



**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: PLUM

COUNTY: VILAS

YEAR: 2009

The Department of Natural Resources surveyed Plum Lake, Vilas County, from April 24 through June 09, 2009, to determine the health of its fishery. The survey was designed to take a comprehensive look at the lake's fishery. Plum Lake is a drainage lake of moderate fertility with substantial areas of gravel substrate and a high-quality walleye population. Plum Lake has a surface area of 1,033 acres, 14.5 miles of shoreline and a maximum depth of 57 feet.

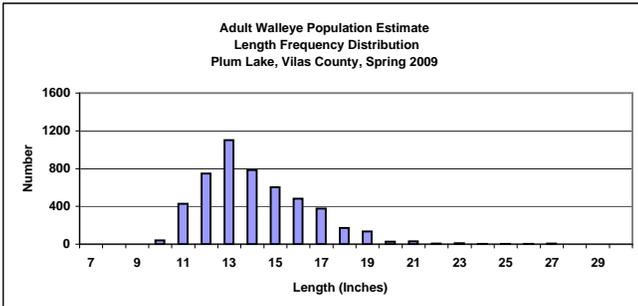


Figure 1. Length frequency distribution of 4964 adult walleye estimated to be in Plum Lake, Vilas County, based on a spring 2009 survey.

* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex \geq 15 inches long.

Walleye

We conducted a mark-recapture survey of Plum Lake's adult walleye population from April 24-29, 2009. We captured and marked (fin clipped) 1,523 adult walleye in six days of fyke netting. Three crews sampled Plum Lake with electro-fishing boats on April 29th and captured 545 adult walleye. Approximately 30% (166 of 545) of those walleye bore the fin clip given during fyke netting.

Based on those results, we estimated that Plum Lake is home to 4,964 adult walleye (4.8/acre). Approximately 53% (2,646 of 4,964) of adult walleye were 14 inches long or larger. The largest walleye we captured was a 27.7-inch female.

Smallmouth Bass

We also completed a mark-recapture survey of Plum Lake's smallmouth bass population from April 24 through June 9, 2009. We captured and marked 140 smallmouth bass through June 3rd. Three electro-fishing crews captured 83 smallmouth bass on June 9th. Nearly 27% (22 of 83) of those smallmouth had been marked (fin clipped) in previous sampling.

From those results, we estimated that 531 smallmouth bass, 8-inches or larger, inhabited Plum Lake. Almost 83% (440 of 531) of those smallmouth were 14 inches long or larger. Approximately 24 percent (129 of 531) were 18 inches long or larger. The largest smallmouth we captured was 21.5 inches long.

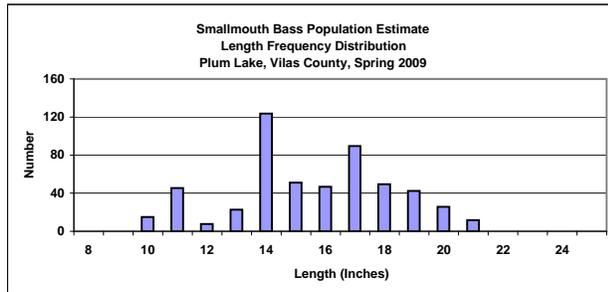


Figure 2. Length frequency distribution of 531 smallmouth bass \geq 8" estimated to be in Plum Lake, Vilas County, based on a spring 2009 survey.

* Note: All values given above are for smallmouth bass 8 inches long or larger.

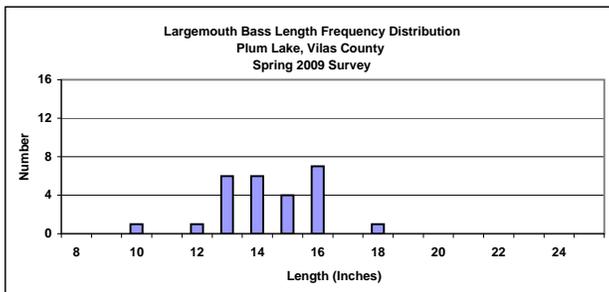


Figure 3. Length frequency distribution of 26 largemouth bass \geq 8" captured during a fisheries survey of Plum Lake, Vilas County, in spring 2009.

Largemouth Bass

We captured 26 largemouth bass, 8 inches or larger, during our fyke netting and electro-fishing sampling of Plum Lake. Approximately 69% (18 of 26) of those largemouth were 14 inches long or larger. The biggest largemouth bass we captured was 18.2 inches long.

Northern Pike

We captured 163 adult northern pike in fyke nets fished in Plum Lake from April 24-29, 2009. Nearly 99% (161 of 163) of adult northern pike we captured were less than 26 inches long. The largest northern pike we captured was a 27.2-inch female.

* Note: Adult northern pike are defined as all sexable northern pike and northern pike of unknown sex \geq 12 inches long.

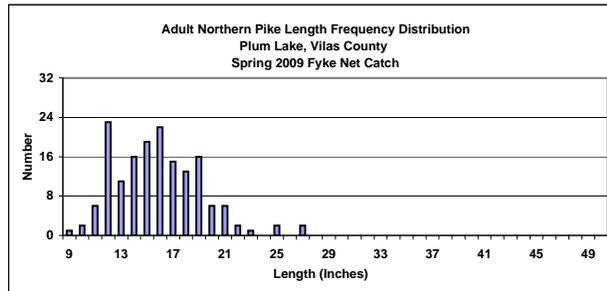


Figure 4. Length frequency distribution of 163 adult northern pike captured in fyke nets during a fisheries survey of Plum Lake, Vilas County, in spring 2009.

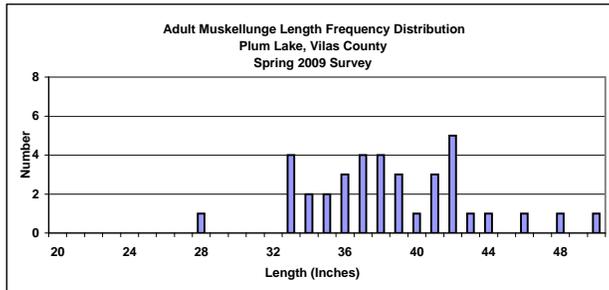


Figure 5. Length frequency distribution of 37 adult muskellunge captured during a fisheries survey of Plum Lake, Vilas County, in spring 2009.

Muskellunge

We captured 37 adult muskellunge during our fyke netting and electro-fishing sampling of Plum Lake. Approximately 86% of the adult muskellunge (32 of 37) we captured were 34 inches long or larger. Nearly 38% of muskellunge (14 of 37) were 40 inches long or larger. The largest muskellunge we captured was a 50.6-inch female.

* Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex \geq 20 inches long.

Other Species

We captured 12 species of fish in our fyke netting and electro-fishing sampling of Plum Lake in addition to the game fish mentioned above. Yellow perch were the most common species in our fyke net catches. We caught moderate numbers of black bullhead, bluegill and rock bass. We also captured black crappie, brook trout, burbot, creek chub, pumpkinseed, redbhorse spp., white sucker and yellow bullhead. In-water sampling will conclude with a survey of young-of-year walleye in fall 2009.

We are also conducting a creel (angler harvest) survey on Plum Lake this year. Creel clerk Lynn Robison will count and interview anglers and examine their catch throughout the 2009 open-water fishing season.

Table 1. General Fishing Regulations for Plum Lake, Vilas County, 2009

| FISH SPECIES | OPEN SEASON | DAILY LIMIT | MINIMUM LENGTH |
|--------------------------------|--|--------------------|------------------------------------|
| Walleye | May 2 - March 7 | 3 | No minimum, 14-18" protected slot, |
| Largemouth and Smallmouth Bass | May 2 - June 19 (C&R) June 20 - March 7 (Harvest) | None 1 in total | 18 inches |
| Muskellunge | May 23 - Nov. 30 | 1 | 34 inches |
| Northern Pike | May 2 - March 7 | 5 | None |

A brief summary of selected fishing regulations for Plum Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

<http://www.dnr.wi.gov/fish/regulations/>

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2010. If you are interested in a summary of the creel survey or want an update on this year's fyke netting and electro-fishing survey results, contact:

Mike Coshun, Treaty Fisheries Biologist
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 358-9209
Email: Michael.Coshun@Wisconsin.gov

For answers to questions about fisheries management activities and plans for Plum Lake, Vilas County, contact:

Steve Gilbert, Fisheries Biologist
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 358-9229
Email: Stephen.Gilbert@Wisconsin.gov