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STATE OF ALASKA

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Alaska Department of Fish and Game

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Sport Fish Division

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ANNUAL REPORT OF PROGRESS, 1961-1962

FEDERAL AID IN FISH RESTORATION PROJECT F-5-R-3

SPORT FISH INVESTIGATIONS OF ALASKA

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INTRODUCTION

This report of progress consists of the job completion reports from the State of Alaska Federal Aid in Fish Restoration Project F-5-R-3, "Sport Fish Investigations of Alaska."

The current project is composed of twenty separate studies and was designed to evaluate the various aspects of the State's recreational fishery resources. The information gathered will provide the necessary background data for better management practices and for the development of future studies. During the current segment, continued emphasis was placed on the overall inventory and cataloging of accessible waters, evaluation of catch data, and investigations on various species of fish.

As a result of several problems of immediate concern, several new studies were instigated during the report year. Data accumulated from these studies has helped solve some problems in projects already in progress.

The population of Alaska is increasing rapidly and this is being reflected in the ever increasing number of "No Trespassing" signs put up by individuals in the vicinity of population centers. Fortunately, much of Alaska's fishery waters are still in the public domain. The division's program of acquiring access to fishing waters continued at a much faster pace since being instigated in 1959. Emphasis is being placed on this job and the successful continuation of this activity will forstall many serious recreational use problems currently facing other states.

The enclosed progress reports are fragmentary in many respects 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-3 Title: Creel Census of the Sport Fishes in the Bristol Bay Drainage.
Job No.: 10-D-2

Abstract:

Voluntary creel census was taken at three military camps on the Naknek River and at various fishing camps of the Northern Consolidated Airlines.

A total of 843 anglers fished 4,463 hours to catch 2,317 fish on the Naknek River. Rainbow trout, king salmon, silver salmon and grayling supplied 95 per cent of the catch. Lake trout, Dolly Varden, red salmon, chum salmon and northern pike were also taken. The main fish species caught at the five "Anglers Paradise" camps were rainbow trout, lake trout and grayling, with lesser numbers of red salmon, Dolly Varden and king salmon taken. A total of 513 anglers fished 4,062 hours and caught 2,863 fish, for a catch of .70 fish per hour for all five main camps. Of these 2,863 fish caught, only 598 were kept. The remainder were returned to the lakes and streams unharmed.

Recommendations:

It is recommended that the study be continued. Attempts should be made to determine the size of fish released at the "Anglers Paradise" camps.

Objectives:

1. To investigate and measure the sport fish population trends in the major recreational fishing waters of the Bristol Bay Drainage.

2. To determine the expansion of angling pressures and their impact on the sport fish resources of the area.
3. To provide recommendations for the future investigation and management of the waters.

Techniques Used:

The military provided creel census data from their respective camps to the Department. Special creel census forms were made up specifically for "The Northern Consolidated Airlines" and "John Pearson's Wilderness Camps".

Infrequent visits were made to some of the camps to check the proper recording of data and also to determine any contemplated building of new camps.

Findings:

The location of the camps and facilities available are discussed in Job 2-C of Project No. F-5-R-2 and need not be repeated. The completed creel census forms from the military camps were obtained at the close of the season and very few had to be discarded due to insufficient data. Northern Consolidated camps completed a good many forms; however, some were not usable for catch per hour data due to omission of number of anglers and hours fished. No information was obtained from Pearson's Wilderness Camps in the Dillingham area during this study period.

NAKNEK RIVER MILITARY FISHING CAMPS:

Three camps were in operation from May to the middle of September. The majority of the fish caught were "rainbow trout" (including sea-run steelhead) followed by king salmon (Table I). Most of the grayling were caught in the early part of the season while silver salmon were caught mainly in August and September. A few Dolly Varden were caught along with a small number of lake trout, red salmon, chum salmon and northern pike.

The catch of rainbow trout, king salmon and silver salmon in 1961 was considerably less than the catch of 1960. The angler participation in 1961 was 843 compared to

1,297 in 1960, a decrease of 454 anglers. The anglers success was almost identical for both years, being .53 fish per hour in 1960 and .51 in 1961. There is a discrepancy between Table I and Table II due to incomplete census data; some anglers did not record lengths of fish caught. Therefore, Table I reflects fish caught for the hours recorded, while Table II is the number of fish measured at these camps in 1961.

The rainbow trout caught averaged 16.7 inches in length, with a range of 8.0 to 33.0 inches (Figure 1). The grayling caught averaged 13.9 inches in length, with a range of 10.9 to 18.8 inches (Figure 2).

The average length of 708 king salmon measured in 1961 was 26.7 inches (Table II). The length frequency of 708 king salmon (Figure 3) indicates a large number of grilse entered the catch.

Average length of 317 silver salmon measured in 1961 was 24.6 inches (Table II), which ranged in size from 11.0 to 38.0 inches (Figure 4).

NORTHERN CONSOLIDATED AIRLINES "ANGLERS PARADISE" CAMPS.

The location and facilities available at the various camps are presented in last years report (Job 2-C, Project F-5-R-2). Creel census records were obtained from camps on Kulik Lake, Kukaklek Lake, Nonvianuk Lake, Tunnel Creek and from Igiugig. Information obtained from camps on Grosvenor Lake, Brook River, Tulara Creek, Funnel Creek and Igiugig was insufficient to include in this report.

Fishing can be considered excellent at all five camps. Catch of fish per hour ranged from .54 to 1.68 (Table III).

The number of fish caught and released were recorded; unfortunately, not all of the creel census forms contained the number of anglers or the hours fished. This information is compiled in Table III and provides data on the large number of fish released. Information on lengths of fish were recorded for most of the fish kept and are presented in Figures 5, 6 and 7.

TABLE I. Summary of Angler Catch in Biweekly Periods of Three Military Camps on the Naknek River in 1961.

Fishing Period Inclusive Dates	5-26 6-9	6-10 6-23	6-24 7-7	7-8 7-21	7-22 8-4	8-5 8-18	8-19 9-1	9-2 9-15	Total Number
Number of Anglers	62	211	129	100	93	134	96	18	843
Hours fished	378.5	1190.3	645.8	545.5	447.5	660.3	531.2	64	4463.1
<u>Number of Fish Taken</u>									
Rainbow	167	176	105	122	78	154	37	35	874
Grayling	41	119	48	9	12	82	3	0	314
Lake Trout	10	5	4	4	0	1	4	0	28
Dolly Varden	4	6	3	14	3	13	4	1	48
King salmon	3	100	208	140	123	112	16	0	702
Silver salmon	0	2	1	1	10	92	189	21	316
Red salmon	0	0	3	3	2	1	0	0	9
Chum salmon	0	0	1	0	0	0	1	0	2
Northern Pike	8	16	0	0	0	0	0	0	24
Total Fish	233	424	373	293	228	455	254	57	2317
Catch Per Hour	.61	.35	.58	.54	.51	.69	.47	.89	.51

TABLE II. Numbers and Average Lengths of the Various Species of Sport-caught Fish in Naknek River from 1956 to 1961.

Year	Rainbow Trout		Grayling		King Salmon		Silver Salmon		Dolly Varden	
	No.	AL*	No.	AL	No.	AL	No.	AL	No.	AL
1956	748	15.7	102	13.3	239	20.5	51	18.8	87	15.3
1957	2,817	17.0	430	11.7	298	28.8	66	21.1	311	13.4
1958	3,689	14.6	483	14.4	---	---	--	--	404	15.6
1960	1,297	15.9	257	14.7	1,258	23.3	429	22.5	73	15.0
1961	888	16.7	317	13.9	708	26.7	317	24.6	55	16.4

*AL - Average Length

TABLE III. Summary of Angler Catch of the Five "Anglers Paradise" Camps in 1961.

	Kulik	Kukaklek	Nonvianuk	Igiugig	Funnel
No. of anglers	262	115	117	6	13
Hours fished	2284	854	766	47	111
Catch per Hour	.54	.87	.94	1.68	1.00
Total fish caught	1248 (1533)	748 (840)	726 (752)	79	111
Rainbow Trout	516 (576)	455 (520)	492 (515)	32	50
Lake trout	718 (942)	160 (185)	210 (211)	8	41
Grayling	---	103 (105)	19 (21)	37	20
Dolly Varden	---	8 (8)	1 (1)	2	--
Red salmon	14 (15)	22 (22)	3 (3)	--	--
King salmon	---	---	1 (1)	--	--
Fish released	951 (1186)	587 (672)	623 (632)	64	73
Rainbow trout	380 (422)	353 (413)	427 (435)	24	37
Lake trout	557 (749)	136 (161)	178 (179)	8	28
Grayling	---	83 (83)	14 (14)	30	1
Dolly Varden	---	3 (3)	---	2	--
Red salmon	14 (15)	12 (12)	3 (3)	--	--
King salmon	---	---	1 (1)	--	--
Fish retained	297 (347)	161 (168)	103 (120)	15	38
Rainbow trout	136 (154)	102 (107)	65 (80)	8	13
Lake trout	161 (193)	24 (24)	32 (32)	--	13
Grayling	---	20 (22)	5 (7)	7	12
Dolly Varden	---	5 (5)	1 (1)	--	--
Red salmon	---	10 (10)	---	--	--

*Numbers in parenthesis includes fish caught where hours fished were not recorded.

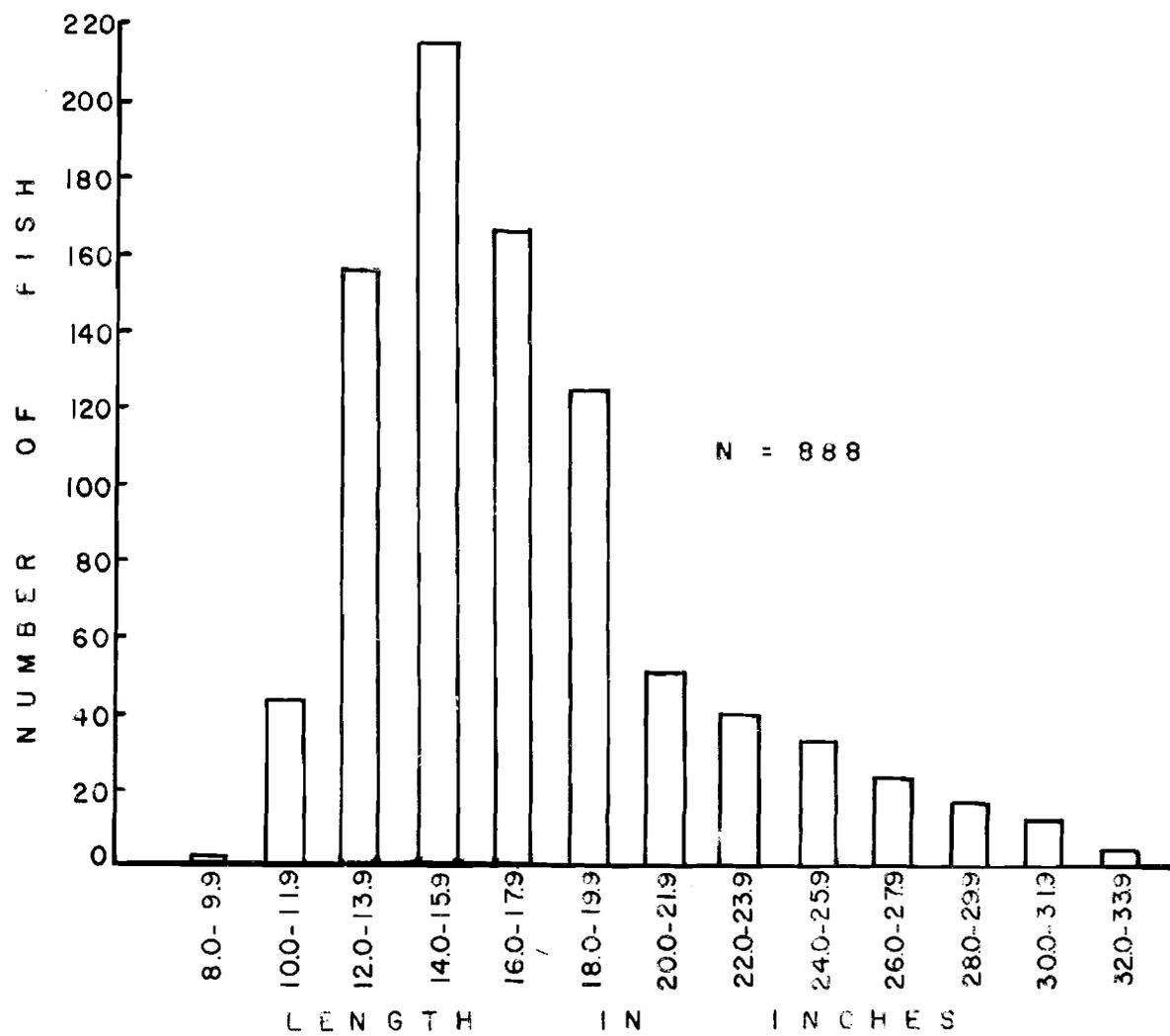


FIGURE 1.- Length frequencies of rainbow trout caught in Naknek River, 1961.

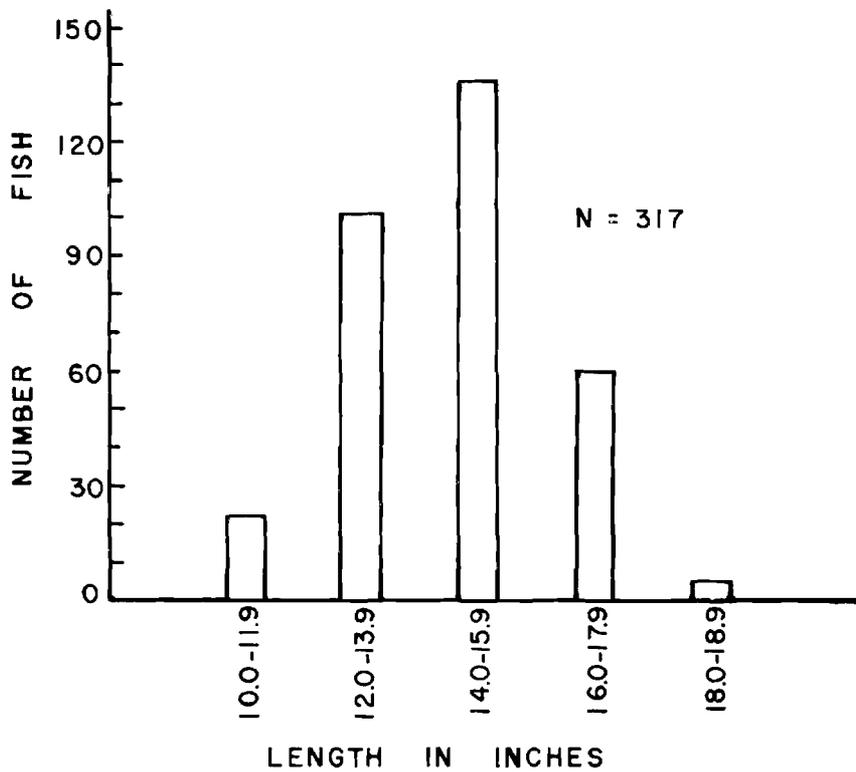
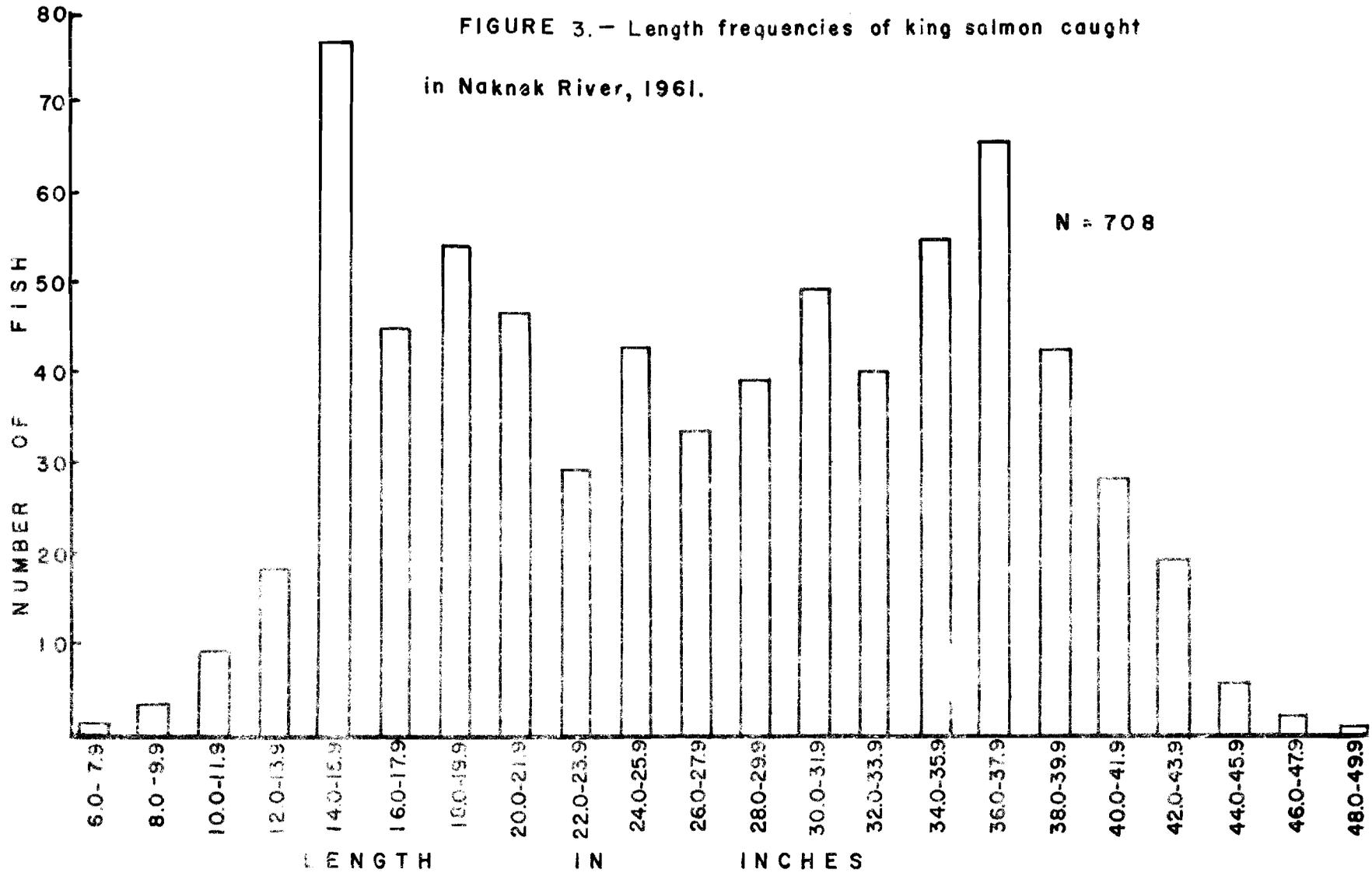


FIGURE 2.- Length frequencies of grayling caught in Naknek River, 1961.

FIGURE 3.— Length frequencies of king salmon caught in Naknak River, 1961.



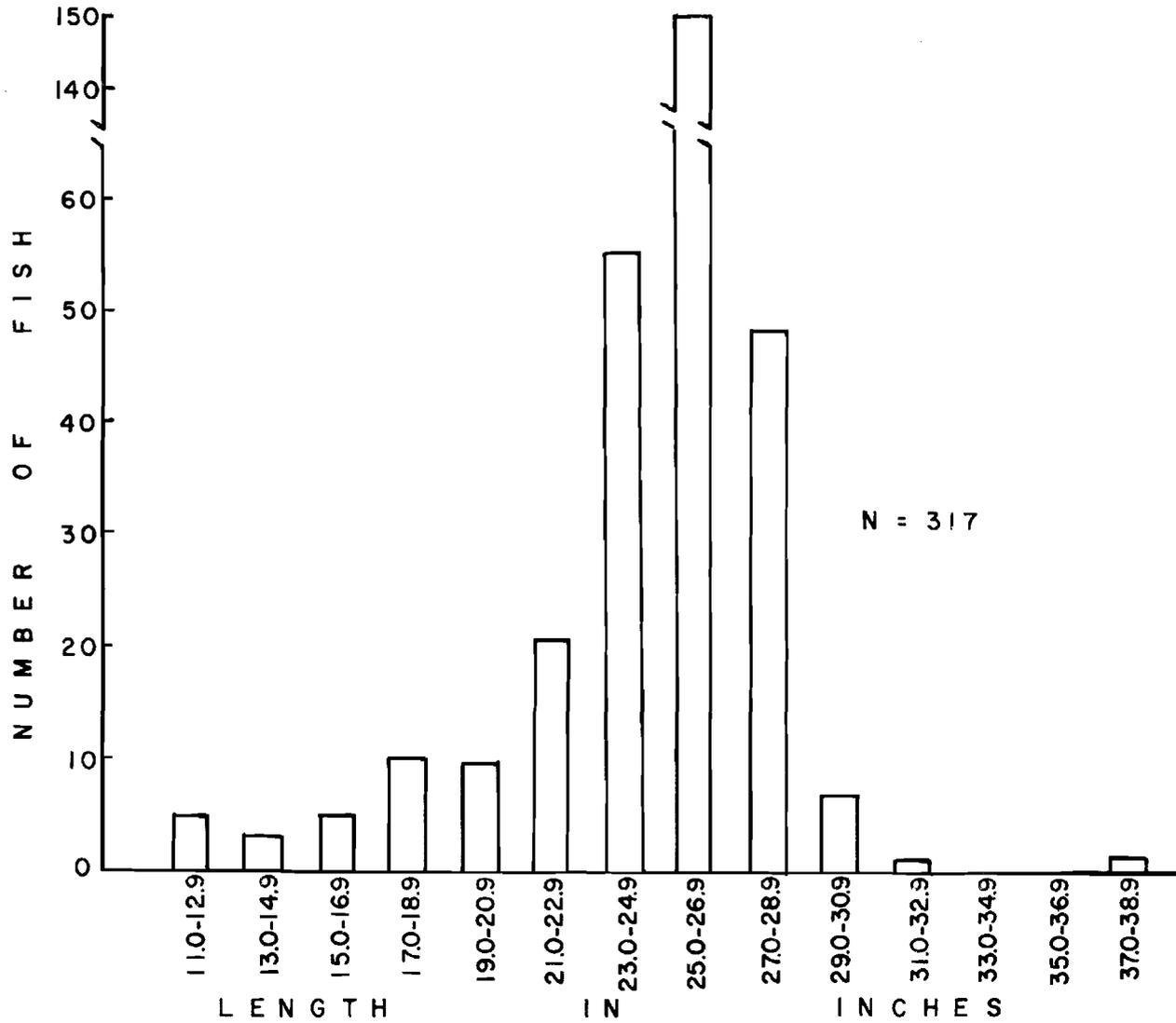


FIGURE 4.- Length frequencies of silver salmon caught in Noknek River, 1961.

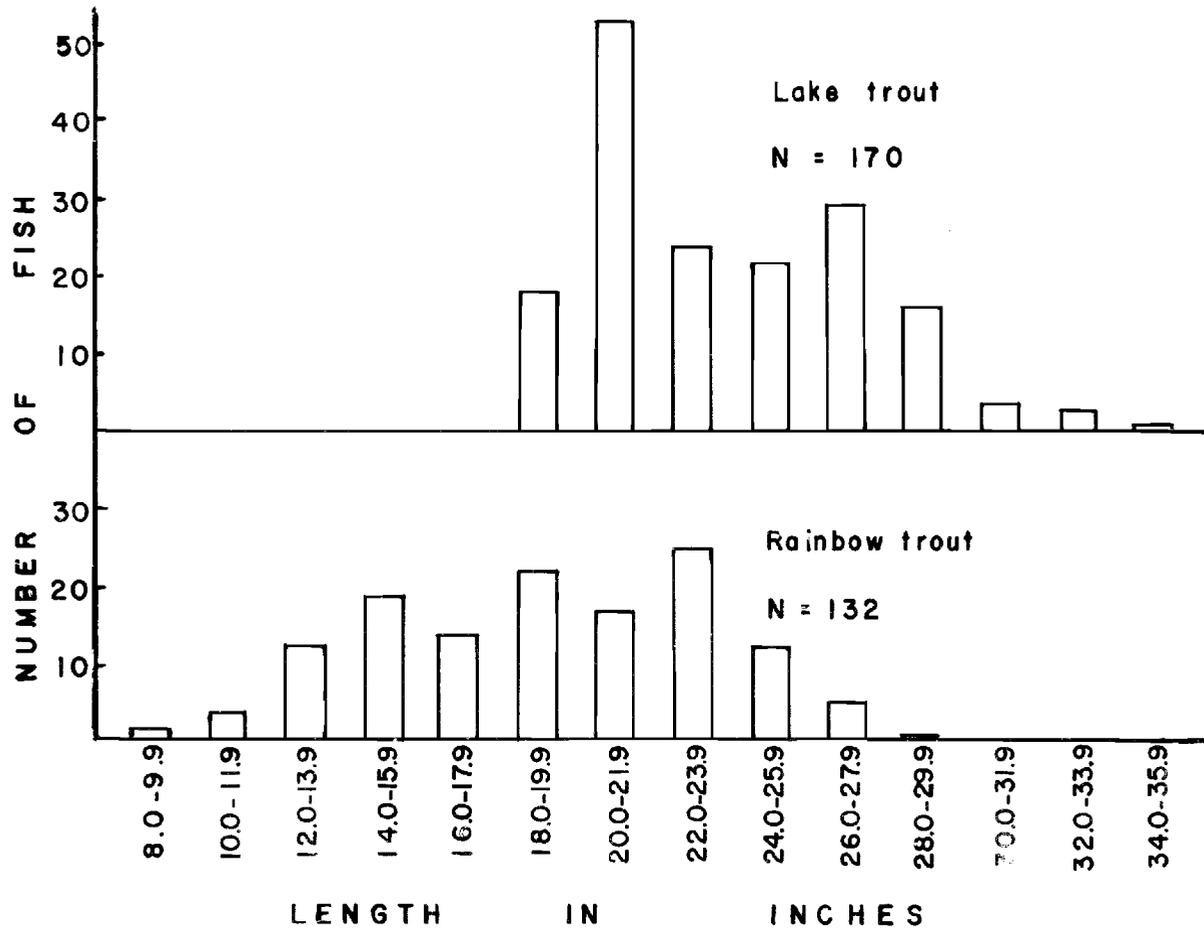


FIGURE 5.- Length frequencies of rainbow trout and lake trout caught in Kulik Lake, 1961.

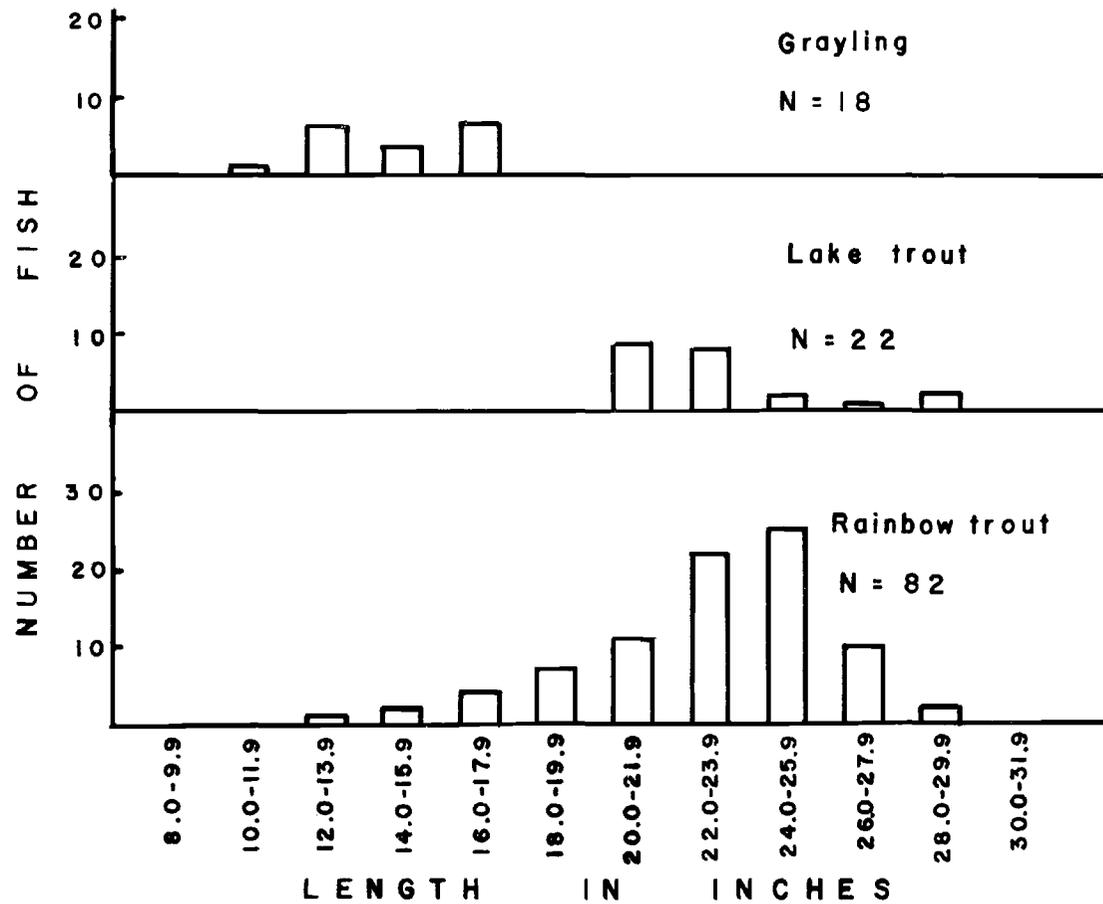


FIGURE 6. - Length frequency of grayling, lake trout and rainbow trout caught in Kukaklek Lake, 1961.

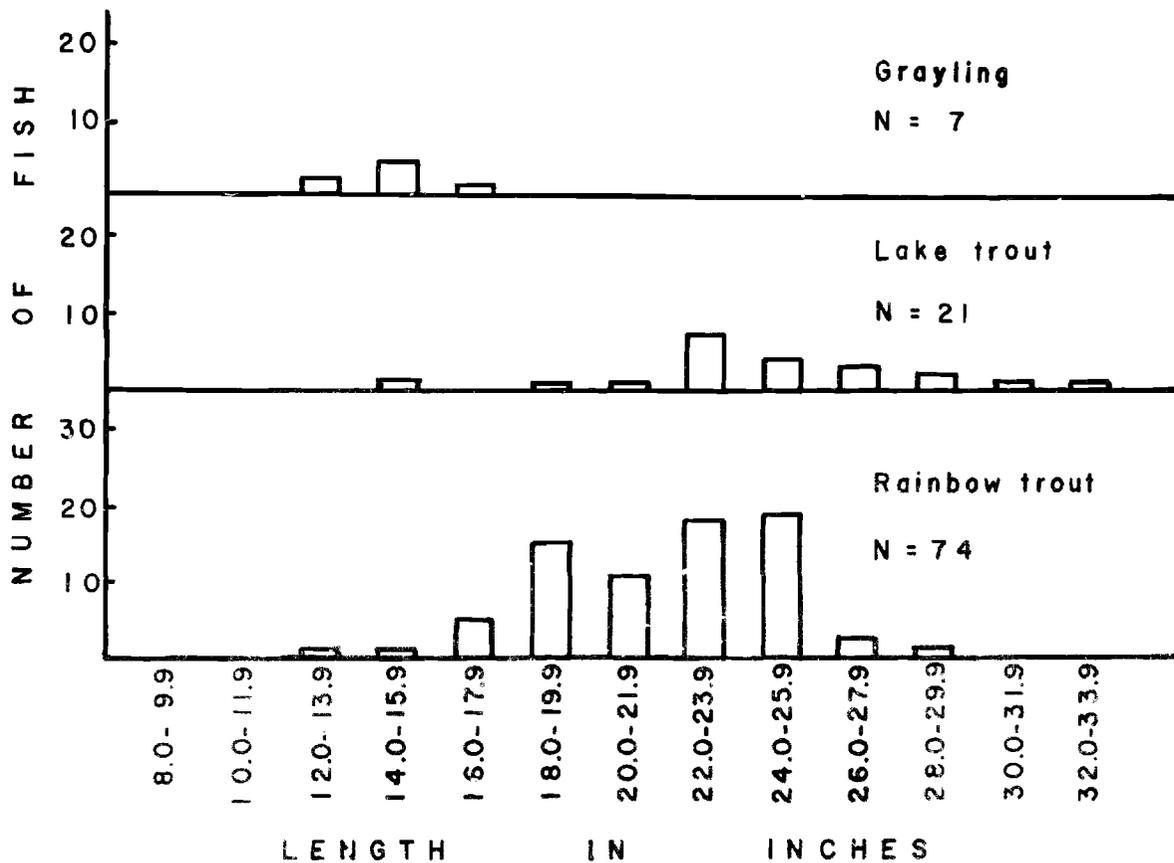


FIGURE 7.- Length frequency of grayling, lake trout and rainbow trout caught in Nonvianuk Lake, 1961.

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