2024 SPRING FISHERIES SURVEY SUMMARY

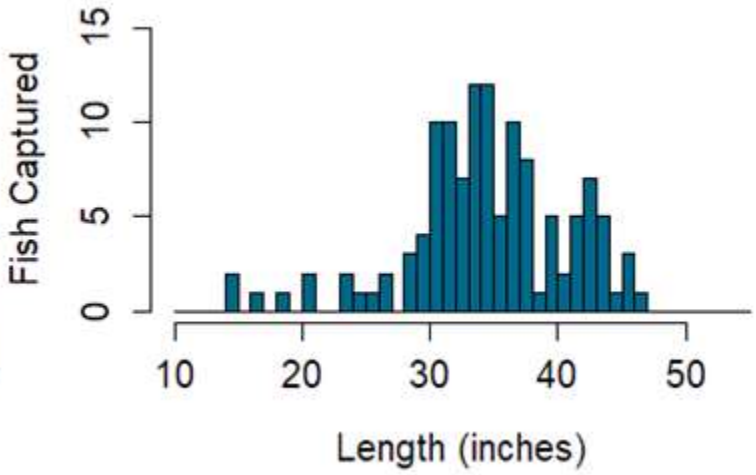
SPIDER CHAIN, SAWYER COUNTY

Report by Max Wolter

The Wisconsin Department of Natural Resources (DNR) Hayward Fisheries Management Team conducted a fyke netting survey on the Spider Chain of lakes (Big Spider, Little Spider, Clear, Fawn and North) from April 2-25, 2024. The primary targets were muskellunge, walleye and northern pike but useful data was also gathered on black crappie and yellow perch. Up to 28 nets were set overnight for 21 total nights which resulted in 330 total net-nights of effort. An electrofishing survey targeting adult walleye was conducted on April 9, 2024 and included all the shoreline of the Spider Chain. An additional electrofishing survey was conducted on May 23, 2024 to target largemouth bass, smallmouth bass and bluegill and included six miles of shoreline. Quality, preferred and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

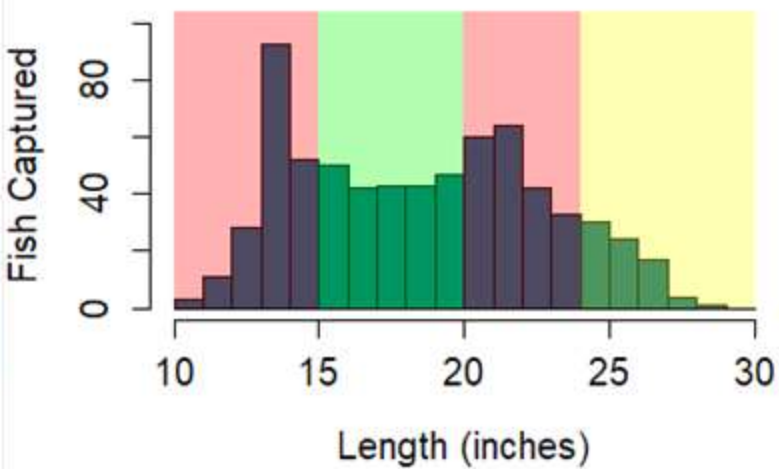
MUSKELLUNGE

Captured 0.3 per net-night ≥ 20 inches	
Quality Size ≥ 30"	63%
Memorable Size ≥ 42"	16%



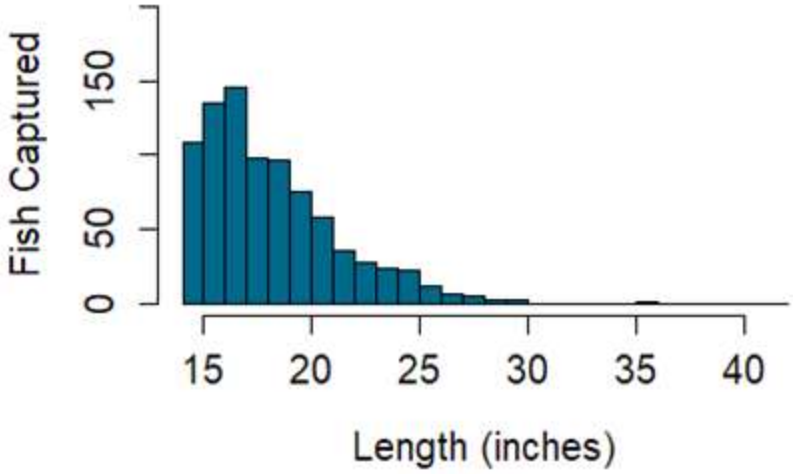
WALLEYE

Captured 3.6 per net-night ≥ 10 inches	
Quality Size ≥ 15"	73%
Preferred Size ≥ 20"	40%



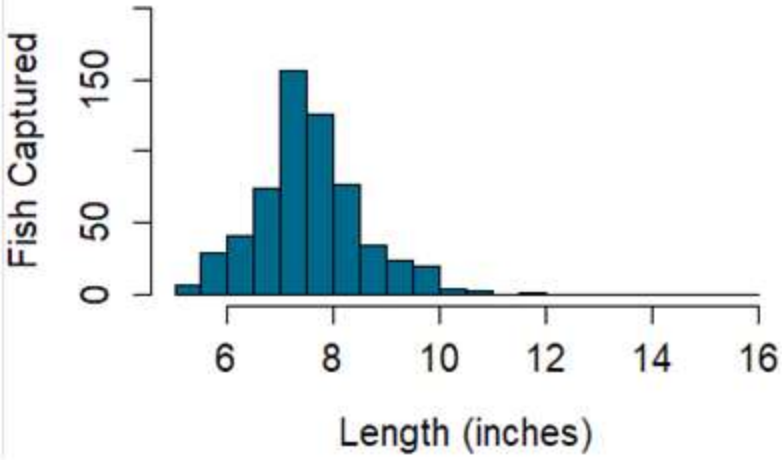
NORTHERN PIKE

Captured 2.5 per net-night ≥ 14 inches	
Quality Size ≥ 21"	16%
Preferred Size ≥ 28"	1%



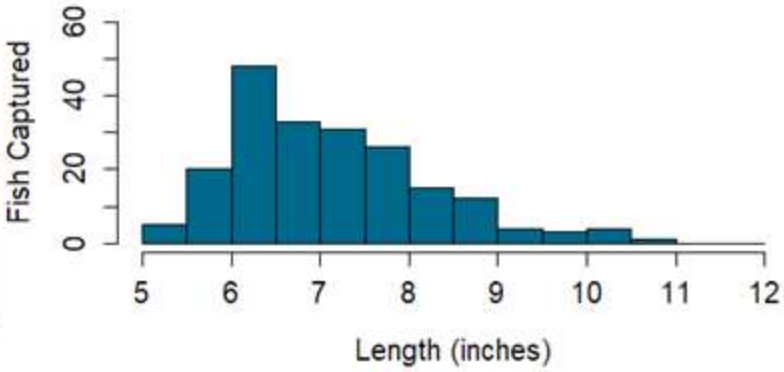
BLACK CRAPPIE

Captured 12 per net-night ≥ 5 inches	
Quality Size ≥ 8"	27%
Preferred Size ≥ 10"	1%



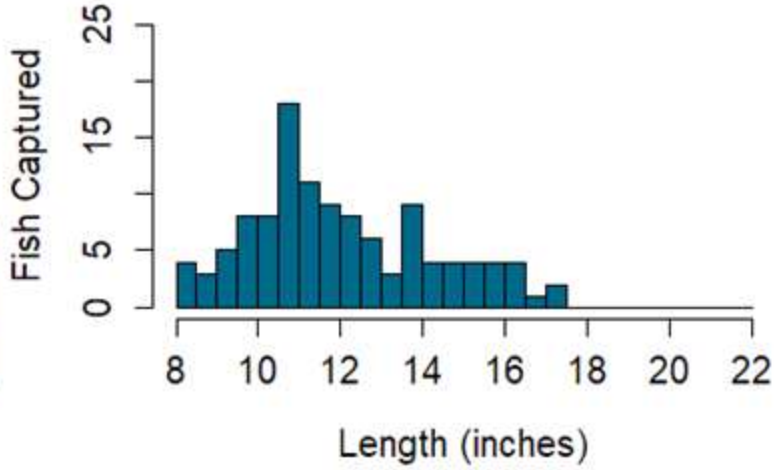
YELLOW PERCH

Captured 9 per net-night ≥ 5 inches	
Quality Size ≥ 8"	19%
Preferred Size ≥ 10"	2%



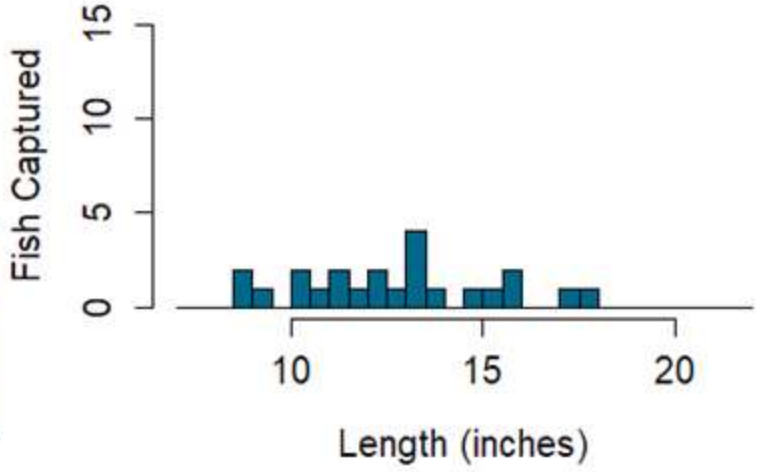
LARGEMOUTH BASS

Captured 20 per mile ≥ 8 inches	
Quality Size ≥ 12"	43%
Preferred Size ≥ 15"	13%



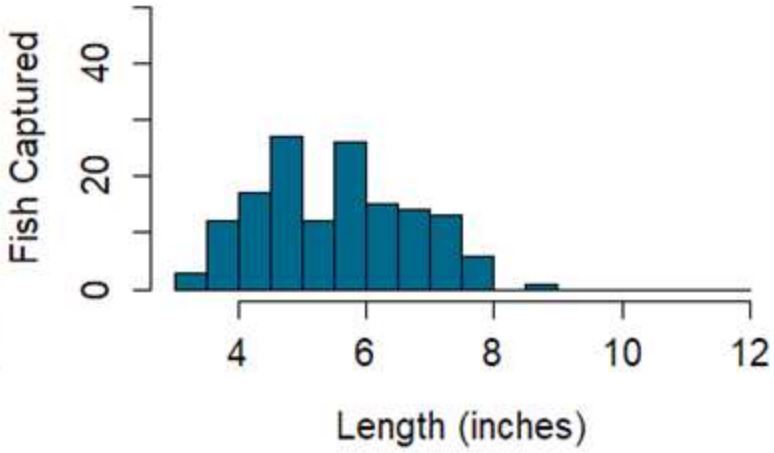
SMALLMOUTH BASS

Captured 4 per mile ≥ 7 inches	
Quality Size ≥ 11"	74%
Preferred Size ≥ 14"	26%
Memorable Size ≥ 17"	9%



BLUEGILL

Captured 100 per mile ≥ 3 inches	
Quality Size ≥ 6”	34%
Preferred Size ≥ 8”	1%



SUMMARY OF RESULTS

This survey was a part of a larger research effort to understand dynamics of gamefish in the Spider Chain of lakes, namely muskellunge and northern pike. As a result, a considerably higher amount of total netting effort was conducted in 2024. This provides a wealth of data on all aspects of the fish community, but also comes with some caveats in how we interpret these data and compare them to past surveys or other lakes. For starters, the amount of netting effort likely “saturated” the lake, meaning nets were out well-beyond the prime period of time for capturing target species. This ends up reducing catch rates for target species, making them appear less abundant than they would in a shorter survey. Additionally, data for some species (panfish and bass) does not include any effort in North Lake, which is often surveyed separately, despite being connected navigationally to the rest of the Spider Chain.

MUSKELLUNGE

Muskellunge catch rates were lower than what has historically been observed in surveys of the Spider Chain. Gear saturation (discussed above) likely provides only a partial explanation for this trend. There is real reason to believe that muskellunge

abundance has decreased over the last decade as pike have become more prevalent in the chain. This dynamic is the focus of a research project that was launched in 2024. We plan to continue to survey this muskellunge population in 2025 and expect to produce an estimate of the total number of adult muskies which can be compared to historic estimates. Size of muskellunge in the Spider Chain has shifted upwards, which will be exciting to some anglers but is also an indicator that abundance has declined. Several musky over 45 inches were captured, which would have been unheard of in these waters in decades past. Tiger muskellunge, a hybrid between northern pike and muskellunge, are also appearing frequently in the lake.

Volunteer Sam Lau with a tiger muskellunge (northern pike x muskellunge hybrid) captured in Spider Lake during the 2024 survey. Several other tiger muskellunge were captured throughout the survey. Photo courtesy of Max Wolter

WALLEYE

Walleye across the entire size spectrum were captured, including many “keeper” fish in the 15-20 inch range. This population is supported by stocking, but is considered a lower-density walleye population. There were an estimated 0.2 (±0.1) adult walleye per acre in North Lake and 0.9 (±0.2) adult walleye per acre in the rest of the chain (1.5 per acre is a common benchmark for a fishable population). The differing walleye densities across parts of the chain are likely reflective of habitat suitability and stocking history. There is a 15-inch minimum length limit for walleye and protected slot of 20-24 inches (corresponding to shaded colors on figure above). The daily bag limit is 3, only one of which may be over 24 inches.

NORTHERN PIKE

Northern pike are a newcomer to the Spider Chain fishery and are largely an unwelcome addition. Pike were first observed in the late 90s and have since become more common than muskellunge (a native species). Pike and muskellunge may compete across several life stages, an interaction we hope to better understand through research. At the same time, efforts are underway to try to manage pike abundance. Anglers are encouraged to keep pike (the daily bag limit is 10, no minimum size limit). Frustratingly, pike size is also poor, with the vast majority of

pike being less than 21 inches. Anglers will need to show a willingness to harvest even very small pike to be able to make a difference in this population.

BLACK CRAPPIE

Black crappie were moderately abundant but generally had unexciting size structure. Only about a quarter of crappie collected in the survey were over 8 inches and just 1% were over 10 inches. The Spider Chain has never been known as a consistent producer of larger panfish and most fishing effort has focused on the popular gamefish species. The daily bag limit for panfish in the Spider Chain is 25 (all species combined).

YELLOW PERCH

Yellow perch were captured at a low-moderate rate. Size structure of perch was also limited.

LARGEMOUTH BASS

Largemouth bass were fairly abundant throughout the chain, with particularly high catch rates in Little Spider and Clear lakes. Unsurprisingly, bass size was not exceptional and most fish captured were in the 10-13 inch range, though a modest portion of the catch included larger fish. There is no minimum length limit for largemouth bass in the Spider Chain to allow some harvest of the abundant smaller individuals. The daily bag limit for largemouth and smallmouth bass is 5 (both species combined).

SMALLMOUTH BASS

Smallmouth bass are less common than largemouth bass throughout the Spider Chain, but offer some good angling opportunities for anglers able to find the habitats they prefer. Smallmouth bass size is also slightly higher than what was observed for largemouth bass.

BLUEGILL

Bluegill were captured at a moderate rate and exhibited size structure that may be attractive to some anglers. Small bluegill are still the norm for this lake, but a sizable percentage of the catch was between 6-8 inches.

Survey Crew: Max Wolter, Scott Braden, Evan Sirianni with volunteers Brian Schommer, Merlin Hibbs, Rick Velasquez, Sam Lau and Trevor Hawver
Reviewed and approved by Aaron Cole