

PROGRESS REPORT

SEPTEMBER - DECEMBER, 1948

ALBACORE

During September, sampling of the albacore market landings continued, although at a somewhat slackened rate because of the morphometric data being collected. The last market sample of the season was taken on September 28. At about this time the fish more or less disappeared, although scattered landings were reported mostly from northern California in October and even November. In 1947 the last sample was taken October 16.

On August 31 the pilchard boat "Bainbridge" and the tuna bait boat "Trask" combined operations to make a catch of albacore. The "Trask" used live chum to hold the fish in a school and the "Bainbridge" set their purse seine around the albacore. The net was laid out at about 2:00 PM and hauled in at 4:25 PM with a catch of 61 albacore weighing 1044 pounds. The catch was made 25 miles WSW from the mouth of the Columbia River. The skipper of the "Trask" is quite enthusiastic about this method of catching albacore and plans to give it a more thorough trial next season.

At the completion of the tuna season several log book records were copied from the local fleet. There is more of this type of information available but it was not obtained because of lack of time.

During the month of September morphometric data were collected on both the local albacore (fresh and frozen) and imported Jap albacore which was being canned at the Sebastian-Stuart plant in Astoria. Measurements were made of body proportions and meristic characters were counted. The analysis of the body proportions has been completed. There were no significant differences in body proportions when comparing local fresh and frozen specimens. However, some of the fins showed significant differences in

length.

The Jap albacore proved to have a relatively shorter head region and longer caudal region. There was no significant difference in the central trunk region. The depth of the Jap albacore is relatively greater and the pectoral fin is relatively longer. Because most of the fins on the Jap albacore were frayed it was not possible to make these comparisons. There were no significant differences between the size of the eye and the length of the jaw. A more complete report on this work is being submitted.

On September 25 the largest of the Japanese albacore being held at Sebastian-Stuart were brought out to be processed. The biggest fish was a male 112 cm. in length weighing 60½ pounds. This compares with an average length of about 65 cm. for our albacore and an average weight of 12 pounds. Even the extremely largest local albacore seen in two seasons of sampling was only about 40 pounds. Of interest is the fact that 19 of the very largest fish (all except four over 100 cm.), were all males. However, a number of Jap albacore averaging about 95 centimeters were examined and 35 were males compared with 30 females. The largest of the females contained eggs which were approaching maturity and the largest males also appeared to be almost ready to spawn.

On September 27 another sample of somewhat smaller albacore ranging from 75-85 centimeters in length was examined. There were 25 males and 16 females. However, the gonads were poorly developed being not much more mature than in local albacore. It was difficult to sex these fish and some recorded as males may have been females.

These few data suggest that only albacore over about 90 centimeters are sexually mature. Practically no local albacore are of this size. Therefore there should be a population of large sexually mature albacore someplace in the Pacific Ocean. These are the fish which disappear from

our shores as relatively small, immature albacore. The available evidence indicates that the local and Japanese albacore are two different races. There is only a small albacore fishery off Hawaii and no other fishery in the northern Pacific. Therefore this theoretical population of large mature fish are probably not being fished.

PILCHARD

The last pilchard sample of the season and the only one of the month was taken on September 2, 1948. The total catch was even poorer than that of 1947 as had been expected. A more complete report of the 1948 season is being submitted.

OTTER-TRAWL

Routine sampling of the otter-trawl landings has continued. Some additional tagging has been done, although because of the poor weather conditions very little tagging can be accomplished.

On October 5 arrangements were made with the drag boats "Trask" and "Galaxy" to carry out savings gear experiments on the Dover sole. The boats were to make side-by-side drags using different size meshes in the cod end. However, there followed a period of two weeks stormy weather after which this project had to be abandoned because the fishermen were anxious to go after dog fish.

On October 14 and 15 a trip was taken to Coos Bay to check for tags and find out what boats were dragging in what areas. No tags were recovered except at Garibaldi where five tagged English sole had been brought in. These were all recovered in one day, three of them in one drag and two in the next. They had been out about a month.

There are about eight drag boats fishing out of Newport and two or three based at Tillamook Bay. There are no drag boats at Coos Bay or anywhere else south of the Columbia River with the exception of those mentioned above. There are plans to base two or three boats at Winchester Bay.

Some additional sampling of the mink food fishery has been carried

out. There are no data as yet to indicate that the mink food fishery is causing any damage to the food fishery. Most of the fish used as mink food are not marketed at least at the present time. The red sole is probably the most important mink food fish and although an excellent food fish is not used because of its small size. Much of the mink food, of course, is scrap from the fillet lines.

In the middle of December, because of the scarcity of bottom fish of any kind some food fish, mostly flounder and rockfish have been brought in for mink food. Fortunately pelting has already taken place by mid-December and the demand for mink food is not so great. However, this practice will be watched. Freezing scrap fish in the fall when it is plentiful would do away with this scarcity of mink food in the winter.

One boat at Newport, the "Yaquina", has been making deep drags off Eureka and plans to do some of this during the winter off Newport. She drags in water as deep as 215 fathoms. The skipper has promised to set aside samples of Dover sole if any are obtained. These would be valuable to determine the time and areas of spawning because there are no landings of Dover sole in Astoria between the last of October and the middle of May.

A start has been made toward digging out the statistics of the otter trawl fisher. The catch figures are available at the present time only as monthly totals from 1943. No totals at all have been tabulated before this time. As far as possible the fishermen's pass books are being used in order to arrive at some idea of the changes in abundance as indicated by the catch per boat per trip. The daily record sheets will also have to be used where there are gaps in the pass book records and to give the necessary data before the pass books were used.

About December 15 the drag boats were able to put to sea again after being in port for several weeks because of bad weather. On December 19

a storm blew the fleet in and good samples of English sole were taken along with a small sample of petrale sole and rockfish. Some of the English sole and petrale had already started spawning. This was disappointing as it was hoped to be able to determine the time of first spawning of these fish. None of the commercially more important rockfish had yet hatched their eggs (Sebastes pinniger, S. flavidus, S. melanops). Very little food fish was brought in although some good catches of dog fish were made near buoy no. 1 at the mouth of the Columbia River.

November 3-5 was spent making preparations for the Tri-State meeting of biologists to be held in Seattle. This meeting was attended from November 8-11.

December 6-8 was spend attending the Tri-State meeting held in Portland. A report was presented on the albacore racial work and on the otter trawl work.

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