = 13054
Unit identifier = ms200113054.  Unit started
at 21:16:45 on 16/11/00
Time (GMT) is 03:01:02.60.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:51.00 / 01:36.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113054
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual fr formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused its do accumulate)  250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1008.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
F2020C140102001401002BFD530A0100
00000001010101010000000000000001
01010101000000000036010000510000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
000000000000000000000004070200CF
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037AFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBFA4FF
6D7332303031313303534FFFFFFFFF
FFFFFFFFFFFFFFF30305431303038FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1008.  ARGOS geolocation id = 13054
Unit identifier = ms200113054.  Unit started
at 21:16:45 on 16/11/00
Time (GMT) is 03:01:30.35.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:51.00 / 01:36.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? n
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1008.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
F2020C140102001401002BFD530A0100
00000001010101010000000000000001
01010101000000000036010000510000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
000000000000000000000004070200CF
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037AFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBFA4FF
6D7332303031313303534FFFFFFFFF
FFFFFFFFFFFFFFF30305431303038FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1008.  ARGOS geolocation id = 13054
Unit identifier = ms200113054.  Unit started
at 03:01:31 on 07/10/01
Time (GMT) is 03:01:42.86.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
```

```
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:51.00 / 01:36.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy?
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1008.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
F2020C140102001401002BFD530A0100
00000001010101010000000000000001
01010101000000000036010000510000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
000000000000000000000000004070200CF
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037AFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBFA4FF
6D733230303131333033534FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303038FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1008.  ARGOS geolocation id = 13054
Unit identifier = ms200113054.  Unit started
at 03:01:44 on 07/10/01
Time (GMT) is 03:01:49.29.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:51.00 / 01:36.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13055; SEAL ID TD84

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1009.  ARGOS geolocation id = 13055
Unit identifier = ms200113035.  Unit started
at 21:19:41 on 16/11/00
Time (GMT) is 03:03:00.09.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.00 / 01:24.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113035
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1009.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
70020C140102001401002BFD530A0100
00000001010101010000000000000001
01010101000000000024010000390000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000040702009C
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020384FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CBFF7FF
6D7332303031313303303335FFFFFFFFF
FFFFFFFFFFFFFFF303054313030039FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1009.  ARGOS geolocation id = 13055
Unit identifier = ms200113035.  Unit started
at 21:19:41 on 16/11/00
Time (GMT) is 03:03:39.51.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.00 / 01:24.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13056; SEAL ID TM20

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1010.  ARGOS geolocation id = 13056
Unit identifier = ms200113056.  Unit started
at 15:52:58 on 15/06/01
Time (GMT) is 03:05:04.51.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.50 / 01:24.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR>
SL-TDR> p
User-definable identification = ms200113056
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+------------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> v
Battery voltage under light load = 7.353
Volts.
SL-TDR> a3
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1010.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7C020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000005024010050390000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010020000000000
FA000000000000000000000000000000
00000000000000000000004070200F6
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020372FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CC014FF
6D7332303031313330353 6FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303130FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1010.  ARGOS geolocation id = 13056
Unit identifier = ms200113056.  Unit started
at 15:52:58 on 15/06/01
Time (GMT) is 03:07:25.62.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.50 / 01:24.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy?
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1010.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
7C020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000005024010050390000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010020000000000
FA000000000000000000000000000000
00000000000000000000004070200F6
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020372FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CC014FF
6D7332303031313330353 6FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303130FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1010.  ARGOS geolocation id = 13056
Unit identifier = ms200113056.  Unit started
at 03:07:26 on 07/10/01
Time (GMT) is 03:07:54.10.  Date (GMT) is 07
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
```

```
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:39.50 / 01:24.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13057; SEAL ID TM16

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1011.  ARGOS geolocation id = 13057
Unit identifier = ms200113057.  Unit started
at 21:23:07 on 16/11/00
Time (GMT) is 00:18:48.07.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:40.00 / 01:25.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113057
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> v
Battery voltage under light load = 7.266
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
S.W. Resistance = 255, Depth (m) = 4
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1011.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
60020C140102001401002AFD530A0100
00000001010101010000000000000001
01010101000000000025010000400000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
00000000000000000000000040702003F
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102038CFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF0CC047FF
6D7332303031313330353 7FFFFFFFFF
FFFFFFFFFFFFFFFF30305431303131FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1011.  ARGOS geolocation id = 13057
Unit identifier = ms200113057.  Unit started
at 21:23:07 on 16/11/00
Time (GMT) is 00:19:25.91.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:40.00 / 01:25.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every  messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 13059; SEAL ID TY65

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
00T1013.  ARGOS geolocation id = 13059
Unit identifier = ms200113059.  Unit started
at 15:51:19 on 15/06/01
Time (GMT) is 00:21:10.86.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200113059
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 20000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> v
Battery voltage under light load = 7.396
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 00T1013.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
50020C140102001401002BFD520A0100
00000001010101010000000000000001
01010101000000000026010000410000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
FA000000000000000000000000000000
000000000000000000000004070200AB
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020380FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFF0CC0E1FF
6D7332303031313330353 9FFFFFFFFF
FFFFFFFFFFFFFFF30305431303133FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
00T1013.  ARGOS geolocation id = 13059
Unit identifier = ms200113059.  Unit started
at 15:51:19 on 15/06/01
Time (GMT) is 00:22:21.14.  Date (GMT) is 08
October 1901
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:41.00 / 01:26.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 250
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350,450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 24107; SEAL ID TN40

```
Satellite-linked Data Recordr wih Teonics ST-
16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0071.  ARGOS geolocation id = 24107
Unit identifier = ms200124107.  Unit started
at 20:35:21 on 23/08/01
Time (GMT) is 01:28:47.23.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.50 / 01:29.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR>
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200124107
Enter new identifier up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-------------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR>
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 2
S.W. Resistance = 255, Depth (m) = 2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0071.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
1C020C140102003C010023FD630A0100
00000001010101010000000000000001
01010101000000005029010050440000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE00000100000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000004070200C5
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020378FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF078ACEFF
6D7332303031323431303 7FFFFFFFFF
FFFFFFFFFFFFFFF30315430303731FF
Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0071.  ARGOS geolocation id = 24107
Unit identifier = ms200124107.  Unit started
at 20:35:21 on 23/08/01
Time (GMT) is 01:29:18.57.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:44.50 / 01:29.50
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 24109; SEAL ID TZ34

```
Satellite-linked Data Recorder with Telonics
ST-16 Argos Transmitter.
Software version 3.15b.  Unit number:
01T0073.  ARGOS geolocation id = 24109
Unit identifier = ms200124109.  Unit started
at 20:38:14 on 23/08/01
Time (GMT) is 23:49:42.56.  Date (GMT) is 15
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]
Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]
Enter number (0/6/10/14) of depth histogram
bins: [14]
Enter number (0/6/10/14) of duration
histogram bins: [14]
Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]
How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200124109
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symb* indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 450, * meters
Enter new limits (in meters):
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
```

```
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> v
Battery voltage under light load = 7.140
Volts.
SL-TDR> v
Battery voltage under light load = 7.105
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
S.W. Resistance = 255, Depth (m) = 0
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0073.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
CA020C140102003C010023FD630A0100
00000001010101010000000000000001
01010101000000000031010000460000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000004070200B1
0A141E28323C46505A647DAFE1FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F620001020374FFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF078B77FF
6D7332303031323431303 9FFFFFFFFF
FFFFFFFFFFFFFFF30315430303733FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked Time-Depth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number:
01T0073.  ARGOS geolocation id = 24109
Unit identifier = ms200124109.  Unit started
at 20:38:14 on 23/08/01
Time (GMT) is 23:50:50.79.  Date (GMT) is 15
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:46.00 / 01:31.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 450, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h

Unit is ready for deployment, disconnect
cable and go for it...
```

PTT ID 24112; SEAL ID BF44

```
Satellite-linked Data Recorder wih Telonics
ST-16 Argos Transmitter.
Software version 3.15b.nit number: 01T0076.
ARGOS geolocation id = 24112
Unit identifier = ms200124112.  it started at
20:42:24 on 23/08/01
Time (GMT) is 01:23:28.84.  Date (GMT) is 11
October 2001
Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.00 / 01:34.00
SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 400, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
SL-TDR> o
Do you wish to allow any unused portion of
your daily transmission allowance
to be added to the next day's allowance? [n]

Do you wish to be able to set the daily
transmission allowance on a
month-by-month basis? [n]

Enter number (0/6/10/14) of depth histogram
bins: [14]

Enter number (0/6/10/14) of duration
histogram bins: [14]

Enter number (0/6/10/14) of time-at-depth
histogram bins: [14]

How many histograms or timeline messages
should be encoded into
each transmission (1/2) [1]
Will the instrument be deployed in an area
where fresh and salt water may
exist in discrete layers? [n]
SL-TDR> p
User-definable identification = ms200124112
Enter new identifier (up to 15 characters):
Shallowest depth to be considered a "dive" =
4
Enter new value:
Deepest depth for accumulating surface-
timelines (0=dry only) = 2
Enter new value:
Unit will try to detect surface every second
when shallower than 20
Enter new value:
Unit will try to detect surface every 1/4-
second when shallower than 10
Enter new value:
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Enter new value:
Change to on-land transmission interval after
n [1-255] consecutive
transmissions without sea-water induced
delays.  n = 10
Enter new value:
After n hours of "haul-out", unit will
suspend further transmissions,
(n = 0 will disable this option).  n = 1
Enter new value:
"Haul-out" ends when n successive at-sea
transmission intervals elapse which
are all "wet".  n = 2
Enter new value:
Unit will duty cycle with n [1-15] days on.
n = 1
Enter new value:
Unit will duty cycle with n [0-15] days off.
 n = 0
Enter new value:
Nominal battery capacity is 60000
transmissions.
See User's manual for formula to determine
actual battery capacity.
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
Enter new daily allowance [1-65535]:
STATUS will be transmitted every nth [0-255]
message.  n = 20
Enter new value:
Blocks of Time-Lines will be transmitted
every nth [0-255] message.  n = 48
Enter new value:
Transmission hours with good satellite
coverage |000000000011111111112222|
 (these hours (read vertically) are all in
GMT) |012345678901234567890123|
-----------------------------------------
---+-----------------------+
                Current setting (1=good,
0=bad) |000111110000000111110000|
Enter new settings.  .  .  .  .  .  .  .  .
. :
       (in listing the histogram bins, the
symbol * indicates
       that there is no upper limit for this
bin.)
Set the upper limits of the maximum-depth
histogram bins:
Upper limits are: 20, 40, 60, 80, 100, 120,
140, 160, 180, 200, 250, 350, 400, * meters
Enter new limits (in meters):
```

```
Set the upper limits of the dive-duration
histogram bins:
Upper limits are: 2, 4, 6, 8, 10, 12, 14, 16,
18, 20, 25, 30, 40, * minutes
Enter new limits (in minutes):
Set the upper limits of the time-at-depth
histogram bins (0 = haul-out):
Upper limits are: 0, 20, 40, 60, 80, 100,
120, 140, 160, 180, 200, 250, 350, * meters
Enter new limits (in meters):
SL-TDR>
SL-TDR> v
Battery voltage under light load = 7.236
Volts.
SL-TDR> v
Battery voltage under light load = 7.236
Volts.
SL-TDR> v
Battery voltage under light load = 7.236
Volts.
SL-TDR> a3
S.W. Resistance = 255, Depth (m) = -2
S.W. Resistance = 255, Depth (m) = -2
S.W. Resistance = 255, Depth (m) = -2
S.W. Resistance = 255, Depth (m) = -2
SL-TDR> e
It is strongly recommended that you log the
following information to a disk
file so that you have a permanent copy of
this setup.  In PROCOMM you do this
by pressing the ALT-F1 key combination.  You
will then be prompted for a
filename, a suggested name is 01T0076.SET
After you have entered a filename, press
return to continue.
SLTDR version: 3.15b
08020C140102003C010024FD620A0100
00000001010101010000000000000001
01010101000000000034010000490000
01FFFFFFFFFFFFF000A0200000A0200
000A0200007E21FE0000010000000100
00100A0501000100010002000000000
5E010000000000000000000000000000
00000000000000000000000407020009
0A141E28323C46505A647DAFC8FF000E
020406080A0C0E101214191E28FF000E
000A141E28323C46505A647DAFFF000E
30030F62000102037EFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFFFFFFFFFFFFFFFFFF078C2AFF
6D7332303031323431313 2FFFFFFFFF
FFFFFFFFFFFFFFF30315430303736FF

Quarter-Watt, Microprocessor-controlled
Satellite-linked TimeDepth Recorder.
Unit measures depth from 0 to 490 meters with
a resolution of 2 meters
Software version 3.15b.  Unit number: 0076.
ARGOS geolocation id = 24112
Unit identifier = ms200124112.  Unit started
at 20:42:24 on 23/08/01
Time (GMT) is 01:23:58.99.  Date (GMT) is 11
October 2001

Shallowest depth to be considered a "dive" =
4 meters
Deepest depth for accumulating surface-
timelines (0=dry only) = 2 meters
SLTDR uses 1-sec / 1/4-sec wakeups when
shallower than 20 / 10 meters
Local time [0-23 hours] corresponding to 00h
UT (GMT): 12
Transmission intervals (at-sea / on-land) =
00:49.00 / 01:34.00

SLTDR will use on-land interval after 10
consecutive dry transmissions
SLTDR will suspend transmissions after 1
hours "hauled-out".  "Haul-out" ends
  after SLTDR is "wet" for 2 successive at-
sea transmission intervals
Transmissions will be duty cycled with 1 day
on and 0 days off
Daily allowance (1-message transmissions;
unused xmits don't accumulate) = 350
STATUS will be transmitted every 20 messages.
Blocks of Time-Lines will be transmitted
every 48 messages.
Hours when SLTDR transmits: 03-07,15-19
Upper limits of maximum-depth histogram bins
are:
20, 40, 60, 80, 100, 120, 140, 160, 180, 200,
250, 350, 400, * meters
Upper limits of dive-duration histogram bins
are:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30,
40, * minutes
Upper limits of time-at-depth histogram bins
are:
0, 20, 40, 60, 80, 100, 120, 140, 160, 180,
200, 250, 350, * meters
****  Check these parameters carefully ****.
 Ready to deploy? y
Type D to archive depth readings, H to
archive histograms: h
```

Unit is ready for deployment, disconnect cable and go for it...