

Volume 6

1964-1965

SH  
11  
.A73  
A4  
V.6

**ARLIS**

Alaska Resources

STATE OF ALASKA

Library & Information Services

Anchorage, Alaska

William A. Egan, Governor



ANNUAL REPORT OF PROGRESS, 1964 - 1965

FEDERAL AID IN FISH RESTORATION PROJECT F-5-R-6

SPORT FISH INVESTIGATIONS OF ALASKA

ALASKA DEPARTMENT OF FISH AND GAME  
Walter Kirkness, Commissioner

E. S. Marvich, Deputy Commissioner

Alex H. McRea, Director  
Sport Fish Division

Louis S. Bandirola, Coordinator

3 3755 000 46597 1

## INTRODUCTION

This report of progress consists of Job Segment Reports from the State of Alaska Federal Aid in Fish Restoration Project F-5-R-6, "Sport Fish Investigations of Alaska."

The project during this report period is composed of 23 separate studies designed to evaluate the various aspects of the State's recreational fishery resources. Of these, eight jobs are designed to pursue the cataloging and inventory of the numerous State waters in an attempt to index the potential recreational fisheries. Four jobs are designed for collection of specific sport fisheries creel census while the remainder of the jobs are more specific in nature. These include independent studies on king salmon, silver salmon, grayling, Dolly Varden, a statewide access evaluation program and an egg take program.

A report concerning the residual effects of toxaphene accumulates the findings of a three-year study. The report presented here terminates this segment and is a final report. The information gathered from the combined studies will provide the necessary background data for a better understanding of local management problems and will assist in the development of future investigational studies.

The subject matter contained within these reports is often fragmentary in nature. The findings may not be conclusive and the interpretations contained therein are subject to re-evaluation as the work progresses.

## JOB COMPLETION REPORT

## RESEARCH PROJECT SEGMENT

STATE: ALASKA Name: Sport Fish Investigations of Alaska.

Project No.: F-5-R-6 Title: Investigation of the Lower Southeast Alaska Salt Water Sport Fish Harvest.

Job No.: 4-D

Period Covered: May 29, 1964 to September 15, 1964.

## ABSTRACT

This report covers the censusing of the Ketchikan area saltwater sport fishery from May 29, 1964 to September 15, 1964. Anglers returning from the popular fishing grounds were interviewed on a scheduled basis. Boats remaining on the fishing grounds during the census period were counted by visual observation so that the total fishing pressure could be assessed. The schedule of the census covered all weekend days and three weekdays each week in a systematic manner. The saltwater fishery is primarily motivated by king salmon with silver salmon a second preference, followed by pink and chum salmon. Halibut, rockfishes and cod enter the catch incidentally.

The total estimated catch landed for the check period was 837 king salmon, 1869 silver salmon, 930 pink salmon, 76 chum salmon, 81 halibut, 30 ling cod and 395 rockfishes. The C.P.U.E. for king salmon was .243 fish per day exclusive of the Ketchikan King Salmon Derby and .187 fish per day during the derby.

## RECOMMENDATIONS

1. This study should be retained to provide a continuity of data on which sound management recommendations may be made.
2. At this time no changes are necessary in the regulations on saltwater sport fishing.
3. Continue to attempt to popularize the use of incidental species of food fish taken in the fishery.

## OBJECTIVES

1. To obtain a reasonable estimate of the species and numbers of fishes harvested by the sport-gear

fishery in salt waters of the Ketchikan and adjacent areas.

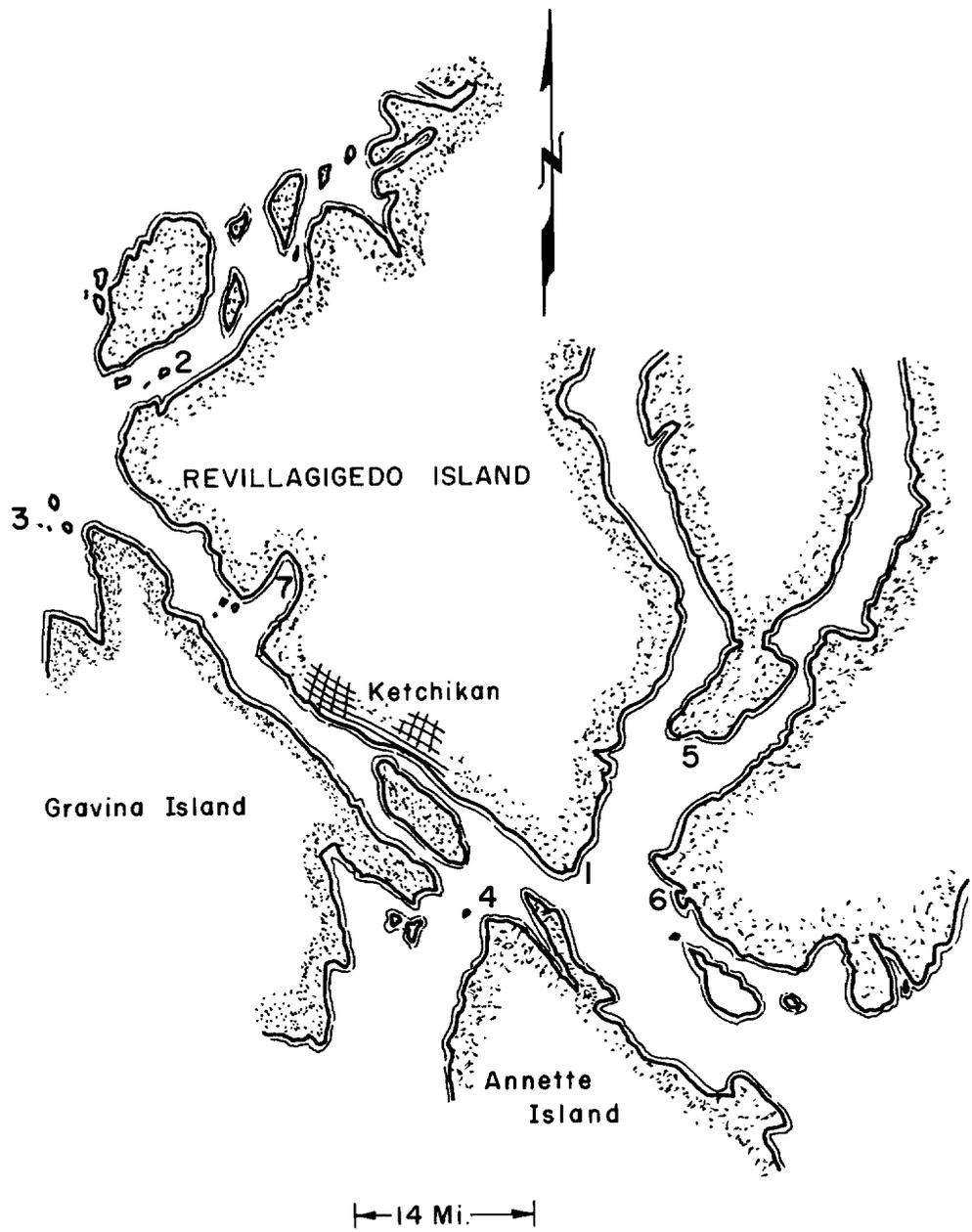
2. To obtain an index of the size and age classes of these saltwater fishes.

#### TECHNIQUES USED

1. The boat landings and areas of intensive fishing were censused in a manner producing the maximum number of angler interviews. The most popular fishing locations are at Mountain Point south of Ketchikan and Clover Pass north of town. Both areas have landings and boat liveries. Anglers were contacted as they returned from fishing both in the morning and in the evening to record the data on those who fish before and after regular 8-5 jobs. Visual boat counts were made of anglers fishing but who could not be contacted. This was possible because the popular fishing grounds are adjacent to the highway system.

The location of fishing effort and the catch were determined by angler interview. Also recorded were methods, baits, techniques and gear type used.

2. The system of census of the fishing pressure in these areas was based on a five-day check each week beginning May 29. The census schedule included all Saturdays and Sundays as the heaviest pressure takes place on these days. This pressure was of sufficient importance to be checked completely whereas that of the weekdays was lighter and therefore less likely to contribute to sampling error. The census then ran five days of each week including all Saturdays and Sundays and no day of the normal workweek was missed in consecutive weeks.
3. Anglers were engaged in conversation as they left the boat or landing. Anglers, obviously in a hurry, were not delayed as most data could be obtained by observation. Both small boat harbors were censused in the morning and in the evening at times when the person with the regular 8-5 employment hours would be seen fishing or could be interviewed as he left the fishing area.
4. The location of the fishing effort (Figure 1) was established by the angler's interview and was often confirmed by previous observation of his particular boat. Also recorded were baits, gear types, angling techniques and type of boat used. Much of this data is noted through visual observation.



- |                    |                  |                   |               |
|--------------------|------------------|-------------------|---------------|
| 1. Mountain Point  | 2. Clover Pass   | 3. Vallenar Rocks | 4. China Town |
| 5. California Head | 6. Icehouse Cove | 7. Ward Cove      |               |

Figure I. Ketchikan Fishing Areas

5. Of the fish brought in, scale samples, weights and lengths were taken on salmon with the angler's permission. If time allowed, these fish were dressed for the angler in order to note stomach contents, sex, gonad development and flesh color. Bottom fishes were noted by number, species and weight only.
6. Recommendations are made to direct the course of future studies and management measures from analysis of the data collected.

## FINDINGS

The heaviest sport-gearred saltwater fishing pressure in the Ketchikan area takes place in the waters visible from Mountain Point and Clover Pass. Salmon migrate through these waters to their spawning grounds and also feed on the herring and other bait that is concentrated by the headland turns or narrow waterways. This fishery for salmon (king and silver) is one of long standing by reason of access convenience from Ketchikan and the above-mentioned congregation of fish.

The census recorded 1,550 angler days by observation on 80 working days during an elapsed period of 110 consecutive days. This effort was distributed as follows:

Mountain Point	380
Clover Pass	754
Vallenar Rocks	298
China Town	96
California Head-Icehouse Cove	20
Ward Cove	2

Inclement weather in the form of wind and rain storms discouraged many anglers. A fair, sunny day usually brought out the less ardent anglers who are happy with an outing and the fishing is a bonus, particularly if a fish is landed. These anglers are not as dedicated or skillful as the group that fishes rain or shine and often.

The angler effort was recorded as influenced by weather. This was noted as follows:

Fair Weather	763 Angler Days
Overcast and/or Rain	784 Angler Days
Stormy	3 Angler Days

(There were 5 stormy days in the 80 days on which census was done.)

The number of boats noted fishing has been plotted in Figure 2. This is the total number recorded from the road system and observation points plus the extrapolated number on

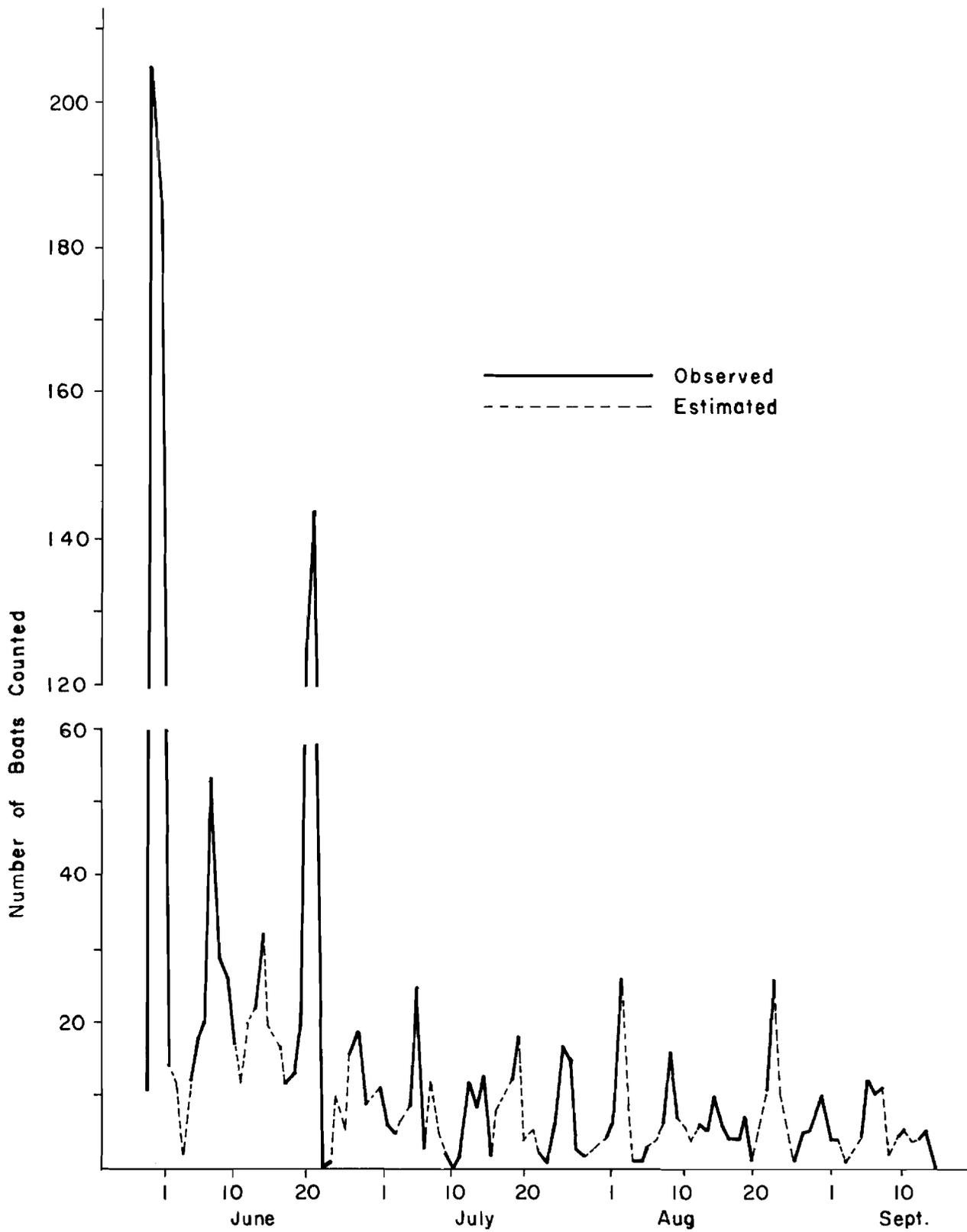


Figure 2. Salt Water Creel Census. 1743 Boats Counted. Ketchikan, Alaska May 29 to September 15, 1964

the checker's days off. Undoubtedly, there were anglers that were out of sight, making the count minimal. The number of boats at the landings in Clover Pass or Mountain Point is only part of the fleet as many anglers use other or private moorages and these anglers are seldom contacted.

The total catch of fish over the census period, exclusive of the Sweepstakes Days of the Ketchikan King Salmon Derby, was estimated using the number of boats observed fishing and the boats contacted as they landed. The ratio was 15.18 boats observed fishing on the grounds to one contacted at the landings. There were 36 king salmon, 123 silver salmon, 61 pink salmon, 5 chum salmon, 5 halibut, 2 ling cod and 26 rockfishes recorded in the census exclusive of the derby sweepstakes days. Applying the correction factor (15.18), the estimated catch is 546 king salmon, 1867 silver salmon, 926 pink salmon, 76 chum salmon, 76 halibut, 30 ling cod and 395 rockfish.

The catch during the Ketchikan King Salmon Derby Sweepstakes Days was recorded by an observer at each of the two weigh-in stations. They recorded all fish entered in the competition and what other fish could be noted that were not entered for awards. It is estimated that the catch was 1.5 times the number of fish entered. The total estimated catch for the four sweepstakes days of the contest was 291 king salmon, 2 silver salmon, 4 pink salmon and 5 halibut. The salmon turned over to the derby management were 194 kings. Three pink salmon, 3 halibut and one silver salmon were also noted in the derby angler catch.

The number of anglers per boat was recorded. There were usually two anglers per boat when fishing for sport. The sport-gear commercial fishermen often fish alone. The total count, using the estimates of effort on the checker's days off, is 3449 anglers in 1643 boats for a total of 2.1 anglers per boat.

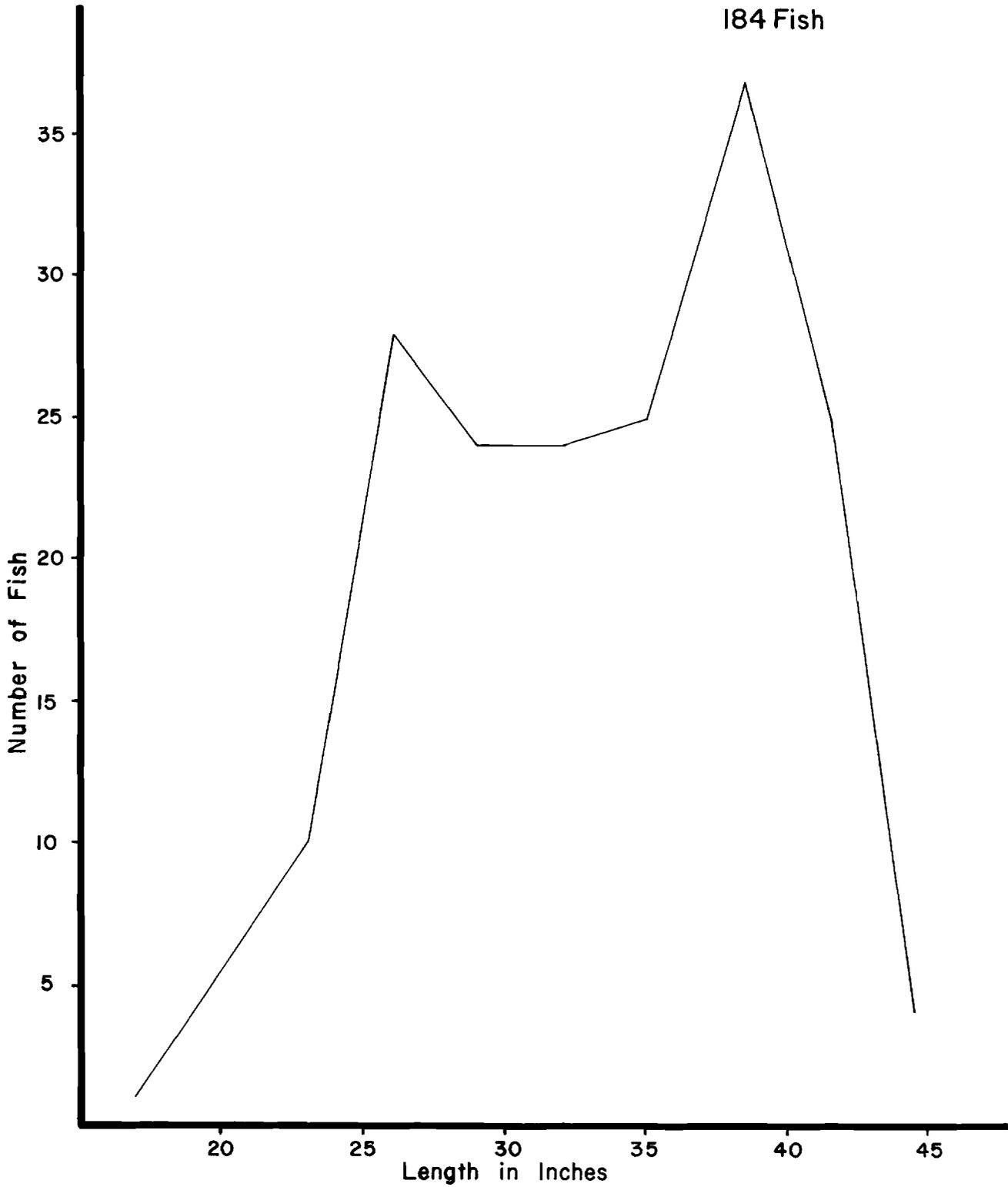
The total estimated catch in the Ketchikan saltwater sport fishery was 837 king salmon, 1870 silver salmon, 933 pink salmon, 76 chum salmon, 84 halibut, 30 ling cod and 395 rockfishes. This estimate is considered by the writer to be conservative.

The "catch per unit of effort" (C.P.U.E.) is calculated in angler days. For the fishery exclusive of the derby sweepstakes, it is .243 king salmon and .967 silver salmon. The intense pressure during the sweepstakes days lowered king salmon C.P.U.E. to .187 and insignificantly for the silver salmon. (The silvers had not started to run during the sweepstakes days.)

Figure 3 is a plot of the lengths of king salmon taken on sport gear. The line has been smoothed by grouping in increments of 3 inches. The bimodal aspect of the line suggests two-year classes comprise most of the catch. Scale readings to check this premise have not been accomplished to date.

Figure 3

1964  
Sport Gear Caught King Salmon  
Length Frequency  
By  
3 Inch Increments  
184 Fish



Such fish as ling cod, rockfishes and other bottom fish were brought to the dock but the angler was often hesitant to use them because of his inability to prepare them properly. He was instructed, as opportunity permitted, in the ease with which these fish are prepared for the table. This minor effort resulted in better relations and understanding with the anglers.

The data collected to date is utilized in the management of the saltwater sport-gearred fishery. The catch of king and silver salmon by sport anglers is largely satisfactory although a decline has been evidenced during the past 20 years. This decline is not thought to be a result of sport fishing activities, but rather by factors beyond the effort of the local sport fish management.

Prepared by:

Robert T. Baade  
Fishery Biologist

Date: February 28, 1965

Approved by:

s/ Louis S. Bandirola  
D-J Coordinator

s/ Alex H. McRea, Director  
Sport Fish Division