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Mr. Stanley Shust 5-22-42
Dr. Roelofs

INSTITUTE FOR FISHERIES RESEARCH
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W
P

ALBERT S. HAZZARD, PH.D.
DIRECTOR

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ADDRESS
UNIVERSITY MUSEUMS ANNEX
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REPORT NO. 783

REPORT ON THE CREEL CENSUS AT HOLLAND LAKE,
LUCE COUNTY, ON APRIL 25-26, 1942.

by

Eugene W. Roelofs

A creel census was taken at Holland Lake, Luce County, during the first two days of trout season--April 25-26, 1942.

Fishing began on Saturday morning, shortly after midnight. By 7:30 the same morning, 129 trout had been caught. Of this number, 125 are believed to have been from the "adult planting" and four from the fingerling group. These fish were taken by 18 anglers, all of whom left the lake before 8:00 A.M. Sixteen fishermen, during the remainder of Saturday, removed 9 adults and one legal fingerling.

Fifteen Sunday fishermen, fishing at all times from 1:30 A.M. to 12:00 noon, took no fish. The writer took two adults Sunday afternoon. Word had been spread to the effect that the lake was "fished out", and only three other anglers visited the lake during the afternoon and evening, no fish being taken.

Nearly all of the fish were taken from the northeast part of the lake. The fishermen lined up, 6 to 8 feet apart, waded in with hip boots, and "hoised in" the fish. Most of the fish were taken on worms, a few being taken on dead minnows.

The individual measurements taken on 4 fingerlings and 68 adults are given in the accompanying table. This table shows that half of the adults measured between 11 and 12 inches and that the average for all adults was approximately 11.5 inches. The average weight of the adults was 231.2 grams or 0.51 pounds. Evidently there was an error in the weighing of the fish at the time of planting since the records show the 200 fish weighing 200 pounds. The fish caught seemed to be in good condition and were beautifully colored.

The catch of 136 adult fish of the 200 which were planted, represents a 68 per cent return. Undoubtedly a few more will be taken and this will raise the percentage. This indicates a good survival as well as a rapid catch.

The fish planted as fingerlings have made some growth, but a relatively small percentage is believed to have reached legal size. The smaller fish were feeding at the surface much more actively than the larger fish. Many small fish were also caught on worms. In most cases, the bait was taken in so far that by the time it was removed, the fish was either dead or had no chance of survival. As a result, a relatively large number of sub-legal fish were killed. It was also noted that 7- to 8-inch fish were thrown away because the larger fish were so easy to take.

For the two reasons mentioned above, it would seem advisable to plant only legal fish in the future.

It also appears that we are to reach a stage of "selling fish over the counter" in Holland Lake, unless some modification in the management is adopted. There seemed to be little sport in the "slaughter" made on Saturday morning. Fish were given no chance to play, but rather were

pulled straight toward shore and "horsed" up on the beach in true "meat-hog" fashion. Large hooks (No. 2) were used, so relatively few fish were lost, in spite of the methods employed.

It seems that two methods could be used to remedy this situation, namely, lower the legal catch to 6 or 8, or prohibit the use of natural bait--allowing only fly-fishing. Fly-fishing was tried by the writer, but the sublegal fish were taken so rapidly that no legal fish were taken. Adults were occasionally rising, however.

There is probably little reason for taking a further census on Memorial Day week-end unless, as suggested by Mr. Beach, another legal planting is made in the meantime.

Field examinations of the stomach contents of 4 adults and several fingerlings were made. The larger fish contained chiefly water-boatmen (Corixidae), back-swimmers (Notonectidae), small diving beetles (Hydrophilidae?); and occasional whirl-i-gig beetles (Gyrinidae), midge larvae (almost emerging), and medium-sized bees, which were abundant about the lake. The smaller fish were feeding more extensively at the surface and contained large numbers of the midge larvae and bees and an occasional water-boatman and diving beetle. The smaller fish had proportionately more food in their stomachs. There was also more variation in the contents of the younger fish--some contained nothing but midge larvae, others contained nearly all bees, while still others took a variety of food.

INSTITUTE FOR FISHERIES RESEARCH

By Eugene W. Roelofs
Junior Aquatic Biologist
District 2 Fisheries Biologist

Report approved by: A. S. Hazzard

Report typed by: R. Bauch

Measurements and Summary of Trout Taken at

Holland Lake, Luce County.

April 25-26, 1942.

	Length (mm.)	Weight (gms)		Length (mm.)	Weight (gms)
7-8 in. (4)	182	50	11-12 in.	296	221
	131	49	(continued)	296	240
	137	58		297	228
	194	59		297	232
8-9 in. (1)	225	140		297	245
9-10 in. (3)	239	116		298	235
	252	142		298	240
	254	143		298	240
10-11 in. (13)	259	152		300	222
	259	175		300	252
	262	148		301	256
	264	153		302	249
	264	173		302	279
	265	145		304	323
	265	153		304	288
	270	170	12-13 in. (17)	305	287
	273	207		308	224
	274	168		309	257
	275	212		310	265
	276	213		310	268
	278	197		310	300
11-12 in. (34)	280	181		311	258
	280	198		311	295
	286	219		312	263
	288	197		314	288
	284	220		320	298
	284	223		323	360
	287	230		324	317
	288	213		325	350
	288	222		328	296
	289	208		328	336
	289	233		329	351
	292	202			
	292	203			
	292	226			
	292	232			
	292	237			
	294	237			
	295	232			
	295	237			

Adults begin.

Length of Average Adult--291.1 mm.
(11.46 in.)
Weight of Average Adult--231.2 gms.
(0.51 pounds)

Measured:

Fingerlings 4
Adults 68

Taken but not measured:

Fingerlings 1
Adults 68

Total 141