

HISTORY OF *Hawaii Longline Fishing*

The modern Hawaii longline fishery traces its roots back to 1917 when “flagline” fishing was first introduced to Hawaii by Japanese immigrants. Flaglining involved a long mainline set horizontally in the water, with multiple leaders and baited hooks, suspended by multiple floats with flags; hence the name “flagline”. Those early vessels were wooden, designed and constructed by Japanese boat builders. To obtain *opelu* (mackerel scad) for bait, the first flagline fishermen developed a relationship with native Hawaiians living in South Kona, Hawaii island. Some of these Hawaiians became involved in the early flagline fishery.

The number of flagline vessels based in Honolulu and Hilo rose to 42 vessels after World War II but declined to only 14 by the late 1970s. Expansion occurred again in the 1980s, reaching 164 vessels in 1991 as the local Hawaii flagline fleet was joined by modern, long-range vessels from the U.S. West Coast, East Coast and Gulf of Mexico. During this period, all but one flagline vessel converted to modern monofilament mainline, line setters and large hydraulically-powered reels, and the fishery became known as “longline.”

Hawaii longline fisheries have been the predominant source of sashimi tuna and other open ocean fish in Hawaii since the early 1980s. Today’s Hawaii longline fishery has two components. The majority of the active vessels (about 125) sets longline gear deep in the water column during the day (45-400 m) to target our prized sashimi fish, the deep-swimming bigeye tuna. Other vessels (about 25) target swordfish, the world’s premium grilling fish, during part of the year. These vessels use shallow-set longline gear to catch swordfish as they swim nearer to the surface at night.

A MODEL OF A RESPONSIBLE FISHERY. Over the past 20 years, the Hawaii longline fishery has been the catalyst for major changes in Hawaii fishing vessels, gear, species composition of fish catch and sea turtle and seabird bycatch reduction. The Hawaii longline fishery is one of the most intensively studied, monitored and best managed fisheries in the world. Hawaii’s fishery was the first pelagic longline fishery in the world to be evaluated using the United Nations Food and Agriculture Organization’s Code of Conduct for Responsible Fisheries. The fishery received a high score of 93% compliance with the provisions of the Code. The innovative management system (including NOAA, WESPAC and USCG) and the performance of the Hawaii longline fishery make it a model of responsible fisheries producing sustainable seafood.

HISTORY OF *Hawaii Bottomfishing*

This method has been practiced throughout the length of the Hawaiian Archipelago since the 1930s. Bottomfishing methods originated with the ancient Hawaiians but have been modernized with the introduction of small mechanized reels and line pullers. Underwater chumming practices of the ancient Hawaiians continue in the present-day fishery. Fishermen target both deepwater species (*opakapaka*, *onaga*, *hapu’upu’u*) and mid-water species (*uku*) associated with pinnacles and other bottom features on offshore slopes and banks. During the 1980s, participation in the bottomfish fishery expanded from a small group of full-time commercial fishermen to a large number of part-time fishermen. Since the beginning of the bottomfish fishery, commercial fishermen have voluntarily rotated fishing grounds to allow local fish populations to recover and to conserve the overall stocks.

HISTORY OF OTHER *Hawaii Pelagic Fisheries*

POLE & LINE FISHING. After World War II and up to the early 1980s, the pole & line fishery for *aku* (skipjack tuna) was the main supply of fresh tuna for sashimi and canning raw material in Hawaii. This fishery involves two different types of fishing: one to capture live bait and the other to catch skipjack tuna. Chumming tuna with live bait keeps them near the boat. Fishermen then use feathered lures with barbless hooks attached to bamboo poles to catch the fish. This fleet supplied the local tuna cannery until it closed in 1984. With the cannery gone, the “*aku boat*” fleet steadily declined as the old wooden sampans deteriorated. Now only one of the old sampans, plus a modern boat make up the pole & line fishery. The modern vessel stores *aku* in refrigerated sea water. This rapid chilling method is superior to using ice for *aku*, and has added several days of shelf life and opened new markets for this special sashimi product. Eating fresh *aku* is one of the many unique pleasures of life in Hawaii.

TROLLING is the most popular pelagic fishing method in Hawaii. Hundreds of boaters participate in this fishery, including full and part-time commercial fishermen, charterboats, and recreational fishermen. The troll fishery targets blue marlin, yellowfin tuna, *mahimahi*, *ono* and skipjack tuna and also lands incidental species such as spearfish, *kawakawa* and rainbow runner. Up to six lines rigged with artificial lures (or live or dead bait) may be trolled when outrigger poles are used to keep the lines from tangling. Trolling gear usually consists of short, stout fiberglass poles and lever-drag hand-cranked reels. Trollers frequent fish aggregation devices (FADs), drifting logs or flotsam, and areas where the bottom drops off sharply that may aggregate fish.

HANDLINE FISHING is a method of fishing that traces back to the ancient Hawaiians. This fishery has become commercially important since the late 1970s. There are nearshore and offshore components of the handline fishery. *Ahi koo*, or locations where yellowfin tuna are known to aggregate, are present near Hawaii island and some other islands. Small vessels deploy baited vertical lines at these places and release chum (cut bait) underwater to entice large *ahi*, or yellowfin tuna, to bite. The *ika-shibi* method is practiced at night, whereas the *palu ahi* method is practiced during the day. Larger boats travel to seamounts and weather buoys up to 200 nautical miles from shore to target bigeye and yellowfin tuna using handline and trolling techniques combined with heavy chumming.

THE HAWAII FISHING AND SEAFOOD INDUSTRY has made its home at the new Honolulu Fishing Village located at Pier 38 in Honolulu Harbor since 2004. The Fishing Village brings together fishing vessels, the Honolulu Fish Auction, fishing supply and support companies, and seafood wholesalers in one convenient location. Building the Fishing Village demonstrates a long-term commitment in Hawaii to sustaining our fisheries, maintaining local seafood production and preserving our culture and heritage of fishing and reliance on the sea for food.

On front cover: aerial photo of Pier 38
by Bob Lamb Big Island Photography

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THE *Hawaii Fishing*
AND *Seafood* INDUSTRY



THE HONOLULU FISHING VILLAGE



Hawaii Fishing Industry IN PERSPECTIVE

In 2009, the Hawaii fishing industry landed 27 million lbs of ocean fish, worth an estimated \$71 million landed value according to the NOAA Fisheries Service. Honolulu receives approximately 83% of the total Hawaii fish landings with the majority being sold through the Honolulu Fish Auction. Fish quality counts in Hawaii and the fish are chilled in ice immediately after capture and landed fresh. Compared with other ports, Honolulu has a relatively low volume, but high value fishery. Honolulu ranked 31st by weight of fish landed (22.3 million lbs) among U.S. ports, but ranked 8th in terms of landed value (\$59.4 million).

The Hawaii Fishing Industry can be described by fishing gear and methods. Hook and line methods are used by longline (“flagline”), trolling (“trollers”), handline (“*ikashibi* and *palu ahi*”), pole & line (“*aku* boats”) and bottomfishing (vertical line) vessels to catch a variety of pelagic fish (open ocean) and deepwater bottomfish species. No nets are used to harvest open ocean fish or deepwater bottomfish in Hawaii. Only American flagged vessels are allowed to deliver fish directly to Hawaii ports.

WHAT TYPES OF OPEN OCEAN FISH ARE CAUGHT?

Tuna (bigeye, yellowfin, albacore, skipjack)
Billfish (swordfish, blue and striped marlins and spearfish)
Other pelagics (*mahimahi*, *ono*, *opah*, *monchong*, *escolar*, etc.)

WHERE DO HAWAII'S BEST QUALITY OPEN OCEAN FISH COME FROM?

Longliners are the main producers of sashimi quality bigeye tuna (*ahi*), yellowfin tuna (*ahi*), swordfish and other open ocean fish. They operate beyond 50 nautical miles from Hawaii shores, often far off shore within international waters. Trollers, handliners and pole & line boats tend to fish within 50 nautical miles of Hawaii shores. Trollers produce premium quality *aku* (skipjack), *mahimahi*, *ono* and marlin (*kajiki* and *nairagi*). Handliners produce summer yellowfin tuna and other tunas. Pole & line boats produce premium quality *aku*, an island favorite for raw fish preparations.

WHAT TYPES OF DEEPWATER BOTTOMFISH ARE CAUGHT?

Hawaii's premier bottomfish include *onaga* (longtail red snapper), *opakapaka* (pink snapper), *uku* (gray snapper), *hapuupuu* (sea bass) and others.

◀ **THE HONOLULU FISH AUCTION** is the anchor of the Fishing Village. It is a fresh fish display auction operated by the United Fishing Agency since 1952. It evolved from Japan's tuna auction system, first introduced to Hawaii in the early 1900's. The new fish auction is a modern, state-of-the-art facility and showcase for the industry. It is the only fresh tuna auction of its kind in the U.S. The auction provides a marketing service for Hawaii's commercial fishermen by concentrating the market demand on Hawaii's daily fish supply. This allows fishermen to focus on what they do best, fishing. With open competitive bidding, an auction system rewards higher quality fish with higher prices. It also produces fair pricing for the range of fish species and quality based on market conditions of supply and demand.

Importance of Hawaii Seafood TO HAWAII REGIONAL CUISINE

Locally produced Hawaii Seafood is an essential, center-of-the-plate ingredient of Hawaii Regional Cuisine. The creativity and innovation of Hawaii's chefs in blending the food cultures and traditions of the islands with the variety of fresh Hawaii Seafood, produce and other local products has resulted in a uniquely Hawaii culinary experience.

THE DAY BEGINS for the Hawaii Seafood Industry with the local commercial fish landings at the Honolulu Fish Auction. Fish buyers at the auction represent the wholesale, retail and restaurant sectors. After the fish are purchased, they are processed into dressed fish or fillets and sold fresh. The fish are sold locally, or flown to the outer islands, the U.S. mainland, with some exported to Japan, Canada and Europe. Although more than 80% of the seafood in the U.S. market today is imported, Hawaii seafood companies and their discriminating customers continue to place a premium on genuine Hawaii Seafood.

THE FISH AUCTION SEQUENCE begins when fishing vessels return to port and line up to be unloaded in order of arrival. Unloading begins at 1:00 am, 6 days a week. Each fish is weighed, tagged with the vessel name, displayed on pallets, and kept clean and cold. Before being offered for sale, each fish is carefully inspected by the auction staff to ensure fish quality and safety. Buyers arrive before the auction begins to inspect the day's landings. By tradition, the auctioneer rings a brass bell at 5:30 am and the bidding begins. The majority of fish are sold individually. Buyers bid against each other until a final price per pound is reached. Buyers are invoiced for their purchases and fishermen are paid that day for their fish. The fish are picked up by the buyers. Some of the fish are packed at the auction facility and shipped to distant markets.

ATTENTION TO FISH QUALITY AND SEAFOOD SAFETY. Hawaii's fresh bigeye tuna, swordfish, *mahimahi* and deepwater bottomfish are among the highest quality available anywhere and are appreciated in the most discriminating seafood markets. The industry pays strict attention to proper fish handling and quality control at sea and on shore because Hawaii consumers know fish quality and love to eat fish raw as *sashimi* and *poke* (Hawaiian raw fish). We eat 42 lbs of fish per person per year, nearly 3 times the national average. Fish are inspected by auction Quality Control staff to be certain that fish quality and seafood safety standards are met. Auction buyers then inspect each fish before bidding. The auction system allows for the efficient sale of the range of fish species, size and quality to suit each special market niche. There is very little bycatch (fishery waste) because Hawaii fisheries are very highly regulated and all fish caught have a place in the market.

GOVERNMENT INSPECTION. The Honolulu Fish Auction and Hawaii fish companies are inspected by the U.S. Food and Drug Administration yearly. The auction has been proactive in developing and implementing a science-based and effective seafood safety control program customized to the Hawaii fishery and its seafood products. This and the attention to proper fish handling from fishermen to retailers rank Hawaii Seafood among the safest seafood available.

