

CHIGNIK MANAGEMENT
HERRING SAC-ROE FISHERY

REPORT TO THE BOARD OF FISHERIES

By:

Frederick M. Thompson

and

Jeff R. Fox

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Alaska Department of Fish and Game
Division of Commercial Fisheries
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INTRODUCTION

Description of the Area

The Chignik Management Area encompasses coastal waters of the Northwest Gulf of Alaska between Kilokak Rocks and Kupreonof Point (Figure 1). The management area is divided into five districts which are, from east to west, the Eastern, Central, Chignik Bay, Western and Perryville Districts (Figure 2).

History of the Herring Fishery

Herring stocks in the Chignik Management Area were initially exploited in 1906. Historical harvest records were combined with north and south Alaska Peninsula catches and reported as Southwestern Alaska herring catches. Herring catches in the early 1900's never exceeded 500 tons per year for Southwestern Alaska stocks and gradually declined until the fisheries terminated in the late 1930's.

The demand for herring roe resulted in the development of a sac-roe fishery in 1980. The harvest of 694 tons in 1980 is the largest on record and catches gradually declined to 20 tons in 1986.

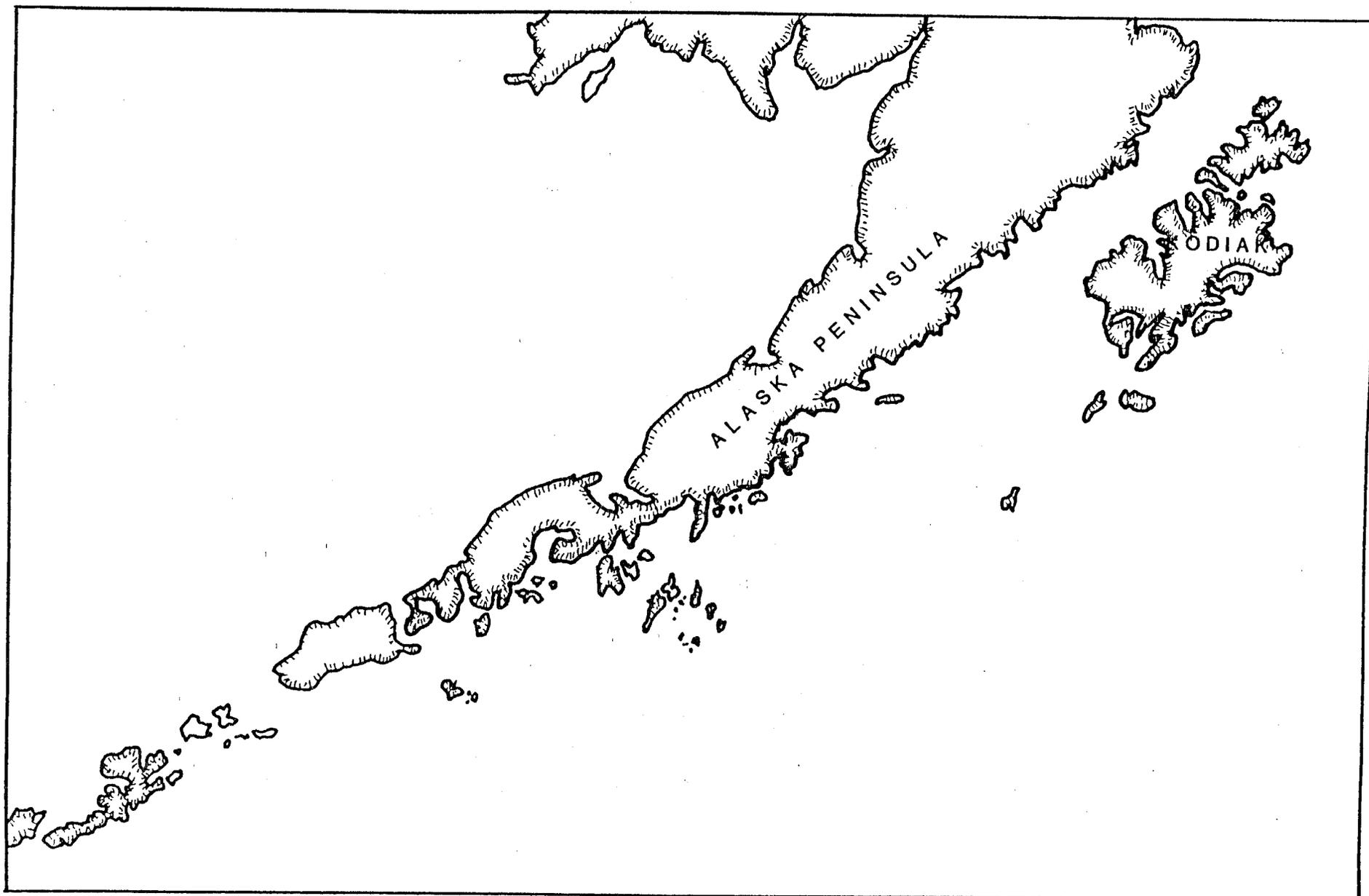


Figure 1. Map of the Alaska Peninsula illustrating the relative location of the Chignik Management Area.

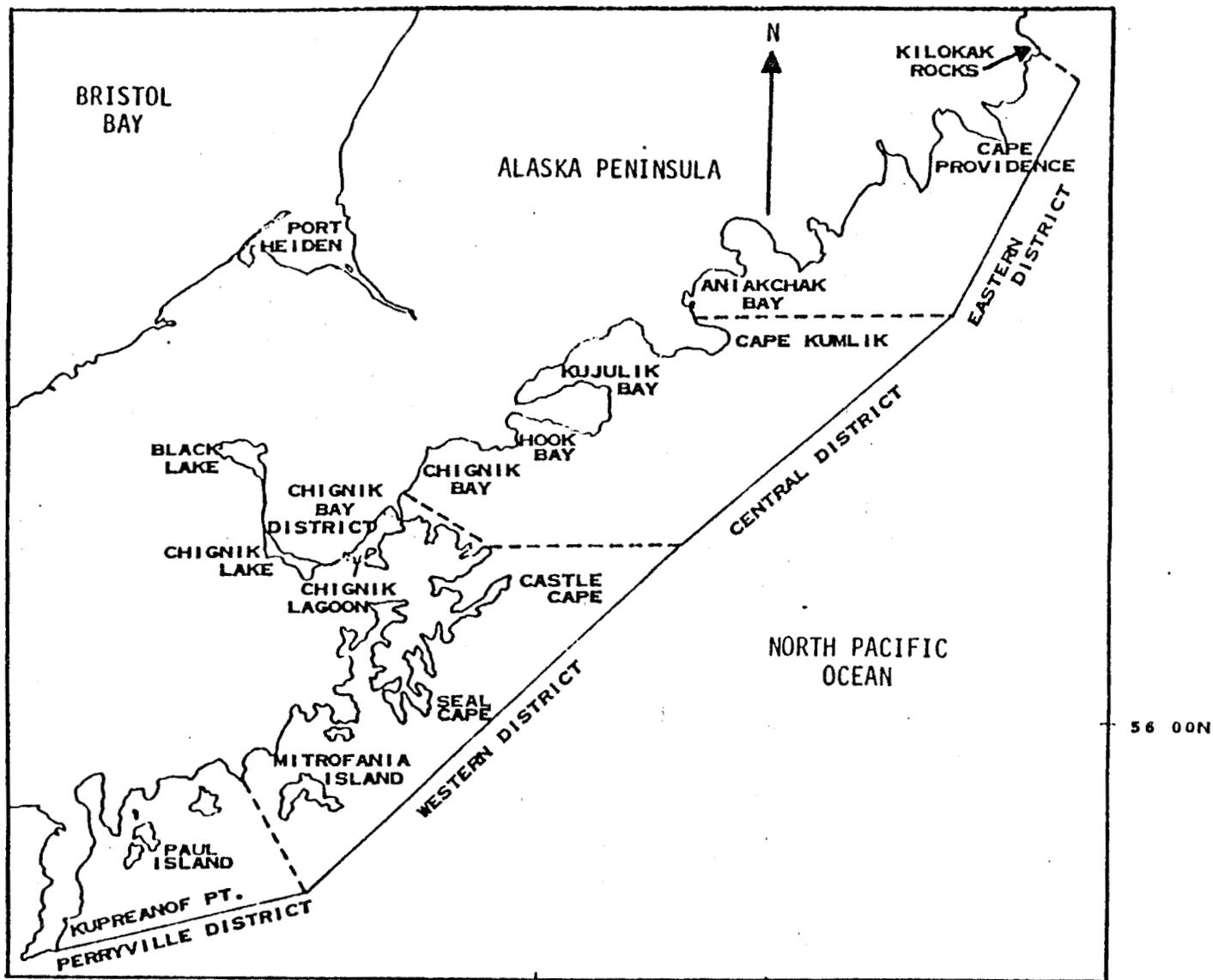


Figure 2. Map of the Chignik Management Area with the statistical fishing districts and some prominent locations identified.

Since 1983 catches have ranged from 11 to 90 tons (Figure 3A). The bulk of the harvest in the early 1980's came from the Big River Section of the Eastern District. These stocks appear to have been over-exploited and have not yet recovered. The herring sac-roe fishery in the Chignik Management Area can be characterized as a low yield, low participation fishery because of the low abundance and dispersed nature of the stocks.

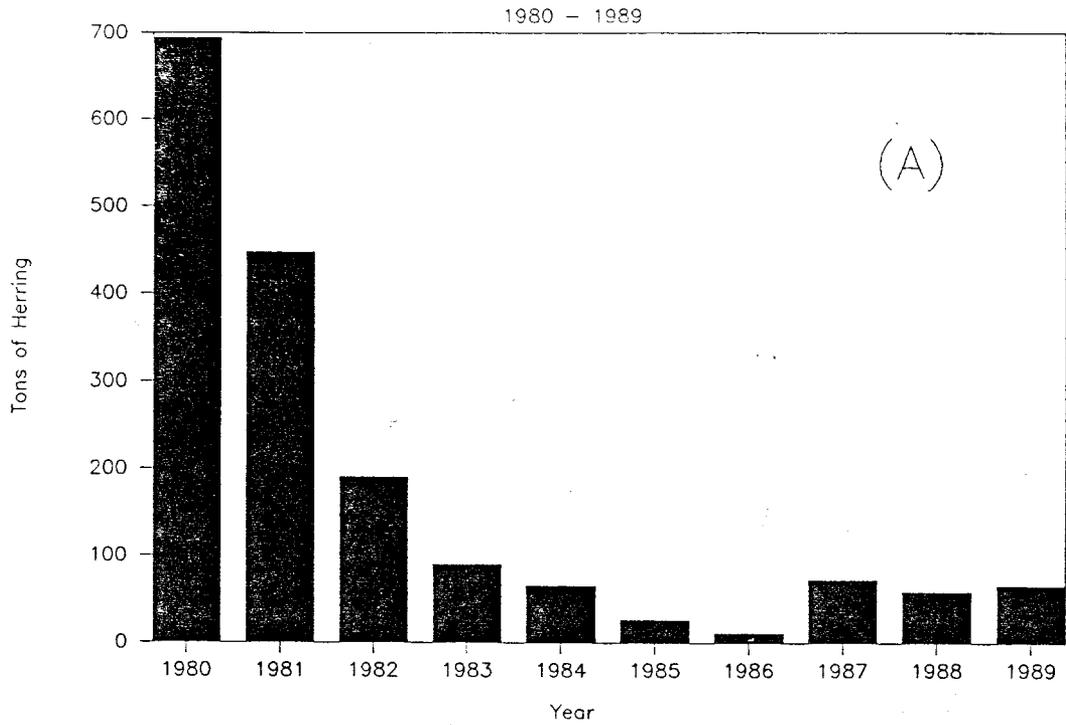
Management Strategy

Sac-Roe Fishery

Since the inception of the sac-roe fishery in 1980 herring have been identified in several relatively small geographic areas. For management purposes the spawning biomass in each of these small areas, generally associated with a bay or lagoon, are treated as discrete stocks. The annual harvest is based on a sliding scale exploitation rate of 0-20 percent of the available spawning biomass. By regulation, the sac-roe season extends from April 15 through June 30. In-season management further regulates the fishery by allowing alternating 24 hour fishing periods and 24 hour closures. This schedule is adhered to until the end of the season or until the guideline harvest quota for a specific stock has been achieved. Projected guideline harvest levels may be adjusted in-season based on assessment of stock biomass.

In-season management decisions are formulated utilizing information from local fishermen, aerial surveys and contact with processors.

CHIGNIK HERRING HARVEST



VALUE OF CHIGNIK HERRING

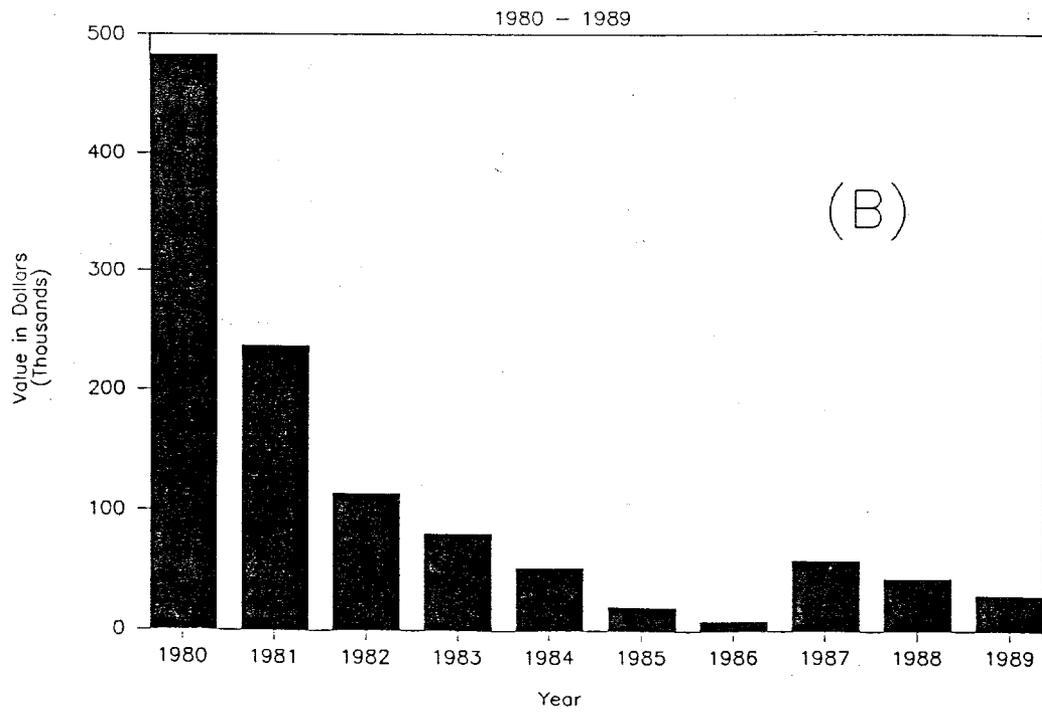


Figure 3. Chignik herring (A) harvest and (B) value from 1980-1989.

Food and Bait Fishery

The regulatory food and bait season extends from August 15 through February 28. The harvest is limited to the difference between the tonnage taken by the sac-roe fishery and the seasons quota for a specific stock. Since the inception of the sac-roe fishery there have been no food and bait landings in the Chignik area.

1989 Season Summary

A total of six registered fishermen harvested 66.1 tons in 1989. The majority of the harvest was taken from the Chignik Bay District. Confidentiality requirements restrict distribution of catch information from specific locations. The estimated harvest of 66.1 tons is similar to the 1983 - 1988 average of 54 tons but less than 10 percent of the 1980 harvest (Figure 3A). The average roe content for the Chignik area as a whole was 9.1 percent in 1989. The total estimated value of the 1989 fishery was 29,700 dollars only 24.4 percent of the 10 year average (Figure 3B).

A total of 392 herring were sampled from the commercial catch in 1989. Samples were collected from Kujulik Bay, Ivanoff Bay and the Chignik Bay District.

The samples collected in from the commercial harvest were dominated by three and four year old fish.

Alaska Department of Fish and Game aerial surveys, reports from commercial aerial observers and general observations from fishermen indicate that there was no significant increase in the spawning biomass from 1988 to 1989.

There are no anticipated management changes for the 1990 herring sac-roe season. The current quotas will remain in effect with any adjustments based on in-season assessment of herring biomass. The Big River Section will remain closed until an improvement in the stock status is observed.

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