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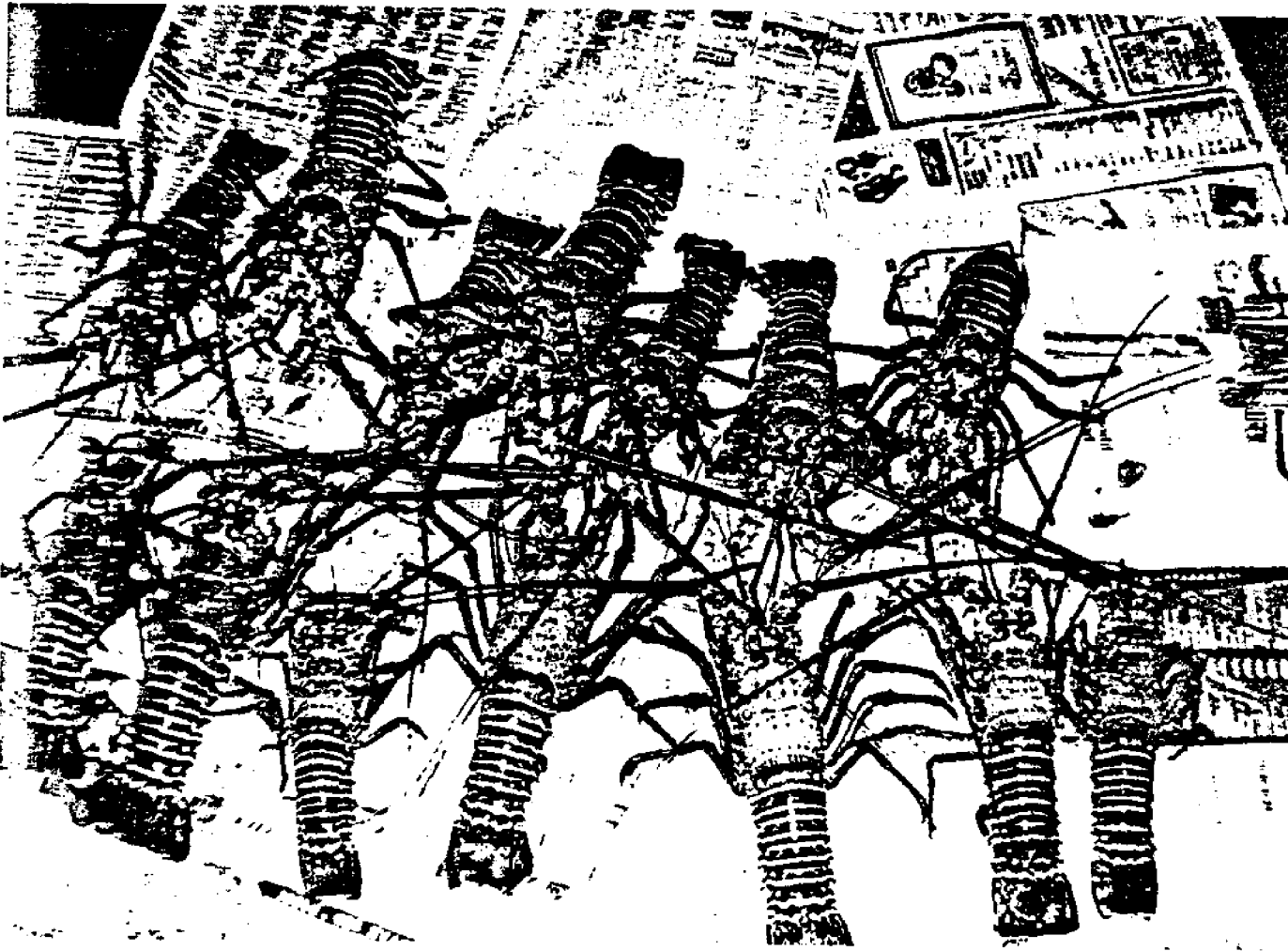
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HAWAII IN HARMONY WITH THE SEA



ULA AND PAPAI-LOBSTER AND CRAB

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LEGAL SIZE SPINY LOBSTERS

Lobsters can be harvested in Hawaii during all months except June, July, and August. Lobsters must weigh at least 1 lb. on Oahu, Maui, and Hawaii, and $\frac{3}{4}$ pound on Kauai to be taken legally.

Lobsters and crabs have always been a very popular food item for residents of Hawaii. These animals, called crustaceans, have a hard external skeleton, or shell, and jointed legs. In fact, the ancient Hawaiians referred to them as "i'a that have feet like prongs."

Although the hard shell of the crustaceans provides them with an excellent defense, it also presents some difficulties for the growth process. In order to grow, the crab or lobster must shed its hard shell, called "molting," and then grow quickly while the new shell is still soft. Once the new shell hardens, further growth is impossible until the next molt. For this reason, and because so much energy must be expended in shell production, growth of crabs and lobsters is generally very slow. This is very unfortunate since these delicious crustaceans are prized by most fishermen, and the demand for them continues to rise. *In order to protect the stocks, there are fishing regulations for five different kinds of crabs and lobsters in Hawaii.*

Ula or Spiny Lobster

The ula or spiny lobster of Hawaii (*Panulirus penicillatus*) and (*P. marginatus*) live in holes and crevices in the coral reef and come out at night to feed. These lobsters are scavengers as are most crustaceans; they are omnivorous, which means they eat both algae and animal food. The ula are highly valued as food and are caught by fishermen with gill nets and traps or by divers with a gloved hand.

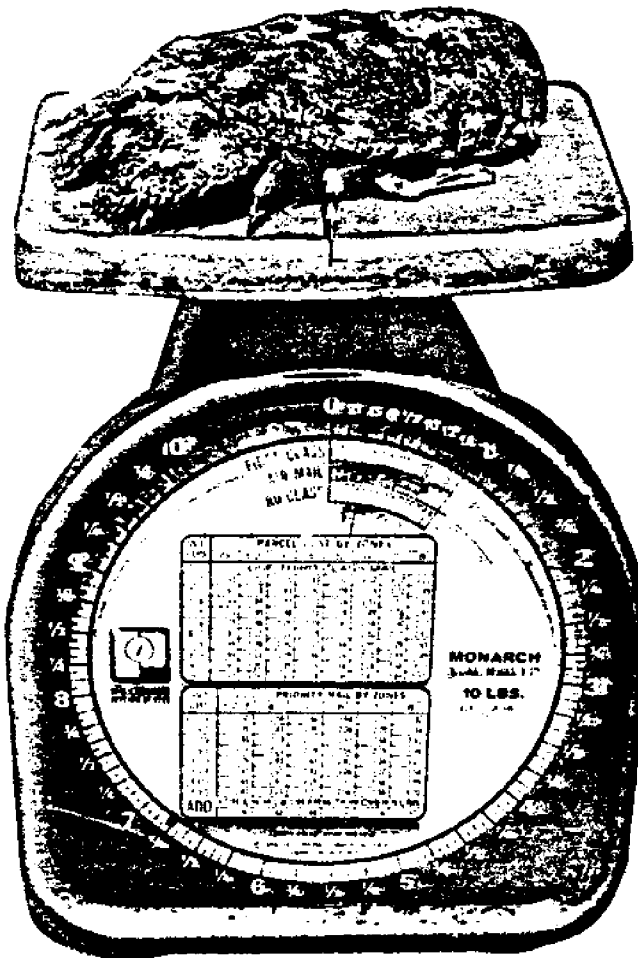
The season for ula is closed from June 1 through August 31, and possession of lobster during that time is considered prima facie evidence in court of a

AND PĀPĀ'I

violation. It is also illegal to take ula with eggs during any time of the year. The eggs, which range in color from orange-red to grayish, when ready to hatch, can be seen as a large mass on the underside of the female's abdomen. *Fishing laws strictly prohibit the spearing of lobster, and any serious puncture wound found on a bagged lobster is considered evidence in court of a violation.* There are also size restrictions on ula. In Honolulu, Maui, and Hawaii counties, spiny lobsters must be at least 1 pound to be taken for home consumption. On Kauai, they need only be ¾ pound. The minimum size for sale is 1 pound in all counties.

During the closed summer season, dealers may sell ula, and restaurants may serve it if the lobster was caught lawfully during the open season. To do this, however, dealers and restaurants must first obtain a special license from the Division of Fish and Game office.

These regulations to protect ula are very important and must be obeyed by all of us if we are to have



SPINY LOBSTER

It is always illegal to take lobsters with eggs. The eggs appear as a large orange-red to grayish, when they are ready to hatch. If a lobster with

eggs is taken, it may take a lobster as long as 5 years to grow to be just 1 pound, the minimum legal size. *If an irresponsible fisherman takes ula with eggs, he will be destroying thousands of lobsters before they even have a chance to hatch and grow, and he may be destroying his lobster grounds for 5 years in the future.*

Ula Papapa or Slipper Lobsters

The ula papapa or slipper lobster (*Scyllarides squammosus*) is another popular lobster in Hawaii that is protected by fishing laws. Ula papapa like ula, live in rocky areas of the reef and hide in crevices during the day, coming out at night to feed. Although there are several different types of slipper lobsters in Hawaii, only one of the species is large enough to be of interest to fishermen, growing to a length of about

ILLEGAL SIZE SLIPPER LOBSTER

Slipper lobsters or ula papapa must weigh at least 1 lb. to be legal for sale in Hawaii.



WITH EGGS

eggs on the underside of the female's abdomen, and range in color from white to yellow. If a crab with eggs is inadvertently caught it should be released immediately.

12 inches. As with ula, ula papapa is caught with gill nets, in traps, and by hand.

The laws regarding the taking of ula papapa are the same as those for ula, except that there is no minimum size for home consumption.

Samoaan Crab or Serrate Swimming Crab

The Samoaan crab or Serrate Swimming crab (*Scylla serrata*) was introduced into Hawaii from Samoa during the 1920's, giving it its common name. This crab grows to be very large, sometimes over 9 inches in width, and is very aggressive. It can easily be recognized by its brown coloration on the upper parts of its body and claws. The last pair of legs on these species are flattened and thus adapted for swimming.

The Samoaan crab inhabits muddy bottoms in brackish water along the shorelines, in river mouths, and estuaries. Fishermen catch these delicious creatures with baited circular nets that are pulled up quickly every 15 or 20 minutes.

Although the season for Samoaan crabs is open all year round, there are size regulations. Crabs must be at least 6 inches in width, measured across the back of the carapace. As with lobster, it is illegal to spear crabs at any time.

Kona Crab or Pāpa'i kua loa

The Kona crab, sometimes called the Red Frog Crab (*Ranina ranina*) is the most prized of all the crabs, and is certainly the most unusual. This crab is perfectly adapted for burrowing backwards into the sand. Its carapace is wide in front and tapers towards the rear. Its abdomen is small, and it is not folded beneath the body, as it is in so many other crabs. The Kona crab is reddish in color with large white areas on its lower side, and it grows to be at least 6 inches wide.

Pāpa'i kua loa lives in sandy bottoms in approximately 10 to 400 feet of water, where it usually keeps the posterior portion of its body burrowed in the sand. It is caught by fishermen with circular baited nets, or nets that are spread over sandy bottoms.

The fishing regulations to protect the Kona crabs were revised and strengthened in 1977. Since it appears that the spawning season for the crabs is during June, July, and August, the season for Kona crab has been closed for these months, just as it is for



KONA CRAB, PAPA'I KUA LOA

It is illegal to harvest Kona crab during the months of June, July, and August.

lobster. As with lobster, it is always illegal to take Kona crab with eggs, and spearing is prohibited at all times. Kona crab must be at least 4 inches in length or in width across the carapace in order to be legal for sale.

Kuahonu Crab or White Crab

The Kuahonu crab (*Portunus sanguinolentus*) is a relatively large crab that lives on sandy and muddy bottoms from shallow water to depths of over 100 feet. The carapace of the crab is smooth with a large spine on each side. Like the Samoan crab, the Kuahonu crab is a swimming crab, with its last pair of legs flattened for that purpose. This crab also is caught by fishermen with baited circular nets and traps.

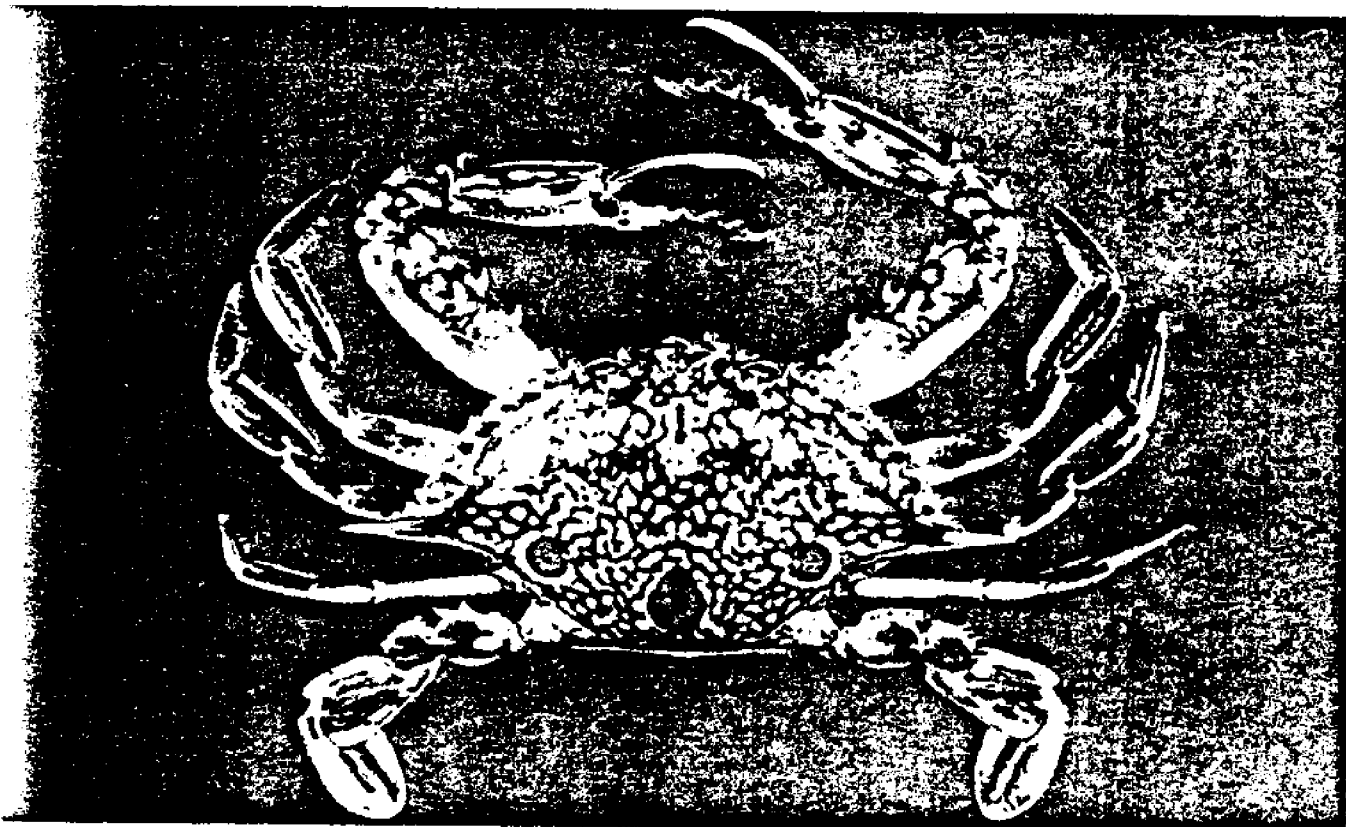
While the season for Kuahonu crab is open all year, crabs must be at least 4 inches in carapace width in order to be legal for sale. It is illegal to take Kuahonu crabs with eggs at any time of the year, and as with other crustaceans, the spearing of them is strictly forbidden.

Be certain to learn and follow these basic conservation rules and practices the next time you go fishing. Remember, only if you obey today's kapu system, will you have lobsters and crabs to catch tomorrow.



CIRCULAR CRAB NET

Many types of crabs are caught by using baited circular crab nets, such as the one in the photograph to the right.



KUAHONU CRAB

The Kuahonu crab is often called Haole crab or Blood Spotted crab. It is always illegal to spear any crab or lobster in Hawaii, including the Kuahonu crab.

If you are interested in learning more about Hawaii's marine life and its conservation and management, *Native Use of Fish in Hawaii* by Margaret Titcomb is an excellent place to start. The following

selected reading list will provide you with additional information on various aspects of the marine environment.

SELECTED READING LIST

- Anikouchine, Wm. A. and R.W. Sternberg, *The World Ocean, An Introduction to Oceanography*. New Jersey, Prentice Hall, 1973. 338 p.
- Cousteau, J.Y. and P. Diole, *Octopus and Squid, The Soft Intelligence*. New York, Doubleday, 1972. 302 p.
- Edmonson, C.H. *The Ecology of the Hawaiian Coral Reef*, New York, Kraus Reprint Co., 1971. 38 p.
- Gosline, W.A. and V.E. Brock, *Handbook of Hawaiian Fishes*, Honolulu, University Press of Hawaii, 1960. 372 p.
- Hawaii, Dept of Land and Natural Resources, *Digest of certain saltwater fishing laws and regulations*. Honolulu, Division of Fish and Game, 1971.
- Hawaii, Dept of Land and Natural Resources, *Excerpts from revised laws of Hawaii, 1955, as amended pertaining to fish, wildlife, and related subjects*. Honolulu, Division of Fish and Game, 1968.
- Hawaii Revised Statutes; *Comprising the Statutes of the State of Hawaii, Consolidated, Revised and Annotated, Fishing Rights and Regulations, Chapter 188*, Honolulu, 1974.
- Hobson, E.S. and E.H. Chave, *Hawaiian Reef Animals*, Honolulu, University Press of Hawaii, 1973. 135 p.
- Hosaka, E.Y. *Shore Fishing in Hawaii*, Hilo, Petroglyph Press, 1973. 176 p.
- Jordan, D.S. and B.W. Evermann, *The Aquatic Resources of the Hawaiian Islands*. U.S. Fish Commission Bulletin Vol. 23, Part 1, 1903.
- Jordan, D.S. and B.W. Evermann, *Preliminary Report on an Investigation of the Fishes and Fisheries of the Hawaiian Islands*. U.S. Fish Commission Report, 1900-1901: 353-382.
- Jordan, D.S. and B.W. Evermann, *The Shore Fishes of Hawaii*, Tokyo, Charles E. Tuttle Co., 1973. 392 p.
- Mackellar, J.S., *Hawaii Goes Fishing*, Graphic Books, New York, 1956. 160 p.
- Tinker, S.W., *Pacific Crustacea*, Tokyo, Charles E. Tuttle Co., 1965. 134 p.
- Titcomb, Margaret, *Native Use of Fish in Hawaii*, 1972. 175 p.
- von Brandt, A., *Fish Catching Methods of the World*, London, Fishing News Ltd., 1972. 240 p.

HAWAII IN HARMONY WITH THE SEA

Jeremy Harris



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