

Observations on the Birth of a Southeastern Alaska Fishery

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The opening of the herring gill net fishery at Kah Shakes Bay (located at the entrance to Boca de Quadra) was one of anticipation. No one—neither the state and federal fisheries officials, seafood processors, nor the fishermen—was quite sure what to expect. The gill net opening was a departure from the traditional herring roe purse seine fishery that has occurred in southeastern Alaska since 1966.

Although a recently established Canadian skiff gill net fishery, while coexisting with purse seine efforts, has accounted for thousands of tons of high-value roe herring in past seasons, exclusive herring gill netting areas were not allowed in Alaska until the 1976 fall Board of Fisheries meeting in Juneau. At that meeting regulations were adopted providing for 10 fishing areas allotted exclusively to gill netting operations in southeast Alaska. The allowable quotas would be determined later, after stock assessment analyses by Alaska Department of Fish and Game officials divulged biomass estimates. Observers of Canadian gill netting have noted a number of advantages of harvesting with that type of gear. They are: 1) possible selectivity for bigger fish, and mature females in particular; 2) possible selectivity against small roe fish and spawn-outs; 3) slower rate of harvest (allowing more time for managerial decision-making); and 4) greater chance of selectivity for individual spawning stocks. Another advantage of the gill net fishery is the dispersion of benefits derived from the herring resource to the industry and the economy by allowing the participation of an additional low investment gear type.

The current regulations state that the

minimum set gill net mesh size is 2½-inch stretch. No single net can be longer than 50 fathoms in length and the maximum aggregate length of the net is 200 fathoms per gear holder. The net is rigged with anchors and buoys and then shackled. The average fishing depth is about 6 fathoms. Some nets have spacers between the lead and cork line splice to allow the herring to drop freely from the top of the net into the bin. Traditionally gear is set and hauled from 18- to 30-foot skiffs but the current law does not regulate the vessel type or size.

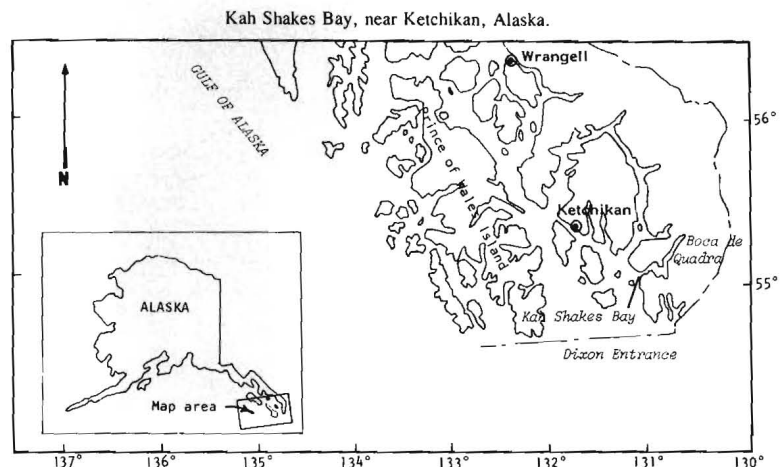
The Kah Shakes Bay opening was closely monitored by Alaska Department of Fish and Game officials, processors, and fishermen.

I arrived at Ketchikan at 0845 Tuesday morning, 30 March, where I joined some processing representatives. I was to accompany their commissioned 51-foot tender, the *Rio Grande*, to the grounds. The vessel was

built for trap tending in the 1930's and had a hold capacity of 23 net tons. The *Rio Grande* had a cash guarantee for this trip and would receive \$50/ton for tendering. We left Ketchikan for Boca de Quadra at 1045 that same morning and arrived at the fishery site by approximately 1500 that afternoon.

The main fishery area was located in two sheltered areas, Bull Head Cove and Kah Shakes Cove, and many types of processing and tendering operations were represented. They ranged from fishermen's cooperatives, Alaska native tribal controlled companies, large and small cold storage firms, and purse seine boats that would tender catches back to the processors located at their home ports.

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Alaska Department of Fish and Game and fishing industry officials anxiously wait for herring roe yields to be determined by a Japanese technician.

A variety of tender vessels were present including converted trap tenders, power scows, tow boats, and purse seiners. Most of the participating fishing companies' tenders were already anchored up in Kah Shakes Bay; many had colorful names such as the *Howkan*, *Chichagof*, *Apache*, *Tomigan*, and *Sable*. The estimated total tendering capacity, including the purse seiners, was in excess of 1,000 tons. This was to accommodate a catch quota predicted to be not in excess of 500 tons.

By Wednesday noon there were approximately 40 gill net skiffs in the area. Many of these were purchased in Canada for a cost of \$2,600. These, and six skiffs built in Petersburg, were constructed of aluminum and are from 28- to 29-feet long with an 8-foot wide bottom flaring to a 9½-foot beam at the gunnel. The Petersburg construction costs were approximately \$2,200 per unit for materials only. Sorting bins were constructed by putting boards on the deck crosswise. Bins on the larger skiffs could accommodate almost 2 tons each for a total capacity of 6 tons.

The Alaska Department of Fish and Game (ADF&G) research vessel *Sundance* was the State of Alaska support vessel used in this fishery. This 72-foot converted albacore fishing boat was originally constructed in California. Dennis Blankenbeckler, a herring research biologist, conducted sonar survey stock assessments from the *Sundance*. The surveys were conducted just outside of Kah Shakes Bay. Interestingly enough, there were no historical herring assessment estimate data for Kah Shakes Bay.

At noon on Thursday, 1 April, it was announced during a meeting on the *Chichagof* that there was an estimated 3,000-4,000 tons of herring present and,



The first set of the season for these Ketchikan fishermen is hauled aboard the tender *Rio Grande* for testing.



Herring are brailed from a Canadian-built aluminum skiff.

unless conditions changed, 300 tons would be allowed as the maximum catch quota. Test fishing was permitted throughout the area to determine the maturity of the roe herring. The samples taken from test fishing indicated roe yields between 7.5 and 9 percent. The processors wanted to wait until roe yields for the total catch averaged an ideal 10 percent, because a loss in one percentage point in yield could mean tens of

thousands of dollars in lost revenue to the industry.

Test fishing benefited the fishermen by allowing them to gain experience. Most of the fishermen present had never set a herring gill net before. There was even some discussion as to what side of the skiff the net should be set, pulled, and reset from; that is, the side having the shaking rack or the opposite side.

It was decided at the Thursday meeting by a majority vote of gear holders that the season would open Friday morning at 0800, and that ADF&G personnel would permit a 300-ton allowable catch. Many fishermen wanted the opening to occur Thursday evening; luckily for Ron Porter and Ole Haynes of Ketchikan, and New England Fish Company, it did not. Their crews were still constructing their NEFCO-financed plywood skiffs Thursday evening when the opening was announced.

Ole and Ron's purse seine vessels, each with two skiffs loaded crosswise on the afterdeck, appeared Friday morning, 1 hour after the opening. The paint was not yet dry or the leaks completely sealed. In fact, one skiff operator borrowed a hammer and nails from us and was continually patching as leaks appeared in the skiff on the grounds. The plywood skiffs cost a grand total of \$200 each and, amazingly enough, held up quite well during the 12-hour period. One skiff unloaded over 7,000 pounds in a single delivery and it apparently had plenty of draft to accommodate even more herring, assuming the good weather conditions that were present then.

Prices were reported to be \$250 per ton (including \$50/ton for tendering) with a possibility for an adjustment after roe yield contents were sampled at the plants. Roe yields varied between 8 and 14 percent. Most of the loads that were delivered were sampled simply by dipping two buckets into a bin. Sex ratios were averaged at about 60/40, males to females, which was considered a high percentage of males for a gill net fishery.

Skiffs of every description including 14 sport fishing aluminum skiffs were used. There were bowpicker skiffs with two- and three-man crews that were apparently very inefficient because the net would bunch up after being pulled through the bow splines, and the herring were extremely difficult to shake loose from the webbing. Some skiffs supported a crew of five, and although it was apparent that these operations could pull nets effectively, some operators were fishing too much gear to be efficient. Other operations having a two-man complement were apparently undermanned.

Apparently some skiffs delivered nearly 18 tons for the day and earnings over \$4,000 were reported. After all the data are compiled it will be interesting to compare the



Two fishermen in a Canadian-built skiff haul their set with the aid of a hydraulic net roller.

various skiff operations in terms of size of skiff, number of units of gear, crew on board, and income earned in that day's fishery.

At 1500 on 2 April it was announced that the fishery would close at 1600. That is, no more sets could be made after that time and fishermen were given a 4-hour period to retrieve all gear. Nets in the water would be

allowed to "soak" until 2000 that night, at which time all of the gear would have to be out of the water.

John Valentine, Area Management Biologist for the ADF&G, reported that some fishermen were actually relieved at the closure announcement because of the extreme fatigue suffered pulling nets during the day.

At 2000 on Friday, 2 April, Alaska's first major herring gill net fishery closed, without major mishaps, and with an estimated harvest of 420 tons. Most of the fishermen were extremely satisfied with the fishery although there were a few dissenters who wanted a larger quota because of the apparent size of the spawning stocks indicated there.

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