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STATE OF ALASKA

Walter J. Hickel, Governor

ANNUAL REPORT OF PROGRESS, 1966 - 1967

FEDERAL AID IN FISH RESTORATION PROJECT F-5-R-8

SPORT FISH INVESTIGATIONS OF ALASKA

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INTRODUCTION

This report of progress consists of findings and work accomplished under the State of Alaska Federal Aid In Fish Restoration Project F-5-R-8, "Sport Fish Investigations of Alaska."

The project during this report period is composed of 20 separate studies. Some are specific to certain areas, species or fisheries, while others deal with a common need for information. Each job has been developed to meet the needs of various aspects of the State's recreational fishery resource. Seven jobs are designed to pursue the cataloging and inventory of the numerous State waters. These are divided into logical utilization areas and are jobs of a continuing nature. It will be many years before an index of the potential recreational fishing waters is completed. Six jobs are directed toward specific sport fish studies. These include special efforts toward the anadromous Dolly Varden of Southeastern Alaska, silver salmon in Resurrection Bay, king salmon stocks on the lower Kenai Peninsula, king and other salmon stocks in Upper Cook Inlet, and Arctic grayling and sheefish in Interior Alaska. Special reports have been prepared on specific phases of the Dolly Varden life history and appear in the Department's special "Research Report" series.

The Statewide access evaluation remains one of the most important jobs conducted under this Federal Aid Program. It provides the Department with a tool to recommend withdrawal of suitable access sites on potential recreational fisheries throughout the State.

The remaining jobs include creel census efforts on specific fisheries in high use areas of the State, an egg-take program directed toward locating suitable indigenous stocks, perfecting advanced techniques in taking, handling and rearing species that are not normally associated with standard fish cultural practices, and continuation of the evaluation of the Fire Lake System.

The material contained in this report is often fragmentary in nature. The findings, evaluations and interpretations contained herein are subject to re-evaluation as the work progresses and additional data are collected.

Volume 8 Report No. 1-D

RESEARCH PROJECT SEGMENT

STATE: ALASKA Name: Sport Fish Investigations of Alaska.

Project No: F-5-R-8 Title: Saltwater Sport Fish Harvest Studies in Southeast Alaska.

Job No: 1-D

Period Covered: May 15, 1966 to August 28, 1966

ABSTRACT

Included in this report are the findings of separate saltwater creel census programs conducted in Juneau, Sitka, Petersburg, and Ketchikan during 1966.

The primary objectives of the census programs were to determine saltwater sport fish harvests of salmon, by individual area, and to acquire current data on these growing recreational sport fisheries.

The sport catch of salmon in each area was determined through an extensive program of angler interviews.

The creel census program of each area, including methods of operation and data obtained, are discussed separately. A small portion of the Juneau, Sitka, and Ketchikan findings will be discussed comparatively.

RECOMMENDATIONS

1. The creel census studies be continued in each area, as needed, to obtain current information upon which sound management policies may be formulated.

2. A unified census program be continued in all Southeast Alaska areas, with the ultimate application of a suitable statistical design.

3. That increasing effort be placed on areas of multiple use conflict.

4. No changes be made in the saltwater regulations at this time.

OBJECTIVES

1. To compile an annual estimate of the numbers and species, by area, of the sport fish harvest of saltwater fishes.

2. To compile indexes to size and age groupings with emphasis on the salmonids.

TECHNIQUES USED

Creel census information was obtained through angler interviews at boat moorages in the Juneau, Sitka, and Ketchikan areas. Information from the Petersburg fishery was obtained through angler contact in the field.

The operation and method of the creel census program were also similar to past years, although a reduction in daily sampling was accomplished during the 1966 season.

During the 1966 creel census program, anglers were interviewed upon completion of the days fishing on three days each week, both weekend and one randomly selected weekday.

Aircraft were used to make boat counts on the fishing grounds, for correlation with dockside interviews in the Juneau, Sitka, and Ketchikan areas. The aerial boat counts were scheduled as follows: a Saturday count on the first week, a Sunday count the second week, and a weekday count the third week. Beginning the fourth week, this schedule was repeated. Weekday counts were flown at 7:00 p.m. and weekend counts at 1:00 p.m.

Salmon derby data were obtained from Juneau and Sitka through actual creel census and by monitoring fish numbers and poundage turned in at the respective derby barges.

Biological data were obtained, including catch composition, fish weights, preferred angling areas, and specific numbers of fish landed. Scale samples were collected for age analysis; these are currently being examined.

Estimated seasonal catches were formulated for each area by correlating aerial boat counts with data obtained from dockside angler interviews.

FINDINGS

Juneau Area Saltwater Creel Census, 1966

Creel census of the Juneau saltwater sport fishery began May 25, and terminated August 28, 1966.

The boundaries of the sport fishing area censused remained similar to previous years, and as described by Engel, 1963.

During the season's census the 2,798 anglers interviewed fished 18,101 hours for a catch of 3,282 salmon of all species. The average catch per censused angler was 1.2 salmon.

Table 1 presents the catch of all sport and sport-geared commercial boats censused during the 1966 season. The number of sport-geared commercial boats censused is a small percentage of the actual number comprising the fleet, and is compared to the sport fleet only to illustrate its superior effectiveness. This increased efficiency is due largely to the multiple gear used by the sport-geared commercial fishermen.

TABLE 1 - Total and Comparative Catch by Sport and Sport-Geared Commercial Boats Censused, Juneau, 1966.

	No. of Boats	Kings	Coho	Chum	Pink	Total Salmon	Percent of Total
Sport	1,033	471	329	4	43	847	26
Commercial*	401	598	1,721	---	116	2,435	74
TOTAL	1,434	1,069	2,050	4	159	3,282	

* Sport-geared commercial boats

Shown in Table 2 is the salmon catch per boat trip for all boats censused in the Juneau area during 1966, and is compared with the 1963-65 catches. A slight decrease is evident in the catch of king salmon, Oncorhynchus tshawytscha (Walbaum), and a more marked decline in the catch of coho salmon, O. kisutch (Walbaum), from that of 1965. The catch of both pink salmon, O. gorbuscha (Walbaum) and chum salmon, O. keta (Walbaum) was slightly higher than in 1965.

No attempt to compare numbers of anglers participating in the Juneau fishery with those of previous years, was made due to the reduction of angler interviews conducted during the 1966 season. Average catch per unit of effort, i.e., salmon catch per boat was considered the only valid comparison.

TABLE 2 - Average Salmon Catch Per Boat Trip, Juneau, 1963-66.

Species	Salmon Per Boat Trip 1963	1964	1965	1966
King	0.95	1.19	0.83	0.74
Coho	1.70	1.60	2.41	1.42
Pink	0.05	0.12	0.04	0.11
Chum	0.02	0.01	0.03	0.002

Table 3 presents the number of anglers, boats, hours fished, and seasonal catch by species for the Juneau area, censused during 1966. This data is depicted in bi-weekly periods.

Table 4 shows the catch of miscellaneous fish species taken by anglers in the Juneau area fishery in the 1966 season. Pacific halibut, Hippoglossus stenolepis (Schmidt) and Dolly Varden, Salvelinus malma (Walbaum) comprised the majority of the non-salmon catch retained by the angler.

TABLE 4 - Catch of Miscellaneous Retained Fish Species Censused, Juneau, 1966.

Ling Cod	Pacific Halibut	Dolly Varden	Pacific Cod	Rockfish
5	723	34	10	2

Halibut was also the species, other than salmon, taken most frequently by anglers in the Sitka and Ketchikan areas. This species is fished exclusively by some anglers, and taken accidentally while salmon fishing by others.

The average weights of king and coho salmon, methods of fishing, gear preference, and boat type used in the saltwater fishery will be discussed in a following text segment. This information is presented comparatively with similar data from the Juneau and Ketchikan areas.

Estimated Salmon Catch--Juneau, 1966

The method of estimating the total season's salmon catch was altered in 1966 to eliminate bias due to greater angling activity on weekend days.

During the 111-day creel census program, 28 weekend days and 11 weekdays were censused for 87.5 percent and 13.9 percent census coverage, respectively. Aerial boat counts indicated 32 percent of the boats fishing were interviewed dockside on any given census day.

Salmon catch estimates were calculated separately for weekend days and weekdays, using the 87.5 percent and 13.9 percent angler samples, respectively. The catch was further expanded for both periods with the 32 percent census coverage figure derived from the aerial boat counts. The extrapolated weekend and weekday catches are totaled to derive the total all-season estimated salmon catch.

Table 5 shows the estimated salmon catch for the Juneau area during the 1966 fishing season.

TABLE 3 - Creel Census Summaries by Bi-Weekly Periods, Juneau, 1966.

Bi-Weekly Period	Number Boats	Number Anglers	Hours Fished	Total Salmon	Total King	Total Coho	Total Pink	Total Chum*
5/7 -5/15**	23	59	298	3	3	0	0	0
5/16-5/29	264	442	6,332	106	104	2	0	0
5/30-6/12	180	373	1,829	85	82	1	2	0
6/13-6/26	220	494	1,419	362	354	5	2	1
6/27-7/10	108	211	1,175	228	106	93	29	0
7/11-7/24	88	285	721	215	109	95	11	0
7/25-8/7	193	374	1,875	685	113	524	47	1
8/8 -8/21	222	283	2,787	1,156	110	985	59	2
8/22-8/28**	136	277	1,665	442	88	345	9	0
TOTAL***	1,434	2,798	18,101	3,282	1,069	2,050	159	4

* Chum salmon catch represents only sport fisherman catch.
** Single week period.
*** Excludes salmon derby days.

TABLE 5 - Total Estimated Salmon Harvest, Juneau, 1966.

	King	Coho	Pink	Chum	Total Salmon	Total* Others
Season Censused Catch	1,069	2,050	159	4	3,282	774
Estimated All Season Catch	4,825	7,911	594	14	13,344**	4,901

* Includes Pacific Halibut, Ling Cod, Dolly Varden and Rockfish.
** Excludes Salmon Derby Data.

Juneau Salmon Derby, 1966

The 1966 Annual Golden North Salmon Derby, sponsored by the Territorial Sportsmen, was held July 22, 23, and 24. Fishing areas and boundaries were slightly enlarged from those of previous years as described by Wadman, 1964.

Due to the increasing size and complexity of the Juneau salmon derby, and the numerous derby stations, numbers of specific fish were not obtained in 1966.

Table 6 presents the specific pounds of fish taken during the three-day salmon derby and turned in at the official derby stations.

TABLE 6 - Total Catch by Species, Juneau Salmon Derby, 1966.

Pounds of Kings	Pounds of Coho	Pounds of Pink	Pounds of Chum	Total Pounds Salmon
12,080	6,953	406	261	19,700

Sitka Area Saltwater Creel Census, 1966

Creel census of the Sitka Sound saltwater fishery began June 15 and terminated August 27, marking the third consecutive year that this program has been in effect in the Sitka area.

Some fishing for early king salmon took place prior to the initiation of the census program, but the majority of angler effort and catch occurred during the investigational period. Twenty-seven days were censused during the 70-day sample period.

The geographical boundaries of the census area remained the same as in previous years, and are described by Andrews, 1964.

The 617 anglers contacted fished 3,426 hours for a total catch of 223 salmon. The average salmon catch per angler for all species was 0.36 fish, down slightly from the 0.54 average of 1965.

Table 7 shows the total salmon by both sport and sport-geared commercial boats fishing Sitka Sound during 1966. The catch of sport and sport-geared commercial boats is compared to indicate the predominance of recreational sport fishing.

The average weights of king and coho salmon, methods of fishing, gear preference and boat type used in the saltwater fishery will be discussed in a following segment of the text. This information is presented with similar data from the Juneau and Ketchikan areas for purposes of comparison.

TABLE 7 - Total and Comparative Catch by Sport and Sport-Geared Commercial Boats Censused, Sitka, 1966.

	No. of Boats	Salmon Catch			Total Salmon	Percent of Total
		King	Coho	Pink		
Sport	240	92	81	3	176	79
Commercial**	55	8	38	-	46	21
TOTAL	295	100	119	3	223*	

* Includes one chum salmon
** Sport-geared commercial boats

Salmon catch per boat trip is shown in Table 8. The 1966 catch per unit of effort declined slightly from that of 1965 for king salmon and showed an identical upward trend for coho. Most significant was the poor angling success for pink salmon, reflecting the relatively poor pink salmon runs in Sitka Sound area during the 1966 season.

TABLE 8 - Average Salmon Per Boat Trip, Sitka, 1965-66.

Species	Salmon Per Boat Trip	
	1965	1966
King	0.41	0.33
Coho	0.32	0.40
Pink	0.31	0.01

Presented in Table 9 are the number of anglers, boats, hours fished, and catch by species, in bi-weekly periods. Included is the catch of halibut and other miscellaneous bottom fish.

Estimated Salmon Catch--Sitka Sound, 1966

The method of expanding the regular season's censused catch to obtain an estimated total seasonal catch is identical to the previously discussed form for the Juneau area. Weekend and weekday catches were expanded separately.

During the 70-day census period, excluding salmon derby days, 16 weekend days and 11 weekdays were censused for 94 percent and 21 percent census coverage, respectively.

Aerial surveys for determination of total boat numbers indicated 47.5 percent of the boats fishing any census day were contacted and interviewed dockside at the completion of the fishing day.

Table 10 depicts the estimated all-season salmon catch for the Sitka area during 1966.

TABLE 9 - Creel Census Summaries by Bi-Weekly Periods, Sitka Sound, 1966.

Bi-Weekly Period	Number Boats	Number Anglers	Hours Fished	Total Salmon	Total King	Total Coho	Total Pink	Other Species			
								RF	LC	H	DV
6/13-6/26	6	10	30	0	0	0	0	3	0	21	0
6/27-7/10	69	147	814	27	23	3	1	18	0	13	2
7/11-7/24	100	207	1,283	52	27	25	0	32	11	211	0
7/25-8/7	46	108	552	48	31	15	2	7	1	28	0
8/8 -8/21	62	125	676	70	14	56	0	10	5	125	0
8/22-8/28*	12	20	71	25	5	20	0	0	0	0	0
TOTAL***	295	617	3,426	223**	100	119	3	70	17	398	2

* A one-week period.
** Includes one chum salmon.
*** Excludes salmon derby data.

RF - Rockfish LC - Ling Cod H - Pacific Halibut DV - Dolly Varden

TABLE 10 - Total Estimated Salmon Harvest, Sitka, 1966.

	King	Coho	Pink	Chum	Total Salmon
Estimated Derby Catch	233	62	4	1	300
Estimated Season Catch	349	375	56	2	782
TOTAL	582	437	60	3	1,082

Sitka Salmon Derby, 1966

The annual Sitka Salmon Derby, as in prior years, was held on two consecutive weekends; June 18, 19 and 26, 27.

The derby catch was obtained by census conducted at the official derby barge as salmon were entered. A total of 242 salmon of all species was taken; 188 kings, 50 coho, 3 pinks, and 1 chum.

During the 1966 salmon derby all major boat harbors were censused in addition to the derby float in an attempt to determine the number of fish caught during the derby weekends, but not turned in for the offered prizes.

It was found that approximately 24 percent of the fish taken during the four days were not entered in the competition. These were primarily the 15- to 25-pound fish that were not eligible for the top prizes.

Table 11 presents the official catch and the estimated total catch for the two weekends comprising the Sitka Salmon Derby.

TABLE 11 - Sitka Salmon Derby Landings, 1966.

Date	Total Salmon	King	Coho	Pink	Chum	Pacific Halibut	Ling Cod	Dolly Varden
June 18	49	37	10	1	1	7	5	0
19	38	34	4	0	0	7	1	1
25	62	50	11	1	0	9	5	0
26	93	67	25	1	0	40	7	2
TOTAL	242	188	50	3	1	63	18	3
Estimated Catch*	300	233	62	4	1	78	22	4

* Expanded by 24 percent.

Ketchikan Area Saltwater Creel Census, 1966

The Ketchikan creel census program was operated 104 days, beginning May 15, and continuing through August 27. General program design was identical to that used in the Juneau and Sitka fisheries.

The 670 anglers interviewed throughout the season fished 4,272 hours to take a total of 369 salmon of all species. The average salmon catch per angler was considerably higher in 1966 than in 1965. The 1966 catch average was 0.69 salmon per angler as compared to 0.34 in 1965. This increase was directly related to the increased catch of pink salmon in the Ketchikan area in 1966.

Presented in Table 12 is the 1966 seasonal catch as censused dockside in Ketchikan. Compared is the catch of sport and sport-geared commercial boats, and the superior effectiveness of the commercial boat is evident. As previously discussed in the Juneau segment, the number of commercial boats depicted in Table 12 does not comprise a large percentage of this fleet.

TABLE 12 - Total and Comparative Catch by Sport and Sport-Geared Commercial Boats Censused, Ketchikan, 1966.

	No. of Boats	Kings	Coho	Chum	Pink	Total Salmon	Percent of Total
Sport	275	113	53	3	127	296	80
Commercial*	34	59	6	-	8	73	20
TOTAL	309	172	59	3	135	369	

* Sport-geared commercial boats

The comparative catch of sport and sport-geared boats is significant in that the boats fishing commercially, 12 percent of the total, actually boated 34 percent of the king salmon taken in the Ketchikan area.

The 1966 catch per boat trip is shown in Table 13 and is compared to that of the 1965 season. The catch of king salmon showed a significant increase, coho catch remained relatively stable, and the average catch of pink salmon rose markedly.

The increase in catch per boat trip for pink salmon again points to the abundance of pink salmon in Ketchikan waters during the 1966 season.

TABLE 13 - Average Salmon Per Boat Trip, Ketchikan, 1965-66.

	Salmon Per Boat Trip	
Species	1965	1966
King	0.36	0.55
Coho	0.22	0.19
Chum	0.008	0.009
Pink	0.14	0.43

A bi-weekly breakdown of total anglers fishing the Ketchikan area, number of boats, hours fished, and total salmon catch is presented in Table 14. The apparent periods of seasonal preference shown in Table 14 indicate early season angling for king salmon to be very popular with Ketchikan anglers.

Average weights of king and coho salmon taken in the Ketchikan fishery are discussed in a following segment comparatively with similar data from the Juneau and Sitka areas.

TABLE 14 - Creel Census Summaries by Bi-Weekly Periods, Ketchikan, 1966.

Bi-Weekly Period	Number Boats	Number Anglers	Hours Fished	Total Salmon	Total King	Total Coho	Total Pink	Total Chum
5/16-5/29	61	127	754	46	46	0	0	0
5/30-6/12	83	169	1,323	62	57	2	2	1
6/13-6/26	48	107	798	60	29	15	16	0
6/27-7/10	37	86	640	45	23	4	18	0
7/11-7/24	38	87	569	62	8	20	34	0
7/25-8/7	19	35	93	33	7	5	21	0
8/8 -8/21	21	54	88	55	2	12	39	2
8/22-8/28*	2	5	7	6	0	1	5	0
TOTAL	309	670	4,272	369	172	59	135	3

* One-week period.

The catch of miscellaneous fish species taken during the census period is depicted in Table 15.

TABLE 15 - Catch of Miscellaneous Fish Species Censused, Ketchikan, 1966.

Red Snapper	Rockfish	Ling Cod	Pacific Halibut	Dolly Varden
22	38	8	23	3

Estimated Salmon Catch--Ketchikan, 1966

The total season estimated salmon harvest, presented in Table 16, is computed in the same manner as in the Juneau and Sitka fisheries.

The creel census period was 104 days in duration, of which 17 weekdays and 25 weekend days were censused for a 22.6 percent and 86.2 percent, respective coverage. Correlation with aerial surveys revealed that 24.8 percent of the boats fishing on census days were interviewed upon their return to dockside.

The catch of all salmon species, particularly pink salmon, increased significantly during the 1966 season. However, this may be partially attributed to modifications in censusing techniques made prior to the 1966 season.

TABLE 16 - Total Estimated Salmon Harvest, Ketchikan, 1966.

	King	Coho	Pink	Chum	Total Salmon
Season Censused Catch	172	59	135	3	369
Estimated All Season Catch	1,179	457	1,142	13	2,791

Salmon Derby, Ketchikan, 1966

There is in Ketchikan an "All Season" and an eleven-Sunday "Sweepstakes" salmon derby. The two derbies, operating simultaneously, create considerable difficulty in determining individual catches and in obtaining complete angler coverage. The Ketchikan salmon derbies are also longer in duration than either the Juneau or Sitka contests, and the angler effort and catch is somewhat more evenly distributed throughout the season, making separate census coverage less important than in the other areas.

The respective derby catches were included in the regular season's catch during the 1966 season.

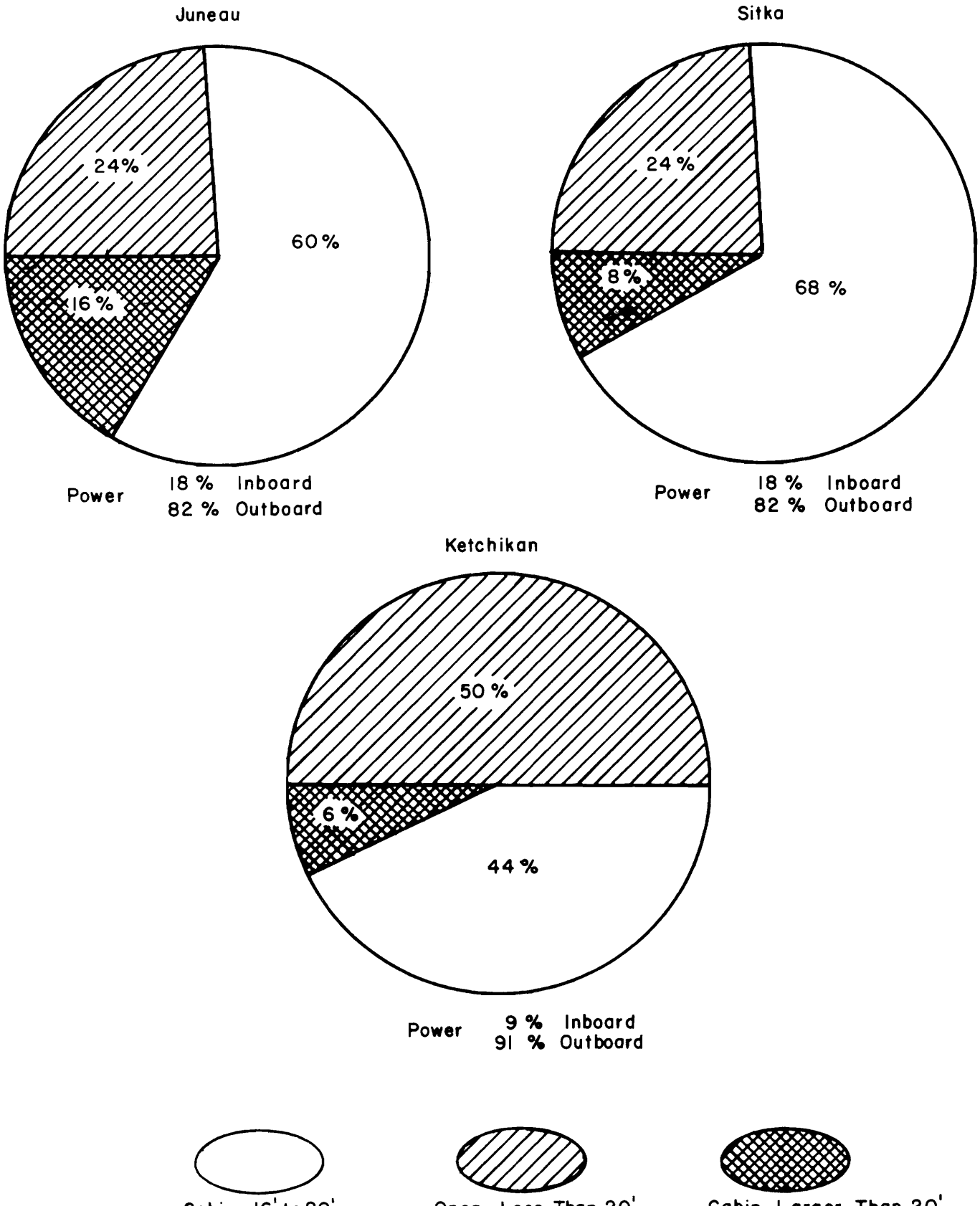
General Comparisons, Southeast Alaska Creel Census Areas

The following table and figures are presented in comparative form for the three separate creel census areas.

Table 17 is a compilation of average round weights of salmon, by species, for the Juneau, Sitka and Ketchikan areas.

Figure 1 depicts the preferred boat type utilized in each of the three census areas and the type of power used.

Figure 1. Type of Boats and Power Used for Boats Checked from Juneau, Sitka, and Ketchikan, 1966.



The Sitka area has the highest percentage of small cabin boats, Juneau the greatest percentage of large cabin boats, and Ketchikan utilized the highest percentage of open skiffs. In all areas outboard engines were used on 80 percent or more of the boats.

Figure 2 indicates trolling is the preferred angling method in all areas, Ketchikan leading with 96 percent of its anglers utilizing this technique.

Juneau anglers used strip-cut herring for bait by preference while Sitka and Ketchikan anglers preferred whole or plug-cut herring. Plugs, spoons, and flashers were used by less than 20 percent of the fishermen in all three fisheries.

TABLE 17. Average Round Weights of King and Coho Salmon in Pounds, by Month, Juneau, Sitka and Ketchikan, 1966.

Area	Species	May	June	July	August
Juneau	King	21.2	24.0	15.4	11.9
	Coho	5.0	----	7.1	11.3
Sitka	King	----	----	13.6	9.3
	Coho	----	----	8.7	8.9
Ketchikan	King	20.5	20.4	25.0	12.0
	Coho	----	4.5	7.0	11.5

Petersburg Area Creel Census, 1966

The assessment of sport fish harvests in the Petersburg area was initiated during the summer of 1966 on two major stream systems, Blind Slough on Mitkof Island, and Petersburg Creek on Kupreanof Island.

These two systems receive a great deal of the sport fish effort in the Petersburg area for anadromous Dolly Varden, cutthroat trout Salmo clarki (Richardson), and coho salmon.

Both areas are easily accessible by road or skiff and are utilized by both resident and visiting non-resident anglers.

Blind Slough Area

Blind Slough is adjacent to the Mitkof Highway south of Petersburg and can be fished in its entirety by walking a short distance off the highway.

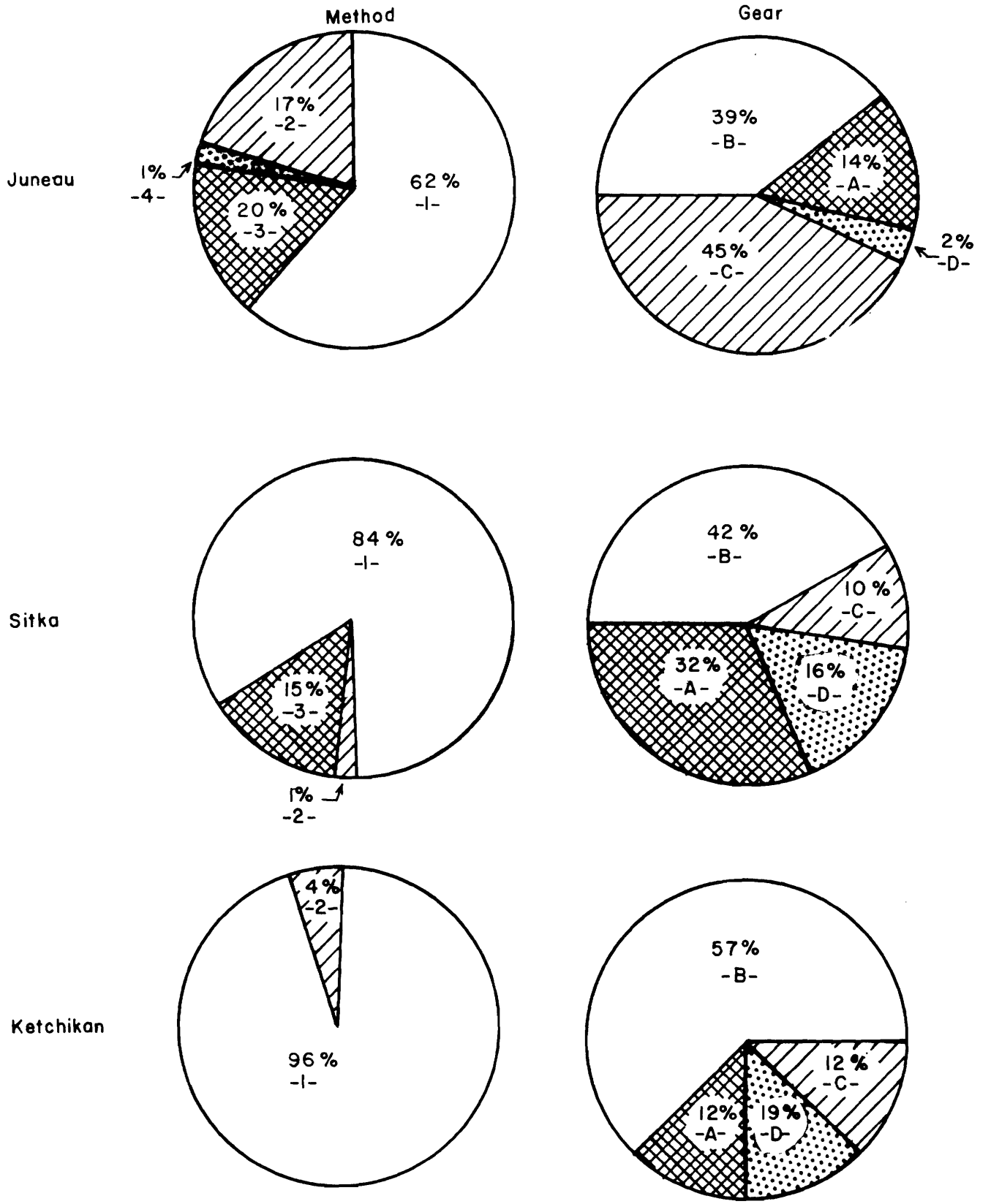
Primary interest of Blind Slough anglers is the silver salmon which are available in August and September. Blind Slough also enjoys an excellent reputation for its good run of "searun" cutthroat and Dolly Varden. Both the cutthroat and Dolly Varden are taken throughout the year but the best fishing is during the salmon runs in September.

The area receiving the majority of the fishing pressure is the "rapids," an intertidal area located approximately one mile above the stream mouth. The "rapids" is quite popular with the after-work Petersburg angler and the vacationing tourist utilizing the several picnic and camping areas in the immediate vicinity.

Blind Slough was censused from July 1 to September 25, 1966. Initially the census program was conducted on two randomly selected weekdays and on one weekend day each weekly period. The census was conducted twice each day, once in the morning and again after work in the evening. Beginning in September this schedule was accelerated to cover both week-end days and three weekdays.

Fisherman success during the month of July was poor with only a few fish taken (see Table 18). The poor fishing was due, for the most part, to low water conditions and a lack of salmon in the slough. Fishing success improved steadily through the month of

Figure 2. Fishing and Gear Preference for Juneau, Sitka, and Ketchikan Fisheries, 1966.



August as more silver salmon entered the slough. Angler success was at its highest during the first week in September, but then declined rapidly throughout the remainder of the month. The silver salmon began to take on spawning colors about the fifteenth of the month and therefore became less desirable to the fisherman. This resulted in an almost total lack of effort near the end of the month.

It was found that during September, 34 percent of the anglers fishing at Blind Slough were non-resident fishermen.

TABLE 18 - Monthly and Total Censused Catch, Blind Slough, 1966.

Month	Total Anglers	Angler Hours	Total SS	Total CT	Total DV	Fish/ Angler	Fish/ Hour
July	8	12	--	--	3	0.37	0.25
August	59	115	48*	--	8	0.94	0.48
September	71	217	71	20	57	2.10	0.68
TOTAL	138	344	119	20	68		

* Includes two pink and one chum salmon.
SS - Silver salmon, CT - Cutthroat trout, DV - Dolly Varden

The angler catch censused on the sample days each month was expanded to provide the estimated monthly catch. It was estimated that two-thirds of all anglers fishing on any given census day were contacted.

Each month censused was considered separately to avoid undue bias due to fish availability or absence for certain periods.

The total of these monthly expanded catches is presented in Table 19 as an estimated seasonal angler catch by species.

TABLE 19 - Estimated Season's Catch, Blind Slough, 1966.

Total Anglers	Angler Hours	Total SS	Total CT	Total DV	Fish/ Angler	Fish/ Hour
465	1,141	349	76	251	1.50	0.60

SS - Silver salmon, CT - Cutthroat trout, DV - Dolly Varden

Petersburg Creek Area

Petersburg Creek is located on Kupreanof Island directly across Wrangell Narrows from the town of Petersburg and can be easily reached by skiff. Petersburg Creek is a favorite with local and non-resident fishermen, due primarily to its close proximity to the town.

The most popular fishing area of Petersburg Creek for "searun" cutthroat, steelhead Salmo gairdneri (Richardson), and Dolly Varden is at the head of tide water. This area is heavily fished during the spring and early summer and again in the late fall. The intertidal area, which extends nearly two miles upstream, is the favored area for salmon fishing.

The creel census was conducted on a less strict schedule than that of the earlier discussed Blind Slough area, with approximately 20 percent daily coverage of July, August and September. Census days were picked at random throughout the period.

Fisherman success at Petersburg Creek was only fair during the first part of July, but improved greatly later in the month as large numbers of pink salmon entered the creek (see Table 20). Fishing effort declined during the first part of August as the majority of the pink salmon had passed through the intertidal area. The first silver salmon appeared in late August and both effort and fisherman success increased. Fishermen were plagued throughout the month of September by heavy rains and high water, greatly reducing the fishing effort. Those fishermen that were contacted did have good success catching silver salmon.

TABLE 20 - Monthly and Total Censused Catch from Petersburg Creek, 1966.

Month	Total Anglers	Angler Hours	Salmon			CT	DV	Fish/ Angler	Fish/ Hour
			PS	CS	SS				
July	27	66	34	1	--	--	22	2.11	0.86
August	23	38	--	--	8	5	--	0.57	0.34
September	6	12	--	--	10	--	--	1.67	0.83
TOTAL	56	116	34	1	18	5	22	1.43	0.69

PS - Pink Salmon CS - Chum Salmon SS - Silver Salmon
DV - Dolly Varden CT - Cutthroat Trout

The total seasonal catch estimate was accomplished similar to that of Blind Slough, i.e., data obtained on census days was applied to total days in the sample period. It was found that approximately two-thirds of all anglers fishing any given day were contacted.

Table 21 presents the estimated all-season sport fish catch for the Petersburg Creek area.

TABLE 21 - Estimated Season's Catch, Petersburg Creek, 1966.

Total Anglers	Angler Hours	Total Pinks	Total Chum	Total Coho	Total CT	Total DV
369	765	224	7	118	33	145

CT - Cutthroat Trout DV - Dolly Varden

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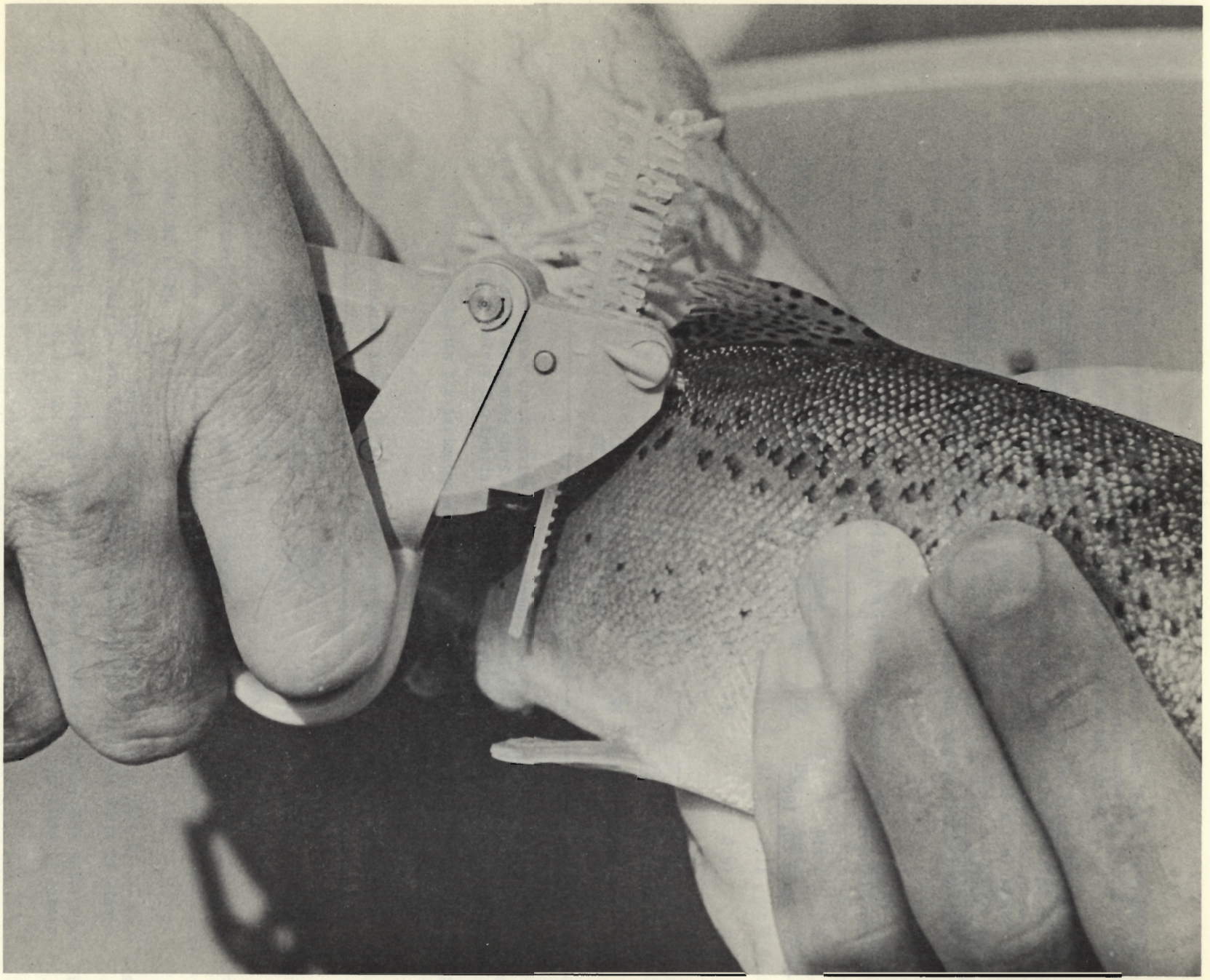

New Technical Developments, such as this Tagging Gun, aid Fishery Workers in their Studies of Various Factors Affecting a Fish's Life History.