WISCONSIN DEPARTMENT OF NATURAL RESOURCES

SHISHEBOGAMA LAKE

2022 – 2023 CREEL SURVEY REPORT

ONEIDA COUNTY

Treaty Fisheries Publication

Created by
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INTRODUCTION

Fish populations can fluctuate due to a variety of factors including natural forces like climate, reproductive success, predation and competition. Human activities such as fish harvest, stocking, habitat change and invasive species introduction can also have significant impacts. The Wisconsin Department of Natural Resources (DNR) fisheries crews regularly conduct fishery surveys on lakes and reservoirs to gather the information needed to monitor changes, identify concerns, evaluate past management actions and to prescribe fishery management strategies. Netting and electrofishing surveys are used to gather data on the status of fish populations and communities, measuring such parameters as species composition, population size, reproductive success, size and age distribution and growth rates. Harvest is another key component of fisheries that we need to measure.

On many lakes in the Ceded Territory of northern Wisconsin, harvest of fish is divided between sport anglers and the six Ojibwe bands who harvest fish under rights reserved by federal treaties. The tribes harvest fish primarily using spearing, a highly efficient method, during a relatively short time in the spring. Every fish in the spear harvest is counted and reported, creating a complete census of the harvest.

We also measure the sport angler harvest to assess its impact on the fishery. It would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake, so we conduct creel surveys instead.

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water to make estimates of harvest and other fishery parameters. Creel survey clerks work on randomly-selected days and shifts, forty hours per week. The survey is conducted during daylight hours throughout the open season for gamefish from the first Saturday in May through the first Sunday in March. Creel surveys are not conducted in November when fishing effort is low and ice conditions are often unsafe.

Creel survey clerks travel their lakes using a boat or snowmobile to count the number of anglers at predetermined times and to interview anglers who have completed their fishing trip. Data are collected on what species they fished for, catch, harvest, lengths of fish harvested, marks (fin clips or tags) and hours of fishing effort. Collecting completed-trip data provides the most accurate assessment of angling activities, and it avoids the need to disturb anglers while they are fishing.

A computer program is used to estimate catch and harvest of each species, catch and harvest rates and fishing effort by month, as well as for the year in total. Keep in mind that these are estimates based on the best information available and not a complete accounting of effort, catch and harvest. Accurate estimates require that we sample a sufficient and representative portion of the angling activity on a lake. The accuracy of creel survey results depends on good cooperation and truthful responses by anglers when a creel clerk interviews them.

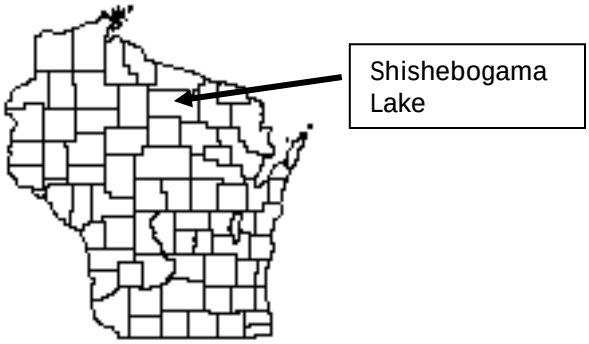
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time and it gives the DNR valuable information needed for management of the fishery.

This report provides estimates of:

1. Overall fishing effort (pressure)
2. Fishing effort directed at each species
3. Numbers of fish caught and harvested
4. Catch and harvest rates

Also included are a physical description of Shishebogama Lake, discussion of results of the survey and detailed summaries by species of fishing effort, catch and harvest.

GENERAL LAKE INFORMATION



LOCATION

Shishebogama Lake is located in Oneida County west of the town of Minocqua.

PHYSICAL CHARACTERISTICS

Shishebogama Lake is a 716-acre drainage lake with a maximum depth of 42 feet. Littoral substrate consists primarily of sand, with lesser amounts of muck and gravel and some rubble and boulders. Shishebogama Lake contains soft, neutral, clear water of moderate transparency.

SEASONS SURVEYED

The period referred to in this report as the 2022-23 fishing season ran from May 7, 2022 through March 5, 2023. The summer creel survey ran from May 7 through Oct. 31, 2022 and the winter creel survey ran from Dec. 1, 2022 through March 5, 2023.

WEATHER

Ice-out on Shishebogama Lake was early May. Fishable ice formed on Shishebogama Lake in early December.

FISHING REGULATIONS

The following seasons, daily bag limits and length limits were in place on Shishebogama Lake during the 2022-23 fishing season:

SPECIES	SEASON	BAG LIMIT	MIN. SIZE
Largemouth Bass	5/07 - 3/05	5*	None
Smallmouth Bass	5/07 - 6/17	Catch&Release	
	6/18 - 3/05	5*	None
*Bass species have a combined bag limit of 5. No bass 14"-18", and only 1 bass > 18" may be kept			
Musky	5/28 - 12/31	1	40"
	On open water		
Northern Pike	5/07 - 3/05	5	None
Walleye	5/07 - 3/05	3	18"
Panfish	Open all year	25	None
No more than 5 Bluegill and Pumpkinseed >7"			
Rock Bass	Open all year	None	None

SPECIES CATCH AND HARVEST INFORMATION

Summaries of angling effort, catch and harvest information for each species are in Table 2 and Figures 1-10, along with a comparison of these statistics with the previous creel survey in Table 2. Information about species with fishing seasons extending beyond March 5, 2023 should be considered minimum estimates. Each species page has up to five graphs depicting the following:

1. **DIRECTED FISHING EFFORT**
   Estimated number of hours during each month that anglers spent fishing for a species.

2. **TOTAL CATCH AND HARVEST**
   Estimated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.

3. **SPECIFIC CATCH AND HARVEST RATES**
   Estimated number of hours it takes an angler to catch or harvest a fish of the indicated species. Only information from anglers who were specifically targeting that species is reported.

4. **LENGTH DISTRIBUTION OF HARVESTED FISH**
   All fish of a species that were measured by the clerk during the entire creel survey season.

5. LARGEST AND AVERAGE LENGTH OF HARVESTED FISH

Largest and average (mean) length of a species of fish harvested. Only fish measured by the creel survey clerk are reported.

CREEL SURVEY RESULTS AND DISCUSSION

SURVEY LOGISTICS

We encountered no unusual problems conducting the survey or calculating the projections contained in the report. This was the third time the DNR conducted a creel survey on Shishebogama Lake. The last creel survey took place during 2002-03.

GENERAL ANGLER INFORMATION

Anglers spent 17,992 hours, or 25.1 hours per acre, fishing Shishebogama Lake during the 2022-23 season (Table 1). That was lower than the Oneida County average of 32.8 hours per acre and significantly less than the fishing effort documented during the 2002-03 creel survey (44.7 hours per acre). July was the most heavily fished month (3,670 hours). Creel clerks were able to conduct 248 interviews throughout the survey.

RESULTS BY SPECIES

WALLEYE (Table 2, Figure 1)
Anglers spent 2,845 hours targeting walleyes. Fishing effort for walleye was highest in February (645 hours). Total catch of walleye was 290 fish, but no harvest was estimated*. Highest catch (153 fish) occurred in August. Anglers fished an estimated 10.5 hours to catch a walleye during the survey. *One 21.0-inch walleye was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch and harvest estimates.

NORTHERN PIKE (Table 2, Figure 2)
Fishing effort directed at northern pike was 1,185 hours during the season. Northern pike fishing effort was greatest in February (436 hours). Total catch of northern pike was 81 fish, with no estimated harvest*. Anglers fished an estimated 96.8 hours to catch a northern pike during the survey. *One 27.4-inch northern pike was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch and harvest estimates.

MUSKELLUNGE (Table 2, Figure 3)
Muskellunge received the highest fishing effort of any species during the season. Anglers spent 8,240 hours targeting muskellunge during the season. Muskellunge fishing effort was greatest in August (2,406 hours). Total catch of muskellunge was 218 fish, and the highest catch (78 fish) occurred in September. Anglers fished an estimated 42.9 hours to catch a muskellunge, and there was no documented harvest during the survey.

SMALLMOUTH BASS (Table 2, Figure 4)
Fishing effort targeted at smallmouth bass was 1,480 hours during the season. Smallmouth bass fishing effort was greatest in July (536 hours). Total catch of smallmouth bass was 697 fish, with 10 fish harvested. Highest catch (383 fish) occurred in July. The only harvested smallmouth bass measured was 14.5 inches. Anglers fished an estimated 2.6 hours to catch a smallmouth bass during the survey.

LARGEMOUTH BASS (Table 2, Figure 5)
Fishing effort directed at largemouth bass was 2,640 hours during the season. Largemouth bass fishing effort was greatest in June (591 hours). Total catch of largemouth bass was 3,901 fish, and total harvest was 110 fish. The highest catch (1,560 fish) occurred in June. Mean length of harvested largemouth bass was 12.2 inches, and the largest measured was 14.9 inches. Anglers fished an estimated 1.2 hours to catch a largemouth bass during the survey.

YELLOW PERCH (Table 2, Figure 6)
Yellow perch were the most sought after panfish species during the survey. Fishing effort directed at yellow perch was 4,438 hours. Total catch of yellow perch was 4,122 fish, and total harvest was 414 fish. Mean length of yellow perch harvested was 8.0 inches.

BLUEGILL (Table 2, Figure 7)
Bluegills received 3,150 hours of directed fishing effort. Total catch of bluegill was 5,660 fish, and total harvest was 186 fish. Mean length of bluegills harvested was 6.9 inches.

BLACK CRAPPIE (Table 2, Figure 8)
Black crappies received 4,382 hours of directed fishing effort. Anglers caught 8,304 black crappies and harvested 3,196 fish. Mean length of black crappies harvested was 10.1 inches.

PUMPKINSEED (Table 2, Figure 9)
Pumpkinseeds received 538 hours of directed fishing effort. Anglers caught 100 pumpkinseeds and harvested 22 fish. Mean length of pumpkinseeds harvested was 6.8 inches.

ROCK BASS (Table 2, Figure 10)
Rock bass received 243 hours of directed fishing effort. Anglers caught 417 rock bass, but there was no estimated harvest. One 7.8-inch rock bass was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch and harvest estimates.

Additional copies of this report, and those covering other local lakes, can be obtained from the DNR Woodruff Service Center or online at:
http://dnr.wisconsin.gov/topic/Fishing/north/trtycrlsrvys.html

ACKNOWLEDGMENTS

The DNR would like to thank all the anglers who took the time to offer information about their fishing trip to the survey clerk. The survey would not have been possible without their cooperation.

We also thank our cooperator, Jim Erion, who generously allowed the DNR to keep a boat and snowmobile on his property during this survey.

Completion of this survey was possible because of the efforts of the following DNR fisheries management and treaty fisheries staff: John Kubisiak, Lawrence Eslinger, Joelle Underwood, Jason Halverson, Mark Love, Eric Brown and Bob Consolo. Creel clerks on Shishebogama Lake during the survey period were Jerry Storke, John Davis and Abbigail Ewert.

Table 1. Sportfishing effort summary, Shishebogama Lake, 2022-23 season; compared to 2002-03 creel results, Oneida County averages and Ceded Territory averages.

Month	Number of Angler Party Interviews	Total Angler Hours	Total Angler Hours / Acre	2002-03 Total Angler Hours / Acre	Oneida County Average Hours / Acre	Ceded Territory Average Hours / Acre
May	14	1,403	2.0	4.3	4.7	4.7
June	32	3,010	4.2	10.7	6.2	6.1
July	38	3,670	5.1	11.5	7.1	6.5
August	30	3,274	4.6	9.6	5.5	5.1
September	31	2,504	3.5	3.8	3.3	3.2
October	39	1,579	2.2	0.9	1.6	1.4
December	12	429	0.6	1.3	1.2	1.0
January	22	855	1.2	1.6	1.6	1.7
February	22	854	1.2	1.0	1.7	1.6
March	8	414	0.6	0.1	0.3	0.2
Summer Total	184	15,440	21.6	40.9	28.3	26.9
Winter Total	64	2,552	3.6	3.9	4.7	4.6
Grand Total	248	17,992	25.1	44.7	32.8	31.2

Note: Summer is May-October; Winter is December-March

Number of Angler Party Interviews is the number of groups of anglers interviewed by the creel clerk. A party is considered the members of a group who fish together in the same boat, ice shanty or from shore. The clerk fills out one interview form for each group of anglers. The number of individual anglers actually contacted by the clerk is usually much greater than the number of groups listed in this table since most groups consist of more than one angler.

Total Angler Hours is the estimated total number of hours that anglers spent fishing on Shishebogama Lake during each month surveyed.

Total Angler Hours / Acre is the total angler hours divided by the area of the lake in acres. This is useful in order to compare effort on Shishebogama Lake to other lakes.

2002-03 Total Angler Hours / Acre is the total angler hours divided by the area of the lake in acres. This is from the previous creel survey that took place on Shishebogama Lake.

County Average Hours / Acre is the average angler effort in hours per acre for county lakes that have been surveyed since 1990. This value is useful for fishing pressure comparisons with other waters.

Ceded Territory Average Hours / Acre is the average angler effort in hours per acre for inland lakes in the Ceded Territory that have been surveyed since 1990. This value can be used to compare Shishebogama Lake to other lakes in northern Wisconsin.

Table 2. Comparison of creel survey synopses, Shishebogama Lake, 2022-23 and 2002-03 fishing seasons.

CREEL YEAR: 2022-23

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hours/Fish)	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hours/Fish)	MEAN LENGTH OF HARVESTED FISH
Walleye	2,845	9.8%	290	10.5	0	*	21.0
Northern Pike	1,185	4.1%	81	96.8	0	*	27.4
Muskellunge	8,240	28.3%	218	42.9	0	*	**
Smallmouth Bass	1,480	5.1%	697	2.6	10	155.7	14.5
Largemouth Bass	2,640	9.1%	3,901	1.2	110	29.8	12.2
Yellow Perch	4,438	15.2%	4,122	1.2	414	10.7	8.0
Bluegill	3,150	10.8%	5,660	0.6	186	21.4	6.9
Black Crappie	4,382	15.0%	8,304	0.5	3,196	1.4	10.1
Pumpkinseed	538	1.8%	100	6.1	22	24.3	6.8
Rock Bass	243	0.8%	417	*	0	*	7.8

CREEL YEAR: 2002-03

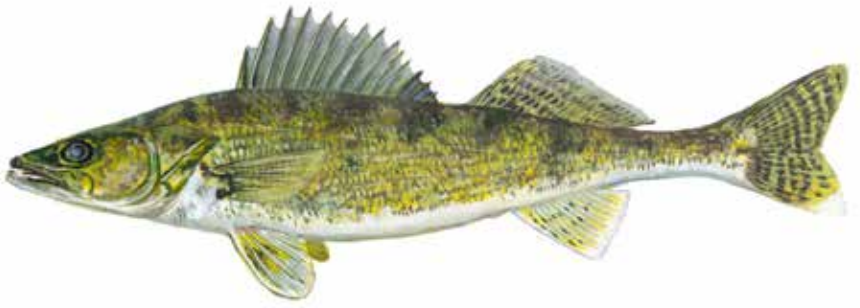
SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hours/Fish)	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hours/Fish)	MEAN LENGTH OF HARVESTED FISH
Walleye	8,371	16.1%	1,775	6.3	52	156.3	19.8
Northern Pike	6,134	11.8%	1,294	6.8	132	66.7	22.8
Muskellunge	2,980	5.7%	138	35.2	0	*	**
Smallmouth Bass	4,850	9.3%	3,277	2.1	0	*	**
Largemouth Bass	9,308	17.9%	16,132	0.7	156	90.1	15.6
Yellow Perch	3,773	7.3%	8,675	0.8	2,566	1.7	8.3
Bluegill	6,452	12.4%	49,439	0.2	8,961	0.7	7.1
Black Crappie	9,886	19.0%	11,451	0.9	6,500	1.6	10.4
Pumpkinseed	0	0.0%	75	*	0	*	**
Rock Bass	239	0.5%	4,078	1.3	33	*	7.5

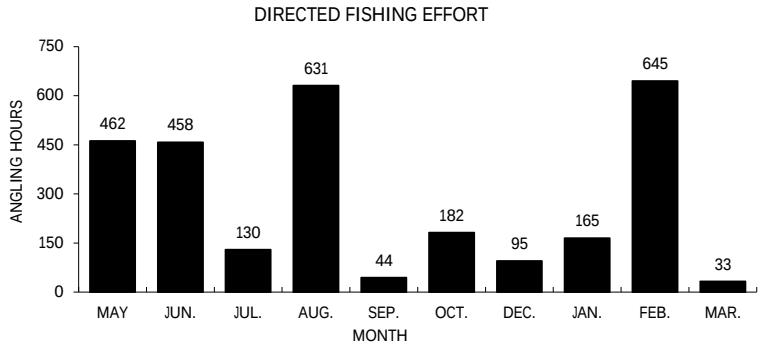
Note: If a species is not shown in a table, no data was collected by the creel clerks for that species.

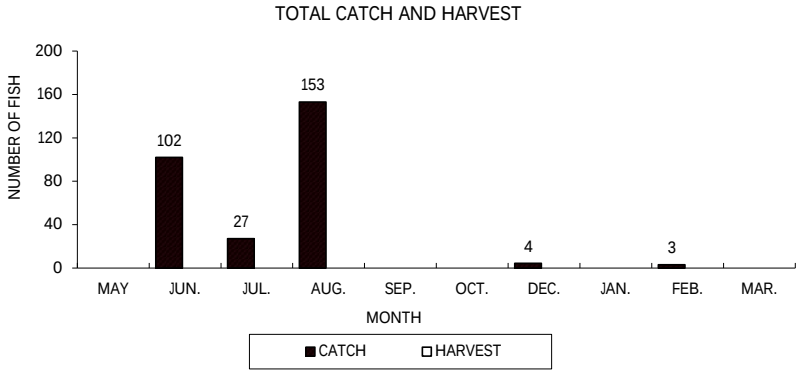
* Indicates that no fish of this species were caught or harvested (depending on the column) by anglers who specifically targeted this species.

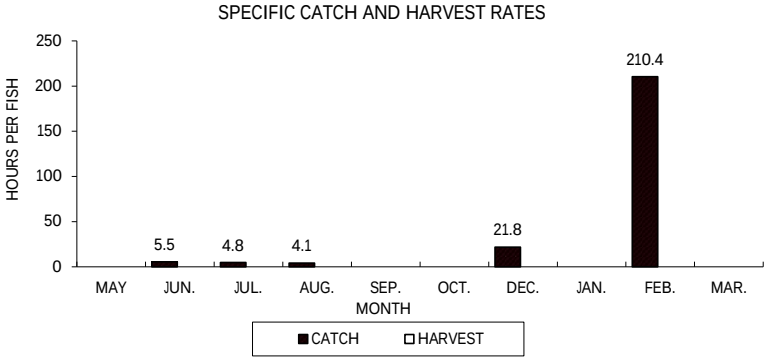
** Indicates that no fish were measured by the creel clerks for this species.

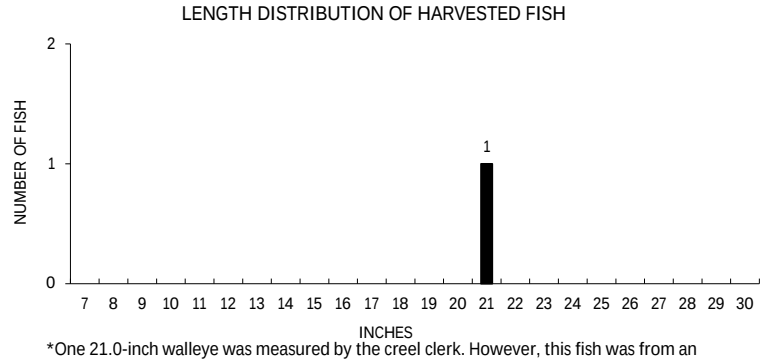
WALLEYE

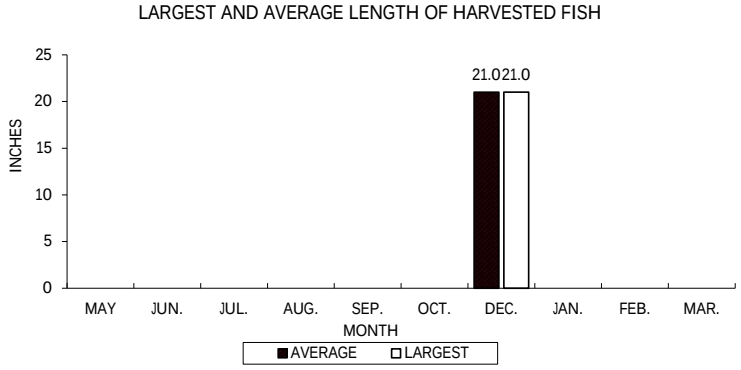






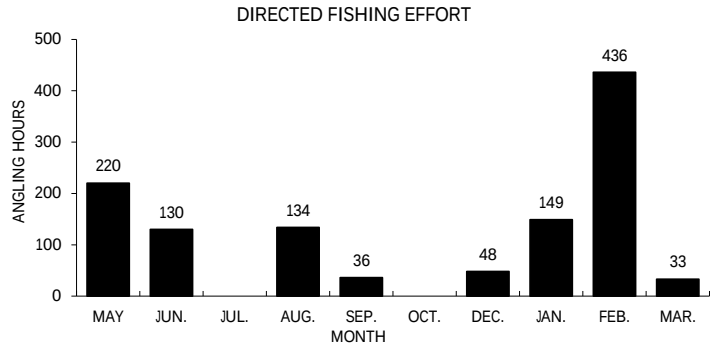




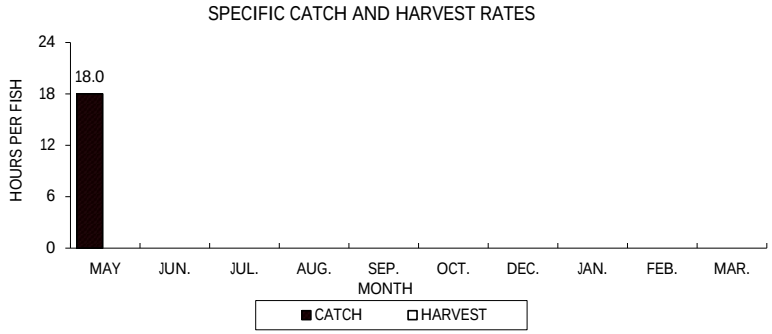


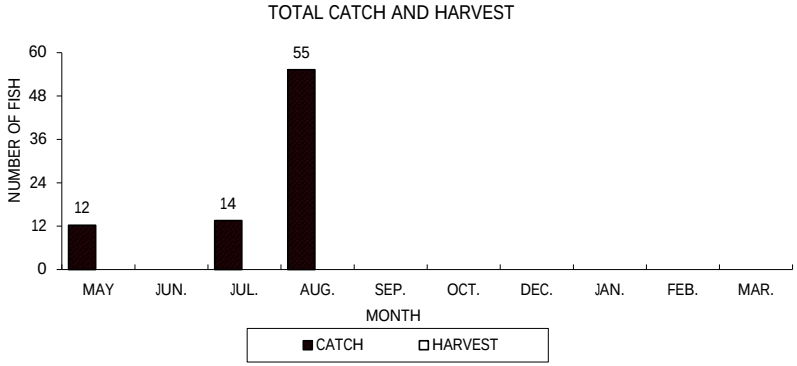
*One 21.0-inch walleye was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch and harvest estimates.

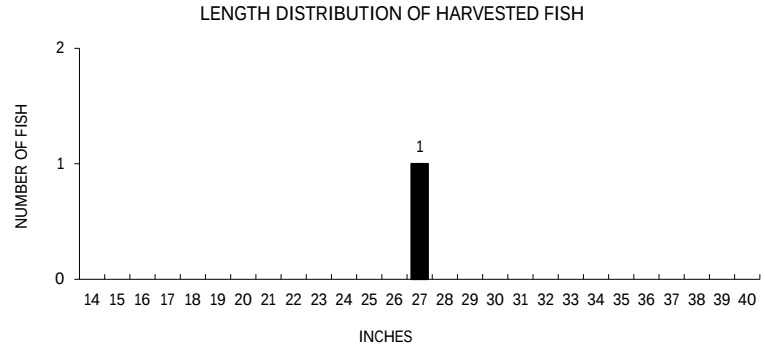
Figure 1. Walleye fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.



NORTHERN PIKE







*One 27.4-inch northern pike was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch and harvest estimates.

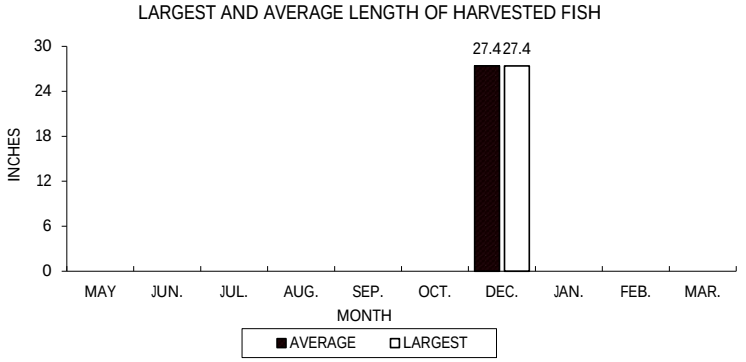


Figure 2. Northern pike fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

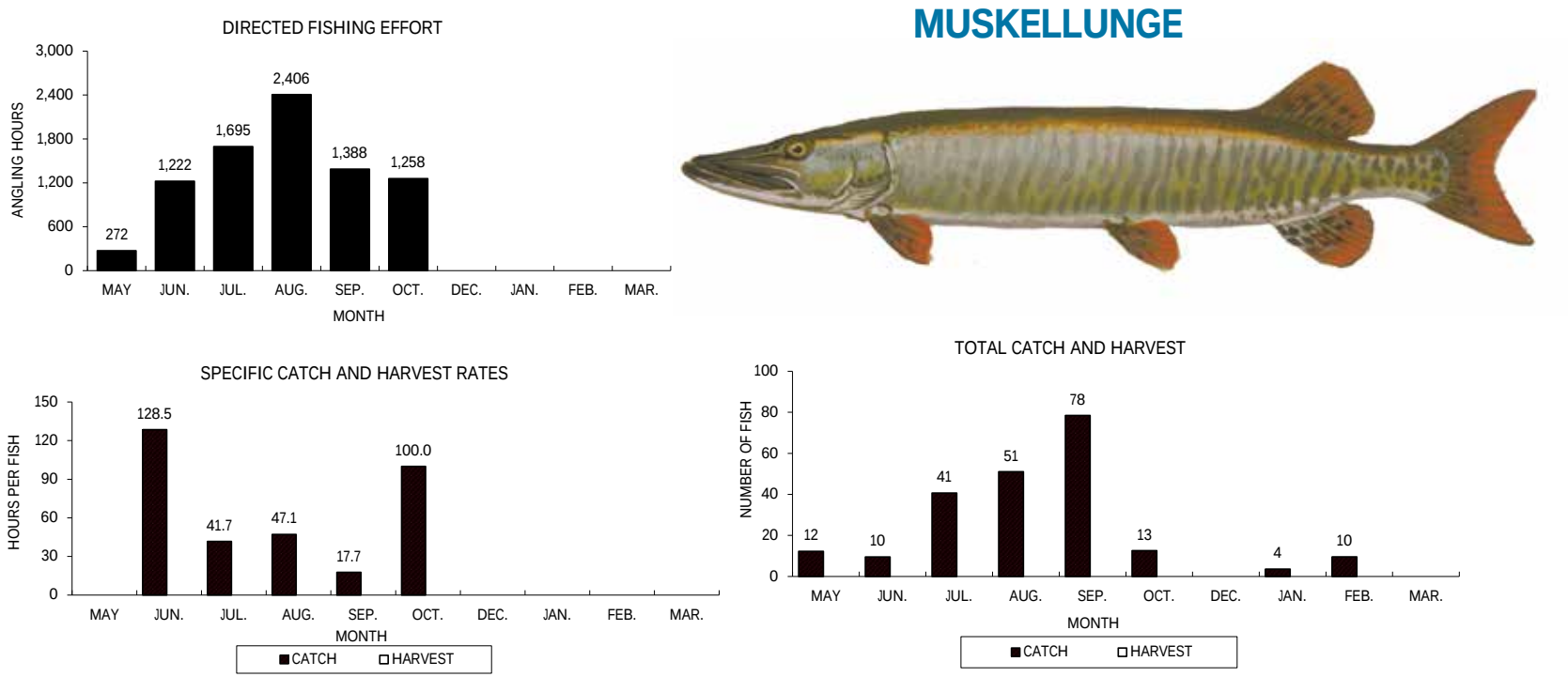
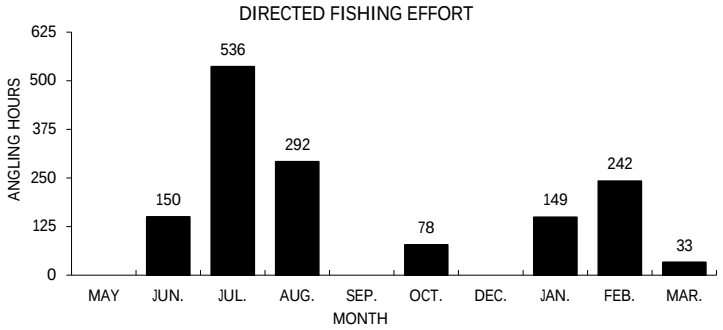
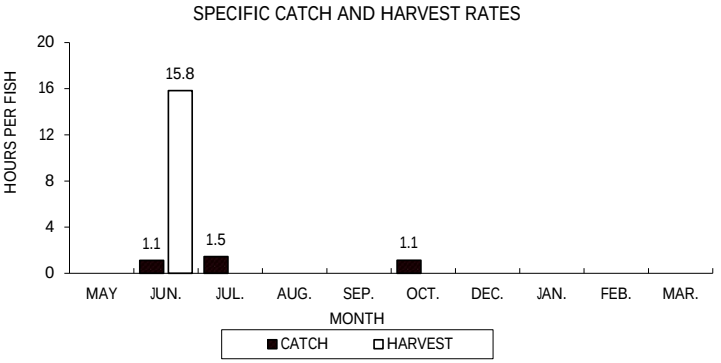
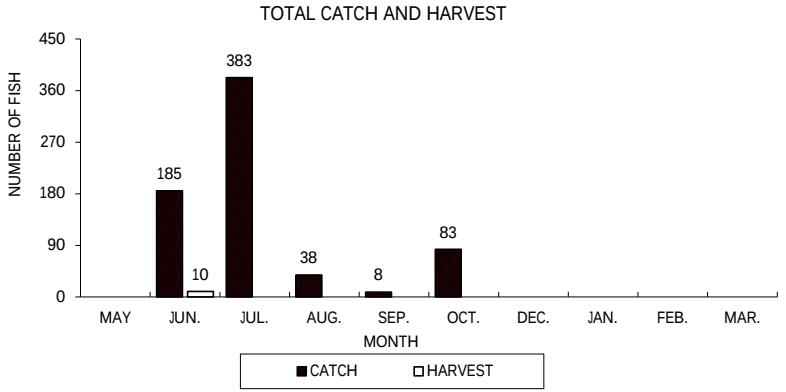


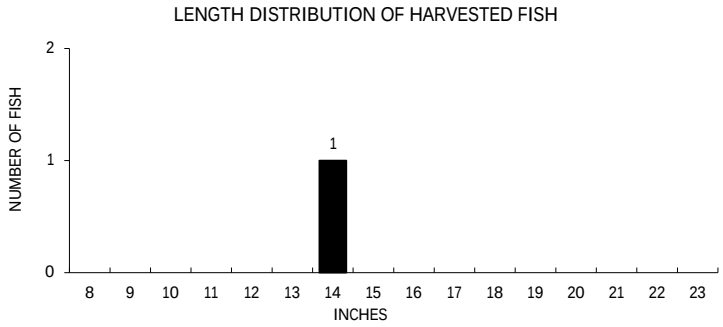
Figure 3. Muskellunge fishing effort, catch and harvest, Shishebogama Lake, during 2022-23.

SMALLMOUTH BASS









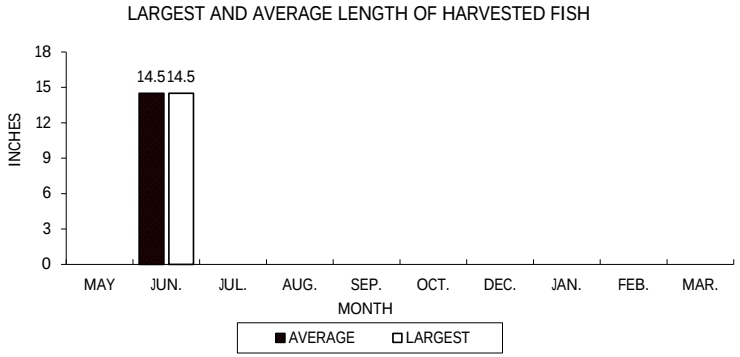
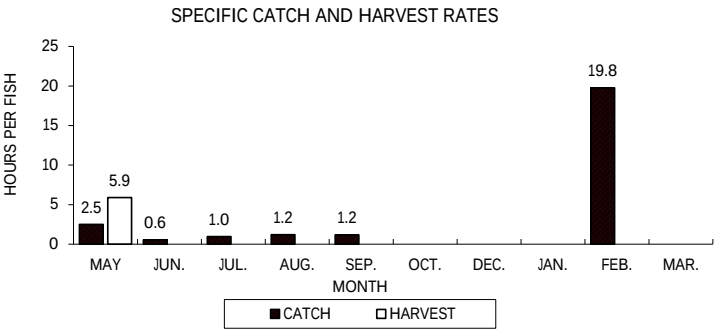
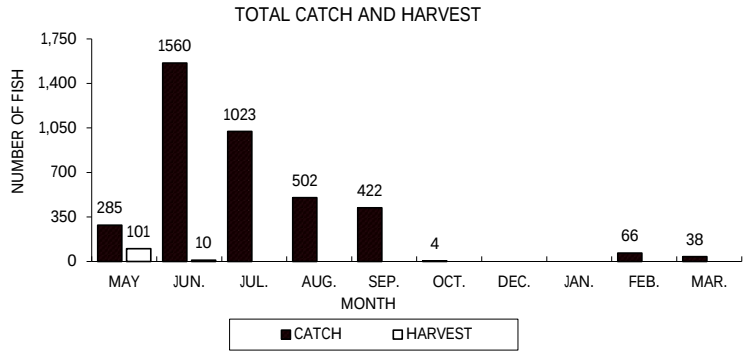
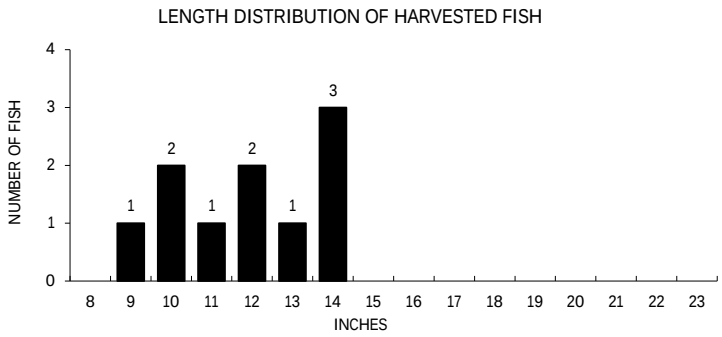


Figure 4. Smallmouth bass fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

LARGEMOUTH BASS







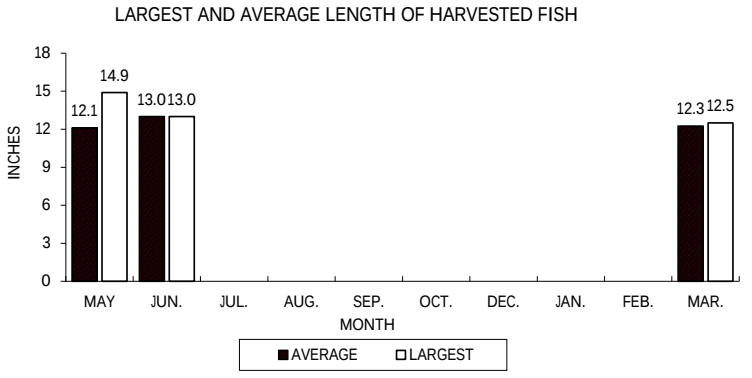
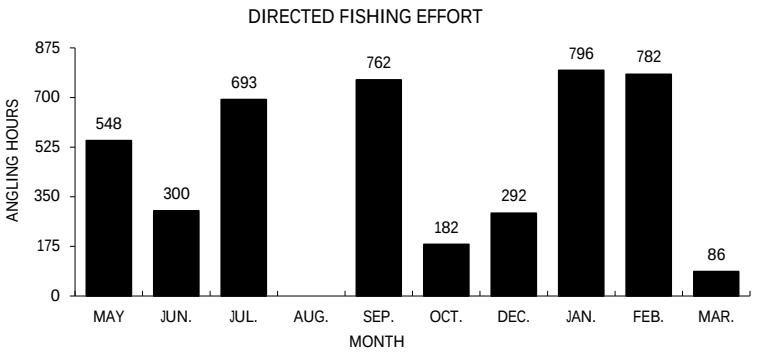
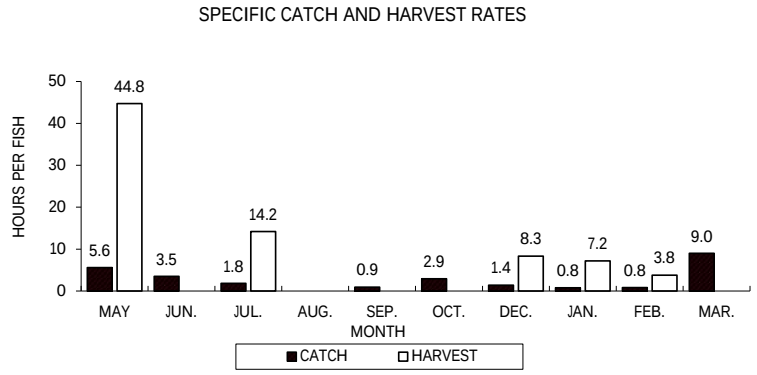
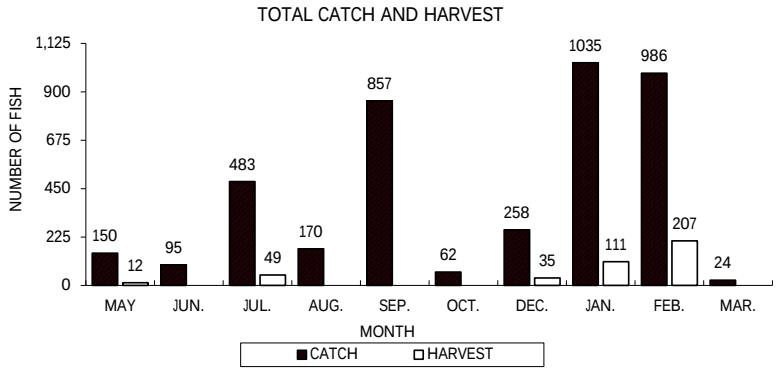


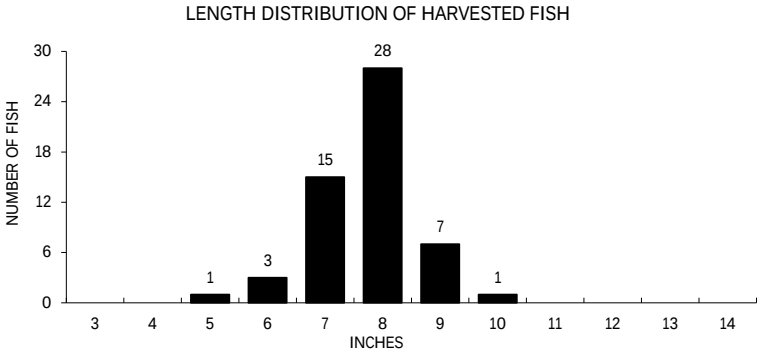
Figure 5. Largemouth bass fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

YELLOW PERCH









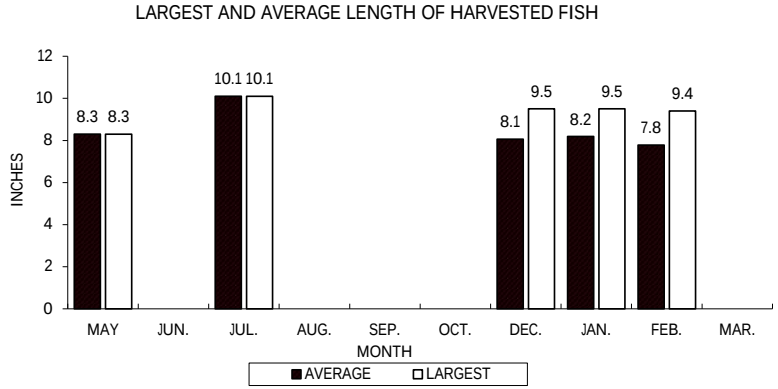
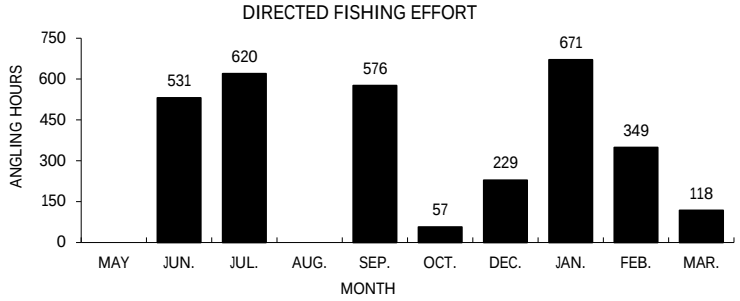
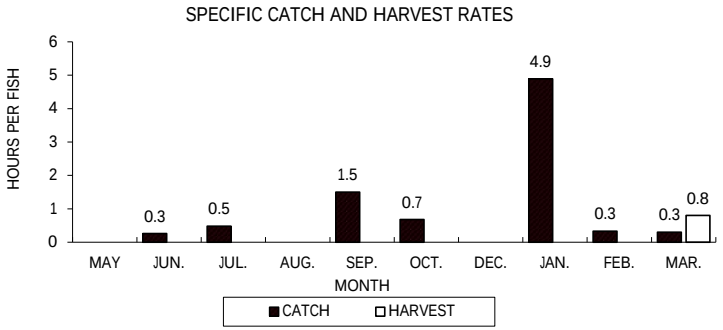
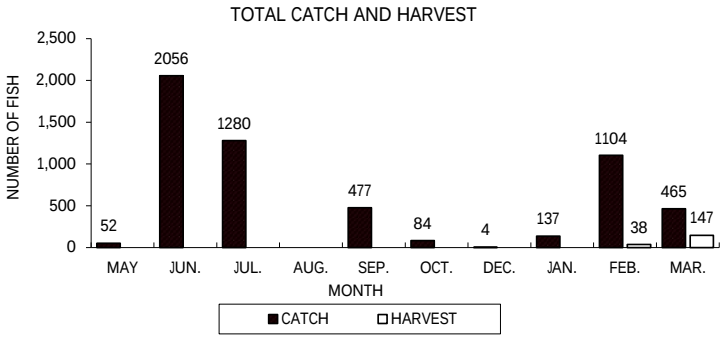


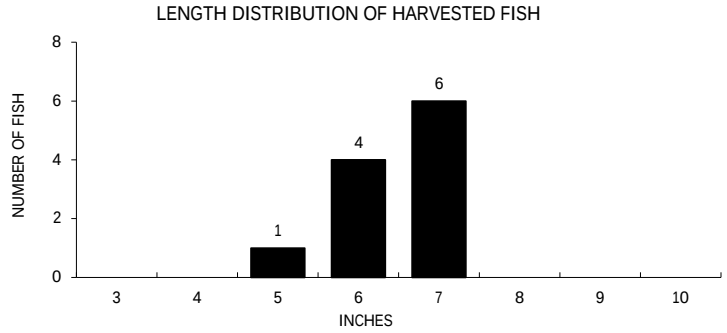
Figure 6. Yellow perch fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

BLUEGILL









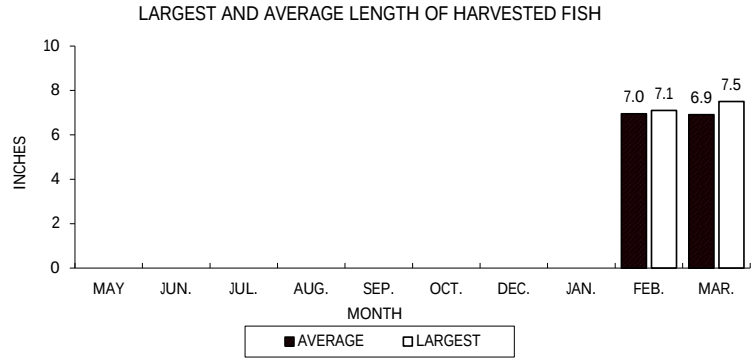
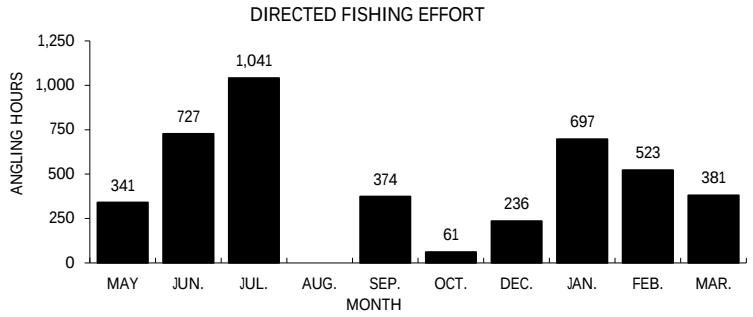
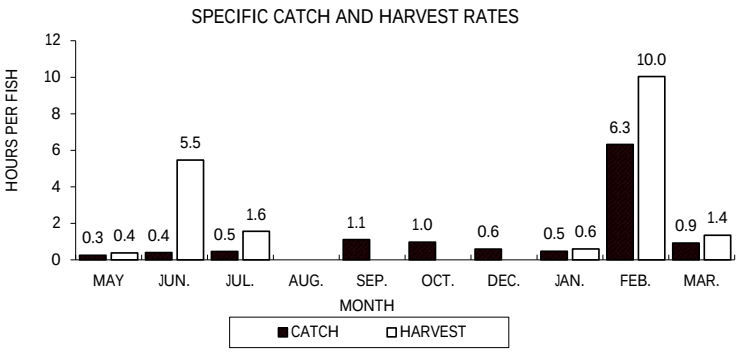
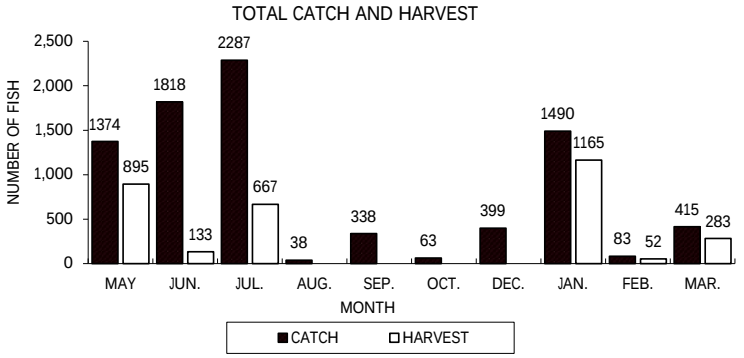


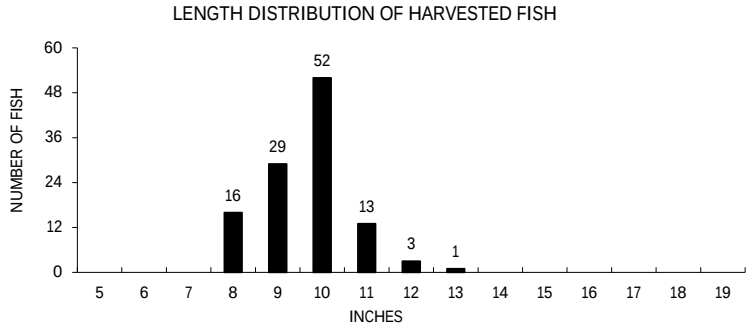
Figure 7. Bluegill fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

BLACK CRAPPIE









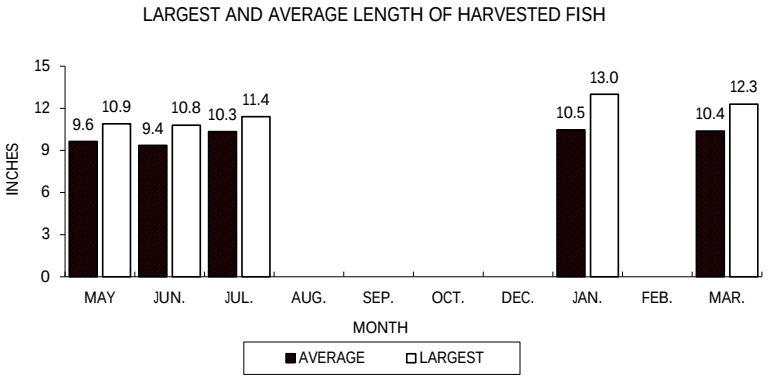
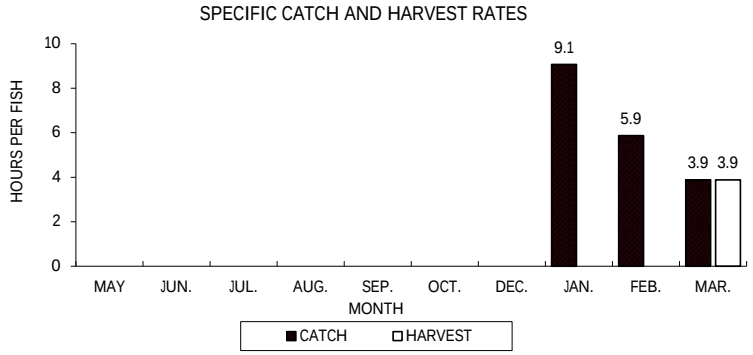
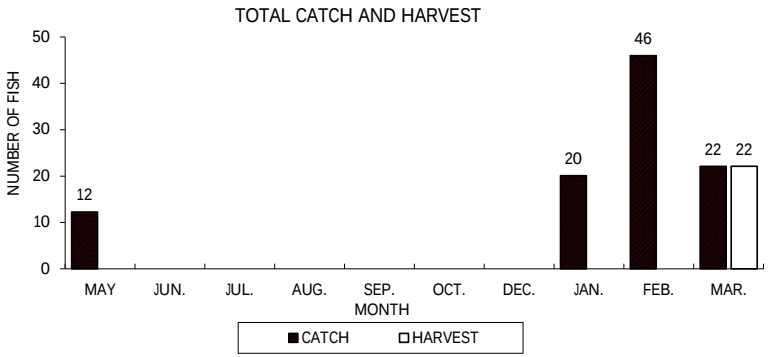
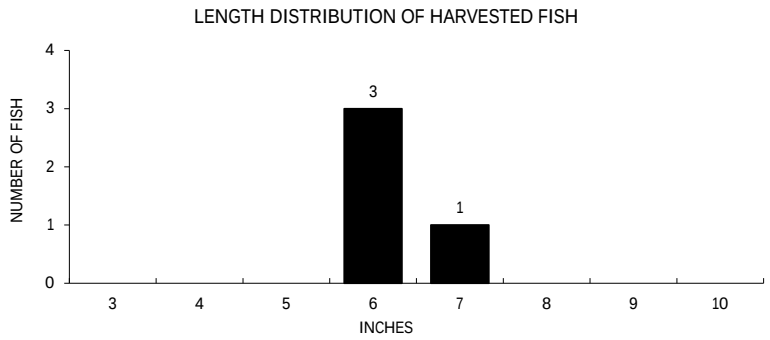


Figure 8. Black crappie fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

PUMPKINSEED







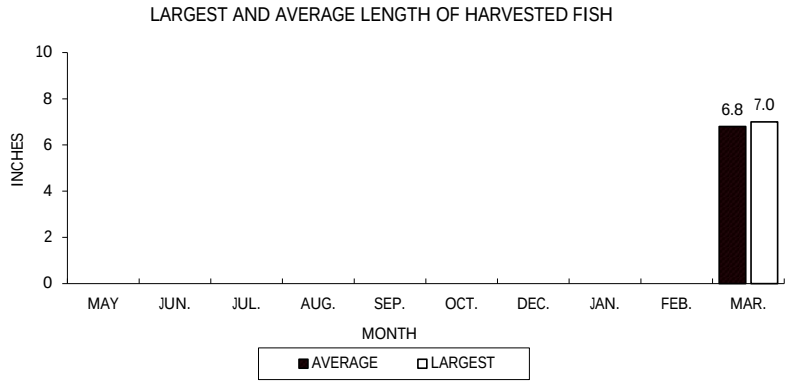
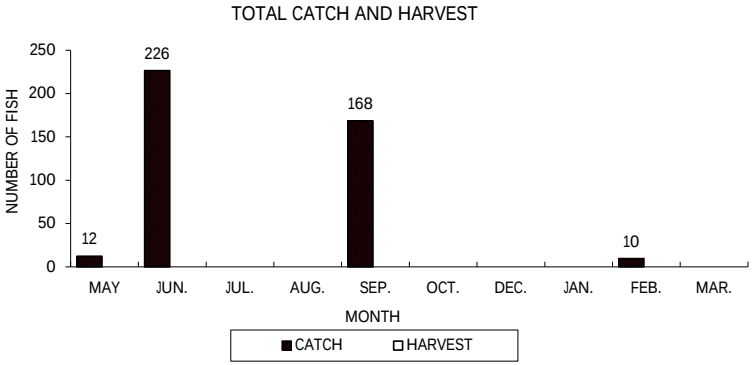
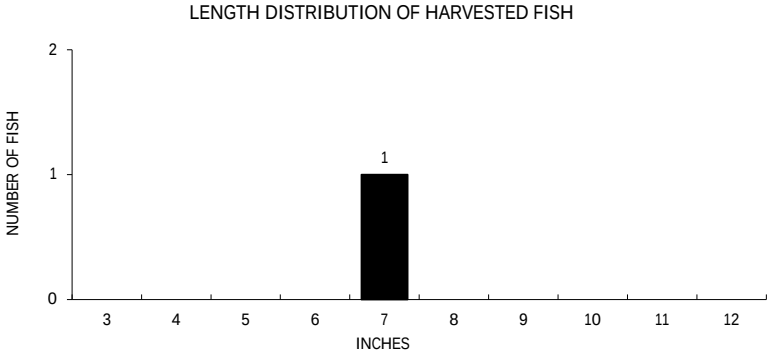


Figure 9. Pumpkinseed fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.

ROCK BASS





*One 7.8-inch rock bass was measured by the creel clerk. However, this fish was from an incomplete interview that does not contribute to angler effort, catch, and harvest estimates.

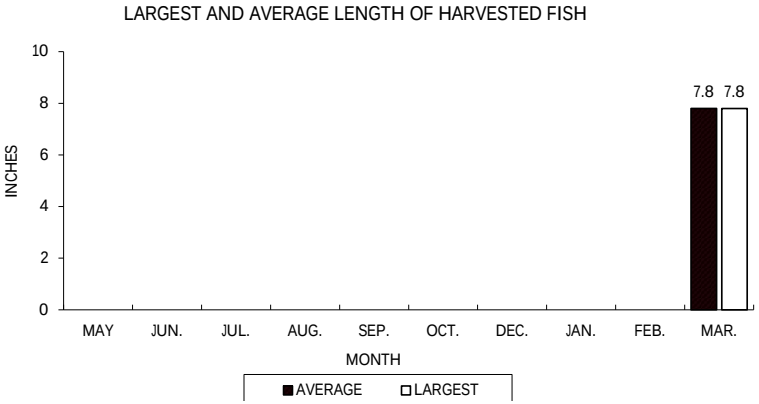


Figure 10. Rock bass fishing effort, catch, harvest and length distribution, Shishebogama Lake, during 2022-23.