

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

JULIA LAKE

2021 – 2022 CREEL SURVEY REPORT

ONEIDA COUNTY



Treaty Fisheries Publication

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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.

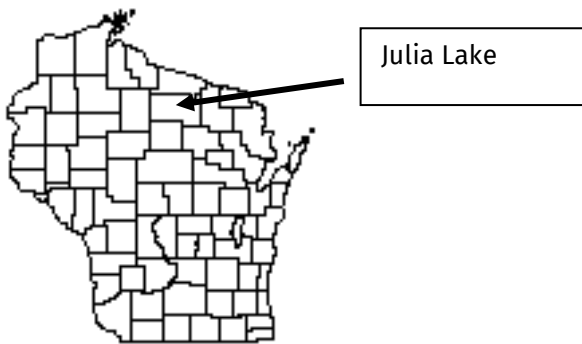
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time and it gives the DNR valuable information needed for management of the fishery.

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 Julia Lake, discussion of results of the survey and detailed summaries by species of fishing effort, catch and harvest.

GENERAL LAKE INFORMATION



LOCATION

Julia Lake is located in Oneida County near the city of Rhinelander.

PHYSICAL CHARACTERISTICS

Julia Lake is a 238-acre spring lake with a maximum depth of 19 feet. Littoral substrate consists of rock, sand, gravel, with lesser amounts of muck. Julia Lake contains very soft, slightly acidic, clear water of moderate transparency.

SEASONS SURVEYED

The period referred to in this report as the 2021-22 fishing season ran from May 1, 2021 through March 6, 2022. The open-water creel survey ran from May 1 through Oct. 31, 2021 and the ice fishing creel survey ran from Dec. 1, 2021 through March 6, 2022.

WEATHER

Ice-out on Julia Lake was around April 1, 2021. Fishable ice formed on Julia Lake in early December 2021.

FISHING REGULATIONS

The following seasons, daily bag limits and length limits were in place on Julia Lake during the 2021-22 fishing season:

SPECIES	SEASON	BAG LIMIT	MIN. SIZE
Largemouth Bass	5/ 01-3/ 06	5	None
Smallmouth Bass	5/ 01-6/ 18	Catch&Release	
	6/ 19-3/ 06	5	None
Musky	5/ 01-12/ 31	1	40"
	On open water		
Northern Pike	5/ 01-3/ 06	5	None
Walleye	5/ 01-3/ 06	3	15"
	20"-24" Protected Slot, 1>24"		
Panfish	Open all year	25	None
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 6 should be considered minimum estimates. Each species page has up to five graphs depicting the following:

- DIRECTED FISHING EFFORT**
The estimated number of hours during each month that anglers spent fishing for a species.
- TOTAL CATCH AND HARVEST**
The estimated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.
- SPECIFIC CATCH AND HARVEST RATES**
The 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.
- LENGTH DISTRIBUTION OF HARVESTED FISH**
All fish of a species that were measured by the clerk during the entire creel survey season.
- LARGEST AND AVERAGE LENGTH OF HARVESTED FISH**
The 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 first time the DNR conducted a creel survey on Julia Lake.

GENERAL ANGLER INFORMATION

Anglers spent 7,527 hours, or 31.6 hours per acre, fishing Julia Lake during the 2021-22 season (Table 1). That was similar to the Oneida County average of 33.2 hours per acre and the Ceded Territory average (31.5 hours per acre). July was the most heavily fished month (1,348 hours), and fishing effort was lightest in October (470 hours). The creel clerks were able to conduct 306 interviews throughout the survey.

RESULTS BY SPECIES

WALLEYE (Table 2, Figure 1)

Anglers spent 1,579 hours targeting Walleye. The greatest fishing effort for Walleye was in February (543 hours). July and August had the least amount of Walleye fishing effort (30 hours). The total catch of Walleye was 173 fish, with a harvest of 43 fish. Both the highest catch (83 fish) and highest harvest (26 fish) occurred in February. Anglers fished an estimated 9.5 hours to catch and 37.1 hours to harvest a Walleye during the survey. The mean length of harvested Walleye was 16.4 inches and the largest measured was a 17.8-inch fish.

NORTHERN PIKE (Table 2, Figure 2)

Fishing effort directed at Northern Pike was 527 hours during the season. Northern Pike fishing effort was greatest in January (138 hours). The total catch of Northern Pike was 150 fish, with a harvest of 16. Anglers fished an estimated 40.5 hours to catch a Northern Pike during the survey. The mean length of harvested Northern Pike was 20.1 inches and the largest measured was a 24.2-inch fish.

MUSKELLUNGE (Table 2, Figure 3)

Muskellunge were the most sought-after gamefish during the survey. Anglers spent 3,026 hours targeting Muskellunge during the season. Muskellunge fishing effort was greatest in September (824 hours). The total catch of Muskellunge was 109 fish and the highest catch (38 fish) occurred in September.

Anglers fished an estimated 30.4 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 1,104 hours during the season. Smallmouth Bass fishing effort was greatest in August (576 hours). The total catch of Smallmouth Bass was 475 fish, with 40 harvested. The highest catch (194 fish) occurred in July. Anglers fished an estimated 3.4 hours to catch a Smallmouth Bass during the survey.

LARGEMOUTH BASS (Table 2, Figure 5)

Fishing effort directed at Largemouth Bass was 1,406 hours during the season. Largemouth Bass fishing effort was greatest in August (576 hours). Total catch of Largemouth Bass was 1,058 fish, with a harvest of 35. The highest catch (304 fish) occurred in June. Anglers fished an estimated 1.7 hours to catch a Largemouth Bass during the survey.

PANFISH (Table 2, Figures 6-10)

YELLOW PERCH received 1,446 hours of directed fishing effort. The total catch of Yellow Perch was 2,246 fish, with 36 harvested. The mean length of Yellow Perch harvested was 8.4 inches.

BLUEGILL were the most sought after panfish species during the survey. Fishing effort directed at Bluegill was 1,810 hours. The total catch of Bluegill was 2,239 fish, with 120 harvested. The mean length of Bluegill harvested was 6.7 inches.

BLACK CRAPPIE received 1,165 hours of directed fishing effort. Anglers caught 537 Black Crappie and harvested 23. The mean length of Black Crappie harvested was 10.2 inches.

PUMPKINSEED received 572 hours of directed fishing effort. Anglers caught 156 Pumpkinseed and harvested 31. The mean length of Pumpkinseed harvested was 6.6 inches.

ROCK BASS received 226 hours of directed

fishing effort. Anglers caught 276 Rock Bass but did not harvest any fish.

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. Without their cooperation, the survey would not have been possible.

We also thank our cooperators, Bob and Sue Thome and who generously allowed the DNR to keep a boat and snowmobile on their property during this survey.

Completion of this survey was possible because of the efforts of the following fisheries management and treaty fisheries staff: John Kubisiak, Lawrence Eslinger, Joelle Underwood, Jason Halverson, Eric Brown, Bob Consolo and Evan Priebe. Creel clerks on Julia Lake during the survey period were Ryley Anacker-Swantz, Eric Lindberg, Ava Cohrs and Chad Leanna.

This creel report was reviewed by John Kubisiak and Lawrence Eslinger of the DNR.

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>

Table 1. Sportfishing effort summary, Julia Lake, 2021-22 season; compared Oneida County averages and Ceded Territory averages.

Month	Number of Angler Party Interviews	Total Angler Hours	Total Angler Hours/Acre	Oneida County Average Hours/Acre	Ceded Territory Average Hours/Acre
May	28	597	2.5	4.8	4.8
June	47	1,187	5.0	6.3	6.2
July	39	1,348	5.7	7.2	6.6
August	58	961	4.0	5.6	5.2
September	52	965	4.1	3.3	3.2
October	35	470	2.0	1.6	1.4
December	13	572	2.4	1.2	1.1
January	19	578	2.4	1.6	1.7
February	13	725	3.0	1.6	1.6
March	2	127	0.5	0.3	0.2
Summer Total	259	5,526	23.2	28.7	27.3
Winter Total	47	2,001	8.4	4.7	4.6
Grand Total	306	7,527	31.6	33.2	31.5

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 Julia 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 Julia Lake to other lakes.

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 Julia Lake to other lakes in northern Wisconsin.

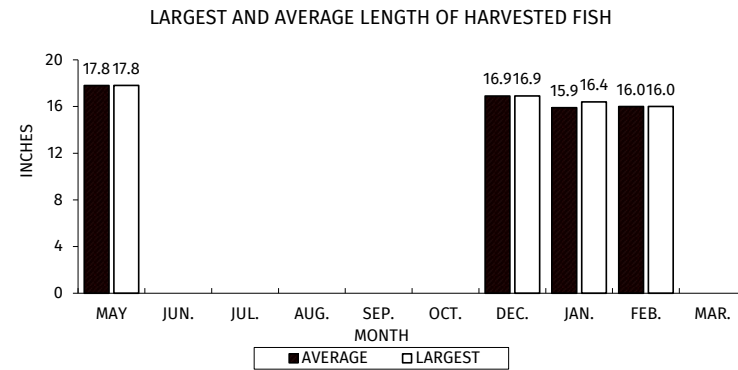
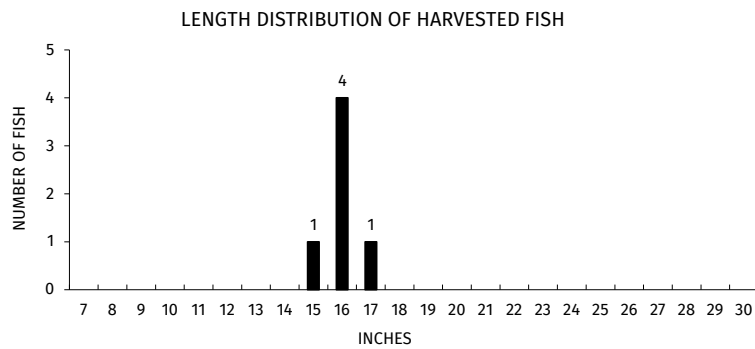
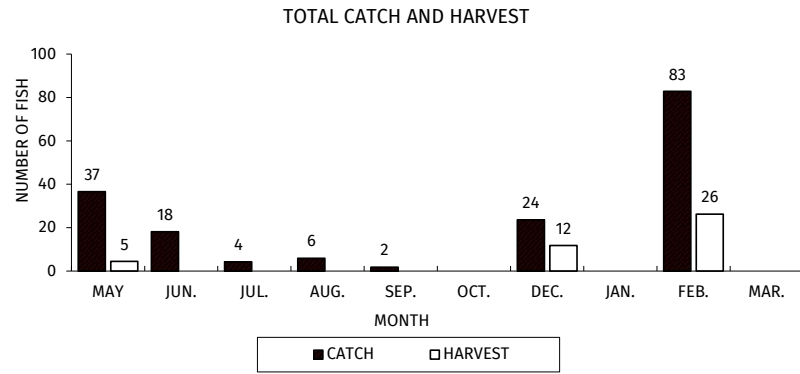
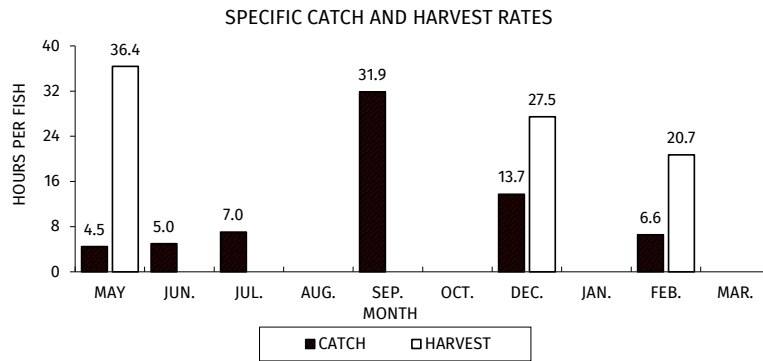
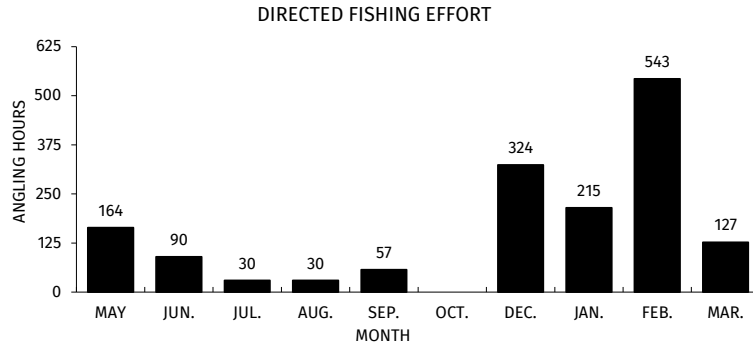
Table 2. Creel survey synopsis of Julia Lake during the 2021-22 fishing season.

CREEL YEAR: 2021-22

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish)	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish)	MEAN LENGTH OF HARVESTED FISH
Walleye	1,579	12.3%	173	9.5	43	37.1	16.4
Northern Pike	527	4.1%	150	40.5	16	110.8	20.1
Muskellunge	3,026	23.5%	109	30.4	0	*	**
Smallmouth Bass	1,104	8.6%	475	3.4	40	36.5	14.9
Largemouth Bass	1,406	10.9%	1,058	1.7	35	45.1	13.7
Yellow Perch	1,446	11.2%	2,246	0.9	36	307.2	8.4
Bluegill	1,810	14.1%	2,239	0.9	120	15.0	6.7
Black Crappie	1,165	9.1%	537	2.2	23	50.1	10.2
Pumpkinseed	572	4.4%	156	8.3	31	99.2	6.6
Rock Bass	226	1.8%	276	9.6	0	*	**

- 9 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



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Figure 1. Walleye fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

NORTHERN PIKE

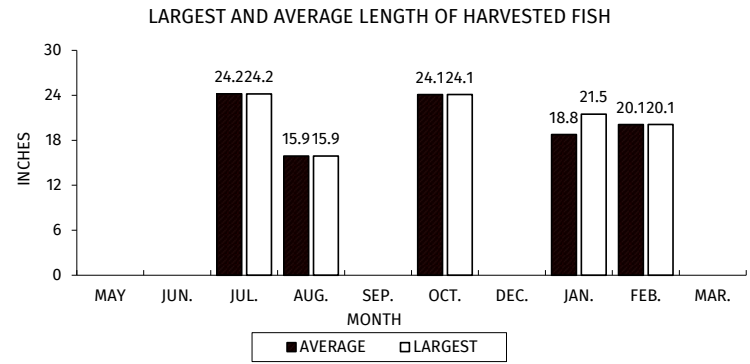
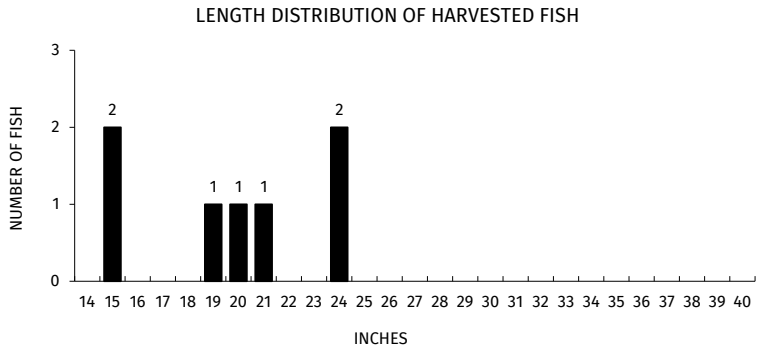
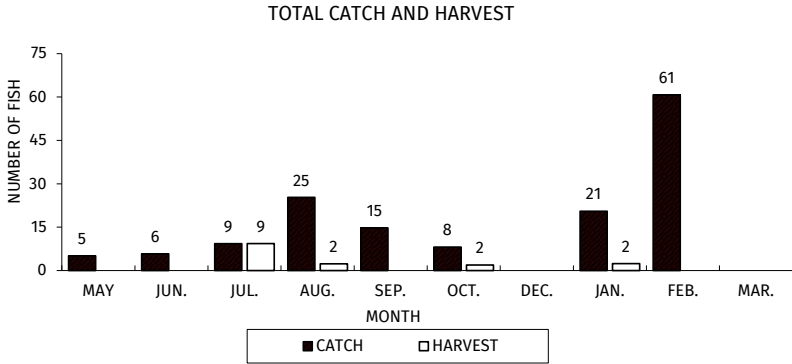
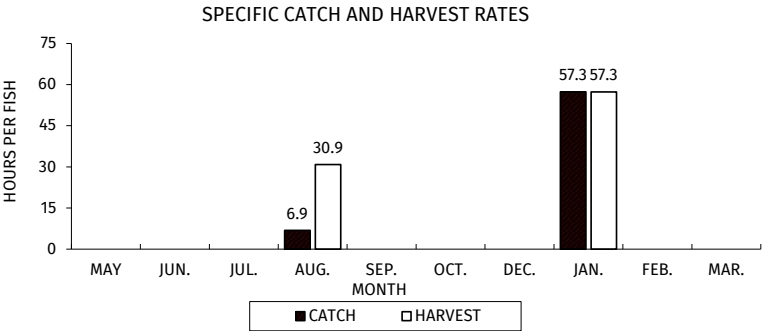
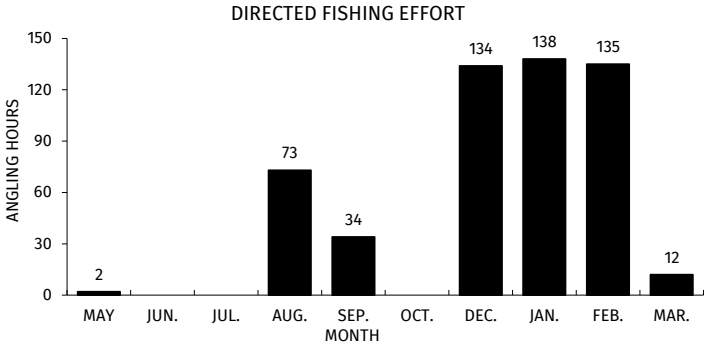
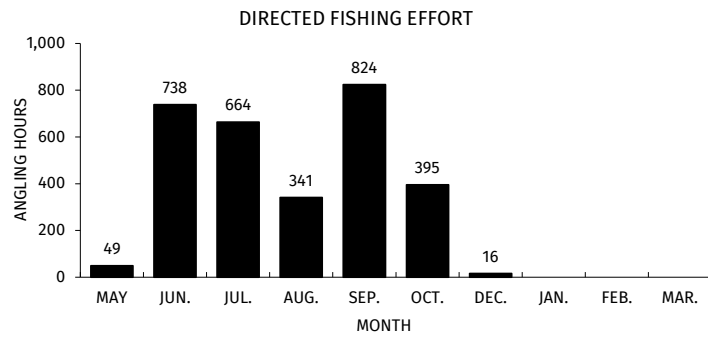


Figure 2. Northern Pike fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.



MUSKELLUNGE

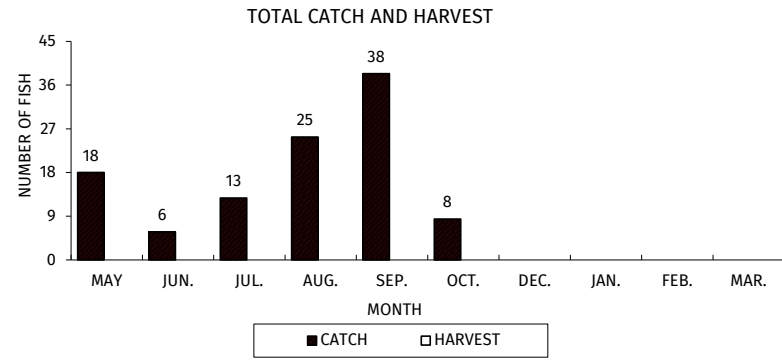
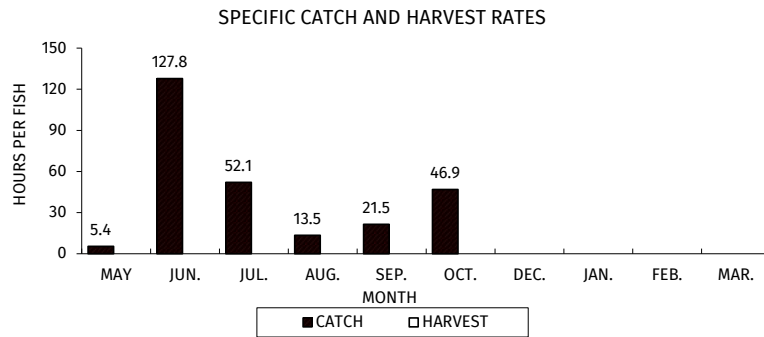


Figure 3. Muskellunge fishing effort, catch and harvest, Julia Lake, during 2021-22.

SMALLMOUTH BASS

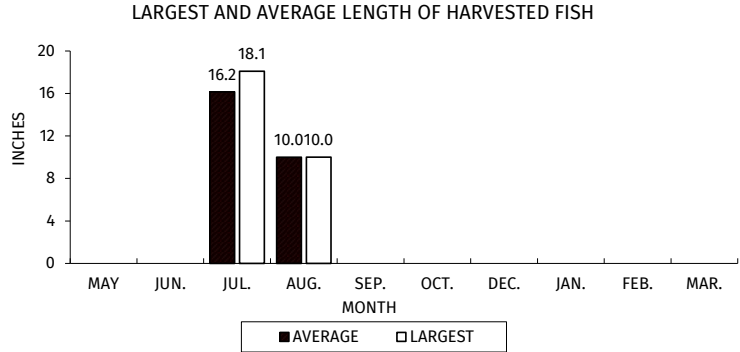
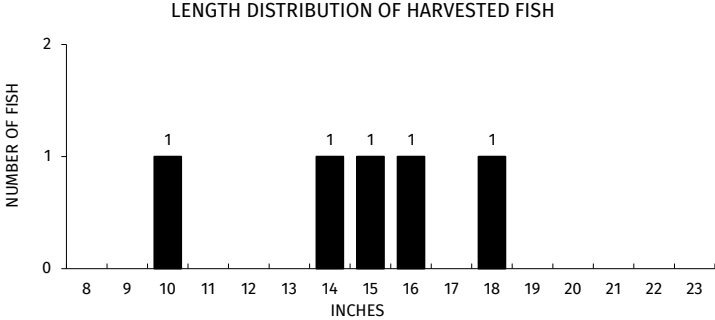
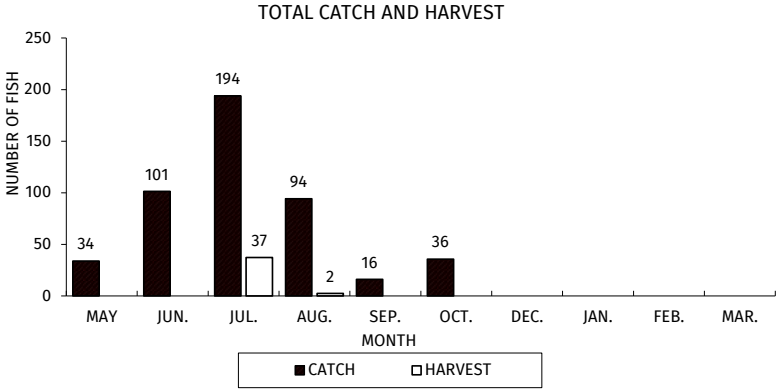
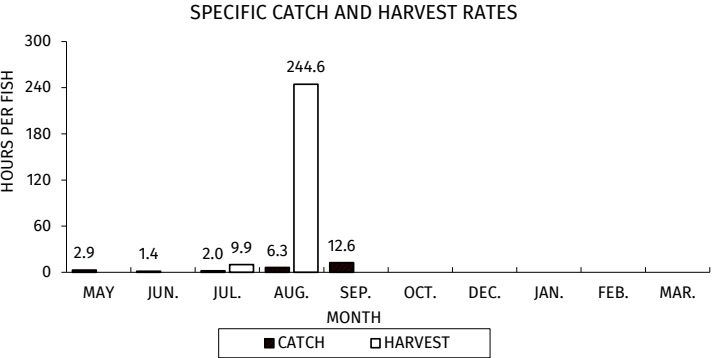
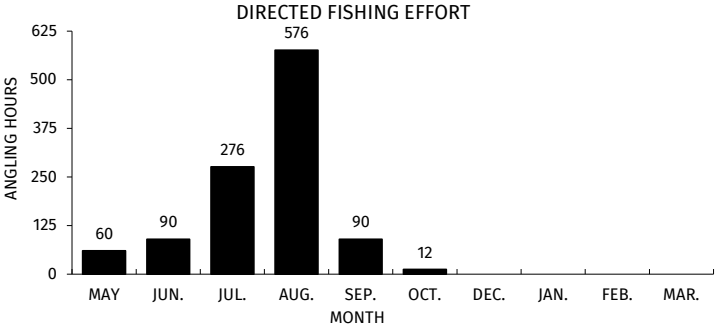


Figure 4. Smallmouth Bass fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

LARGEMOUTH BASS

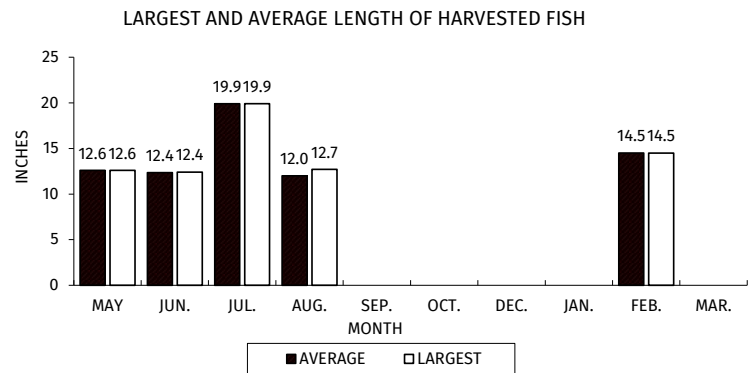
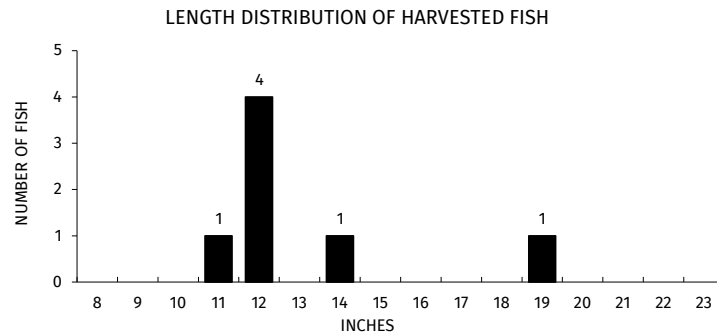
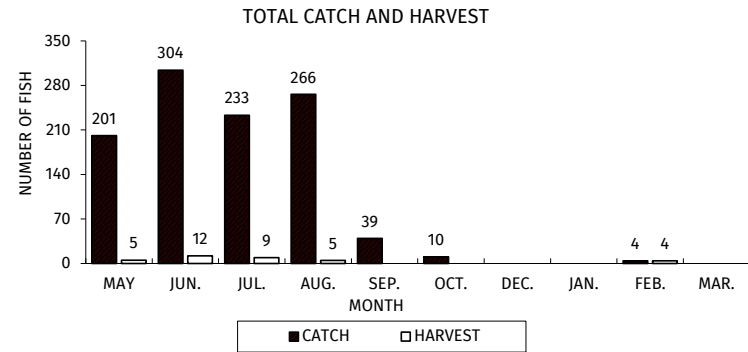
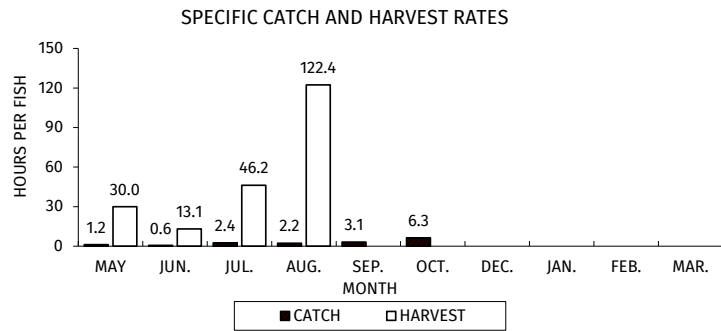
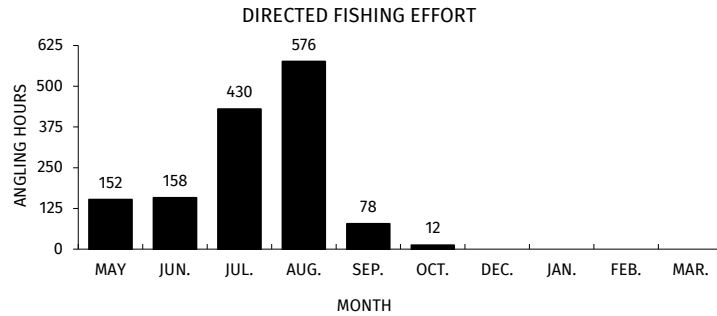


Figure 5. Largemouth Bass fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

YELLOW PERCH

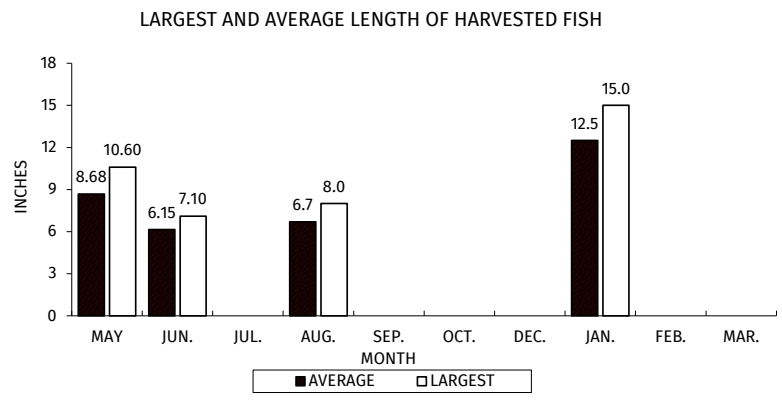
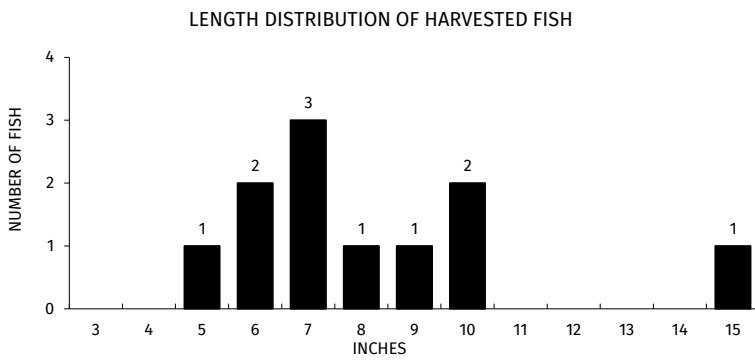
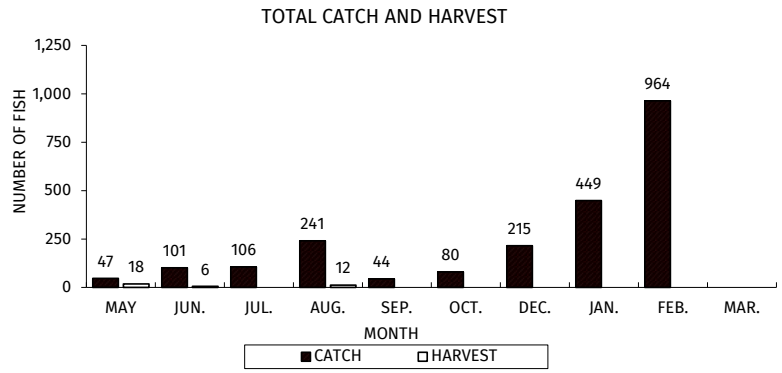
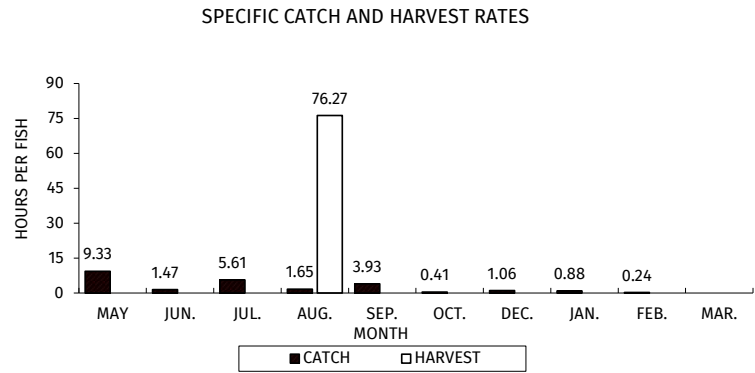
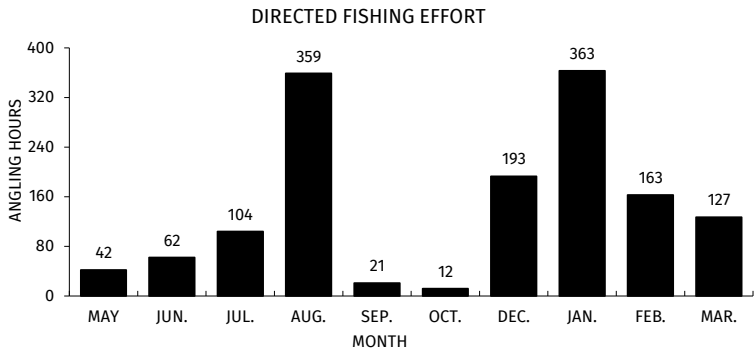


Figure 6. Yellow Perch fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

BLUEGILL

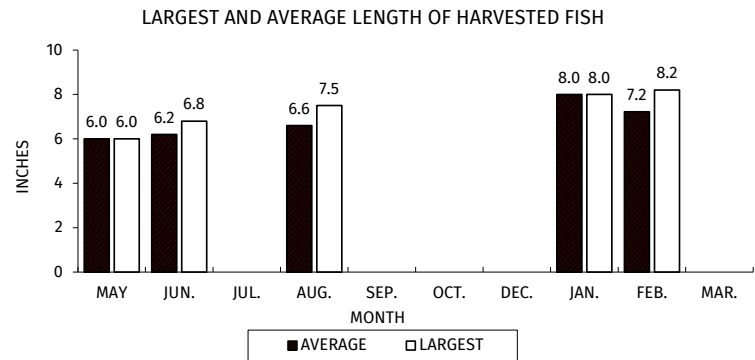
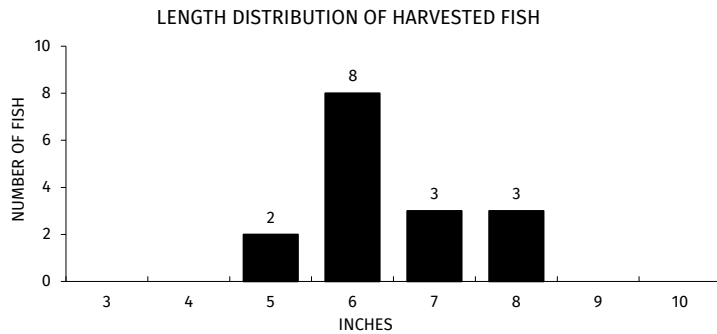
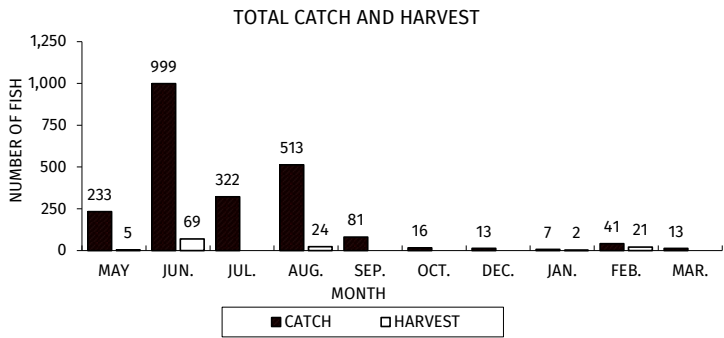
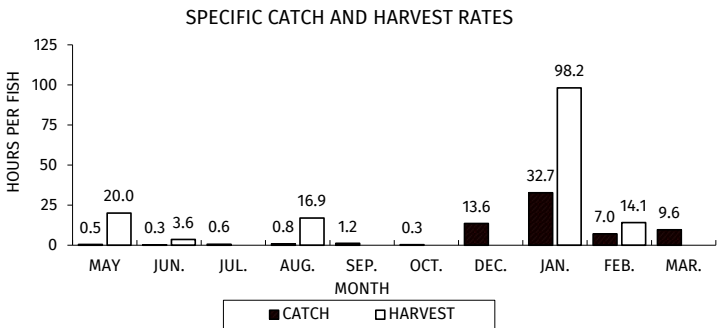
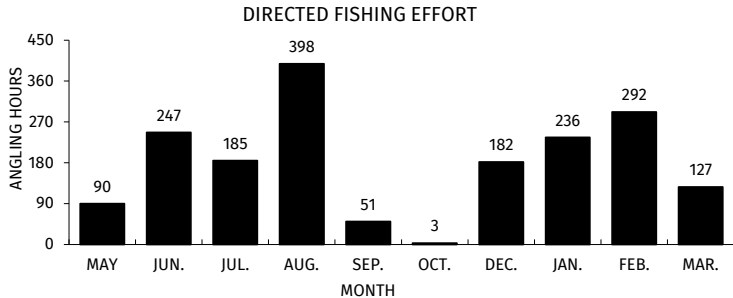


Figure 7. Bluegill fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

BLACK CRAPPIE

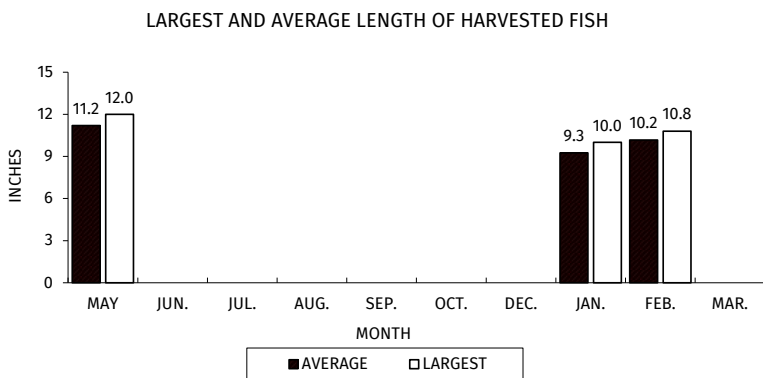
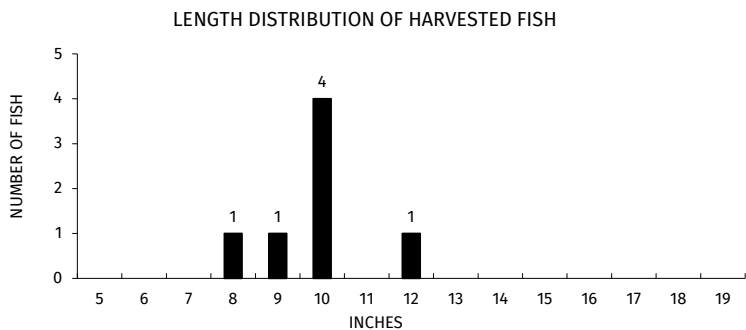
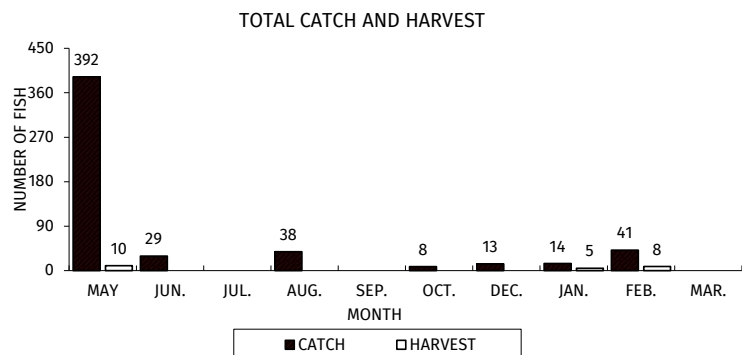
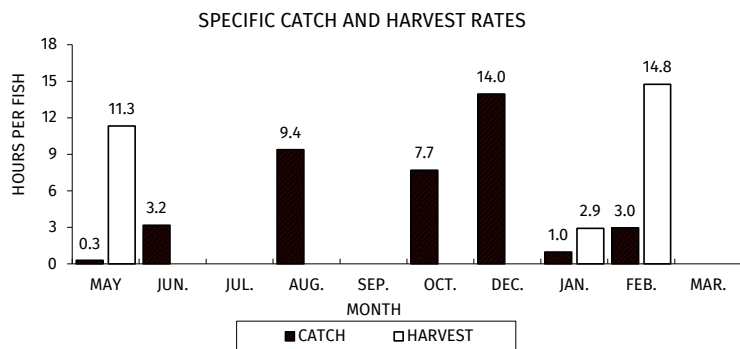
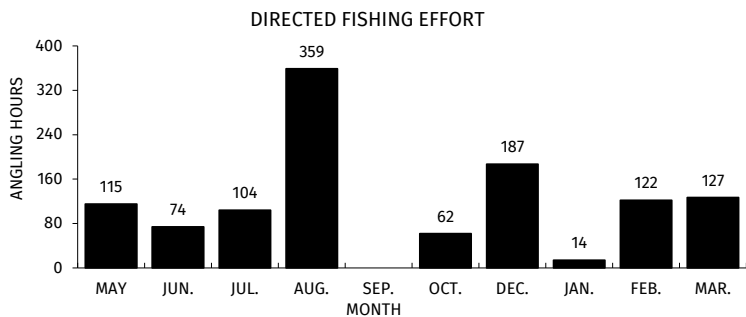


Figure 8. Black Crappie fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

PUMPKINSEED

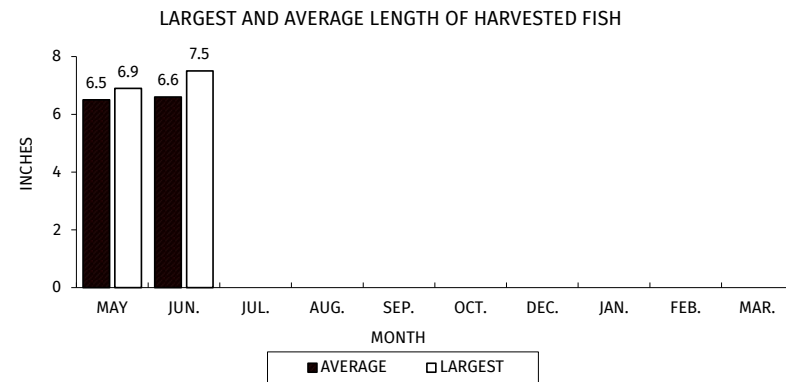
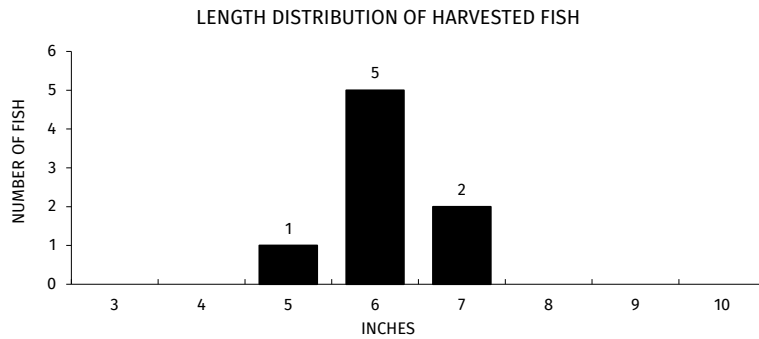
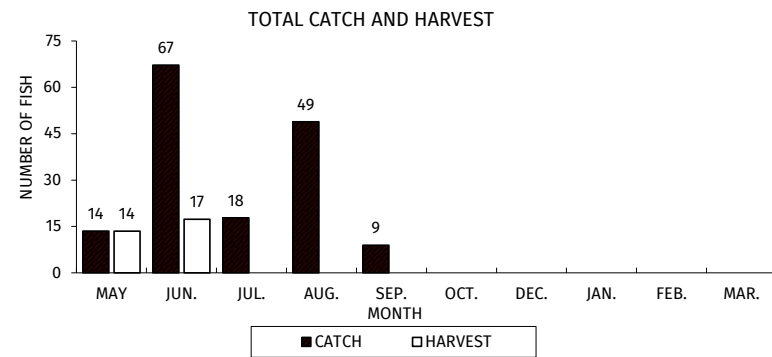
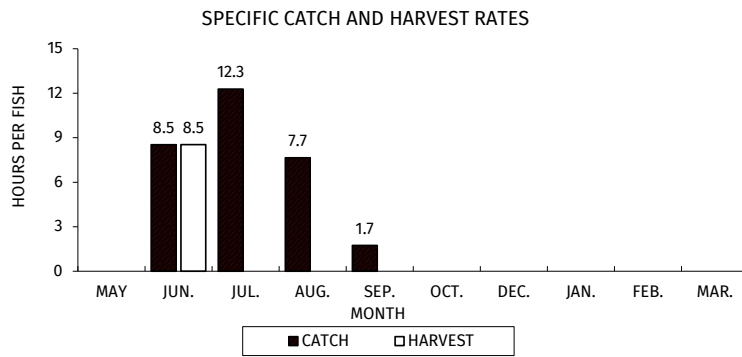
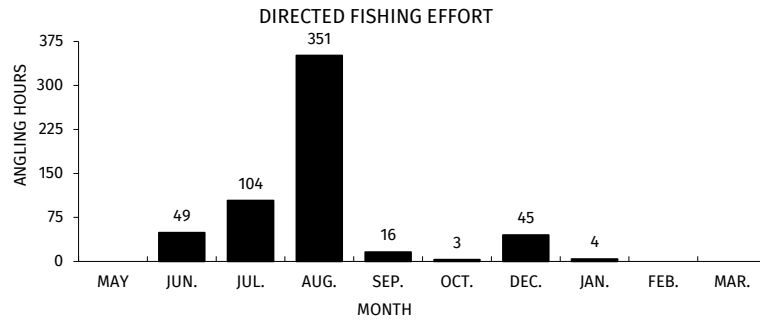


Figure 9. Pumpkinseed fishing effort, catch, harvest and length distribution, Julia Lake, during 2021-22.

ROCK BASS

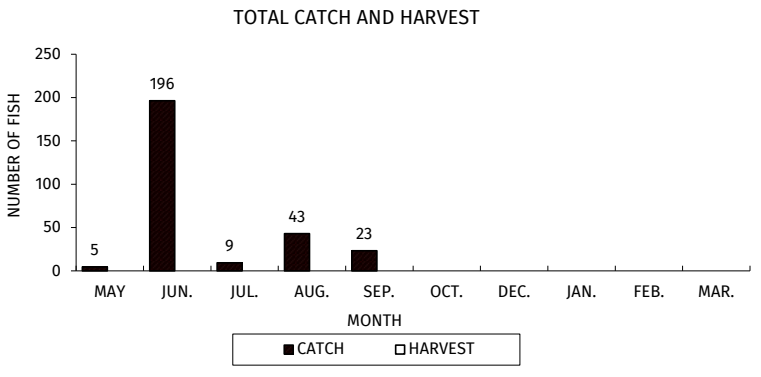
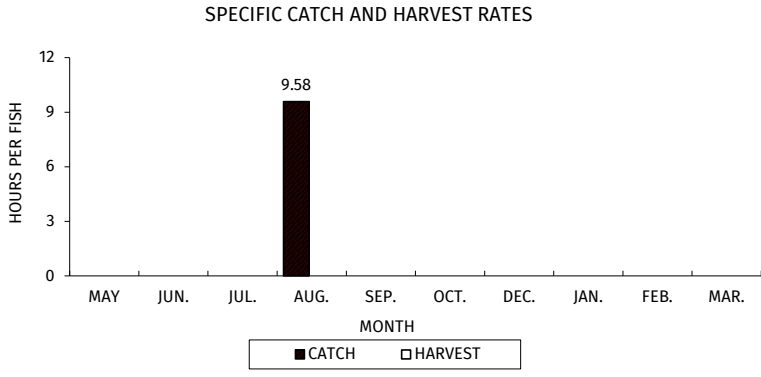
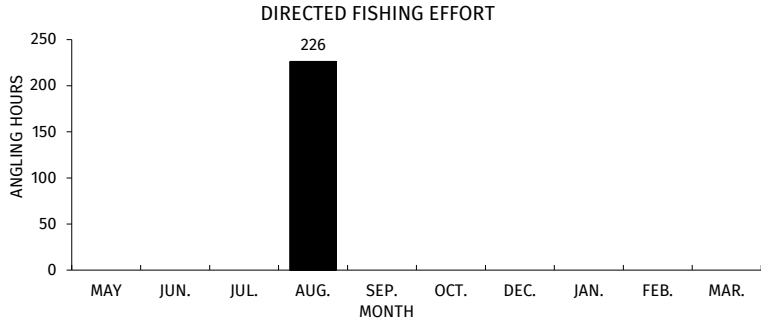


Figure 10. Rock Bass fishing effort, catch and harvest, Julia Lake, during 2021-22.