

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

CHEQUAMEGON BAY FALL SURVEY REPORT 2025

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INTRODUCTION

Chequamegon Bay is a 34,000-acre, shallow (mean depth of 28 feet) embayment on Wisconsin's south shore of Lake Superior (Figure 1). It is a productive nearshore area of the lake that supports a diverse assemblage of fishes and serves as a restricted-use area from high-efficiency commercial gears. The Chequamegon Bay Fall Survey was developed to provide an index of relative abundance for important recreational coolwater species, primarily walleye and yellow perch.

METHODS

From 2019 to 2025, walleye and yellow perch were targeted with graded-mesh, monofilament gill nets (400-foot gangs composed of 50-foot nets constructed with 1.5 to 5.0-inch mesh by 0.5-inch increments). Gill nets were fished for one night (24 hours) in six fixed locations (Figure 1) using the R/V Hack Noyes near the beginning of October.

All target species were measured (nearest 0.1 inches), weighed (when possible; nearest gram) and tagged with a uniquely numbered Floy tag on the left side of the dorsal fin. Tag data were recorded for all recaptured fish. Non-target species were also measured or counted depending on the total number and time constraints. Sagittal otoliths were sampled from all deceased individuals of each target species. External marks or diseases (e.g., sea lamprey wound, etc.) were noted. Relative abundance (mean catch-per-unit-effort [CPE]) was calculated as number of fish per km of gill net (stations as replicates).

RESULTS AND DISCUSSION

Eighteen fish species were detected during the 2025 survey (Figure 1).

WALLEYE

Total walleye relative abundance was highest in 2020, driven by a high abundance of smaller fish, and total walleye relative abundance has overall been stable over past five years of the survey (Figure 2). Relative abundance of smaller, sublegal (< 15 inches) walleye was relatively stable from 2021-2024 but was notably low in 2025, which indicates possibly poor recruitment

into the fishery in the upcoming couple years (Figure 2). Relative abundance of harvestable walleye (> 15 inches) has been relatively stable over the past four years (Figure 2).

Median length of walleye across all years in this survey was 18.2 inches (Figure 3). Most sizes of walleye were vulnerable to capture in this survey, which represented fish from 7 to 26 inches. Median length of walleye in the 2025 survey was closer to 20 inches, and median length has increased each year since 2020, as fewer small fish have been observed in recent years (Figure 4).

Age composition of walleye in this survey suggests recruitment of Chequamegon Bay walleye is closely tied to DNR stocking inputs (see also Preheim and Carl 2026) with semi-consistent recruitment in the most recent decade (Figure 5). Stronger cohorts were apparent, such as the 2017, 2019, and 2022 year-classes. The Chequamegon Bay walleye age composition has become progressively older from 2020 to 2025. Mean age increased from 4.1 to 6.4 during that period, which is likely the reason for the increasing trend in size composition (Figure 4) and suggests lower recruitment in recent years compared to earlier in the time series.

OTHER SPECIES

Yellow perch relative abundance was high in 2025, similar to the previous peak in 2021 (Figure 6). Yellow perch relative abundance is very correlated with recruitment of younger fish – years with higher CPEs and recruitment are characterized with smaller median lengths and a concentration of smaller fish (Figure 4). For example, the yellow perch stock had low abundance but larger median length in 2019, when it was composed primarily of age-3 and 4 individuals (Figure 7). In contrast, the yellow perch stock had high abundance but smaller median length in 2025, when it was composed primarily of age-2 individuals. Median length of yellow perch in this survey across all years was 6.9 inches (Figure 3).

White perch relative abundance has increased substantially since 2019 and reached a new high in 2025 (Figure 6). We observed a wider distribution of white perch lengths in the 2025 survey compared to previous years (Figure 4), suggesting 1) the presence of a new strong cohort and 2) multiple cohorts within the stock. Both have led to the increase in total white perch abundance in recent years. Median length of white perch in this survey across all years was 8.7 inches (Figure 3).

Relative abundance of northern pike has been somewhat variable in this survey but has generally decreased from 2019 to 2025 (Figure 6). Median length of northern pike has been generally stable throughout the time series (Figure 4). Median length of northern pike in this survey across all years was 24.8 inches (Figure 3).

White sucker relative abundance has generally increased since 2019 (Figure 6). White sucker median length also increased slightly throughout the same time series (Figure 4). Median length of white sucker in this survey across all years was 17.3 inches (Figure 3).

REFERENCES

[Preheim, A., and D. Carl. 2026. Population Characteristics of the Ashland Walleye Stock in Chequamegon Bay, Lake Superior. WDNR Fisheries Survey Report.](#)

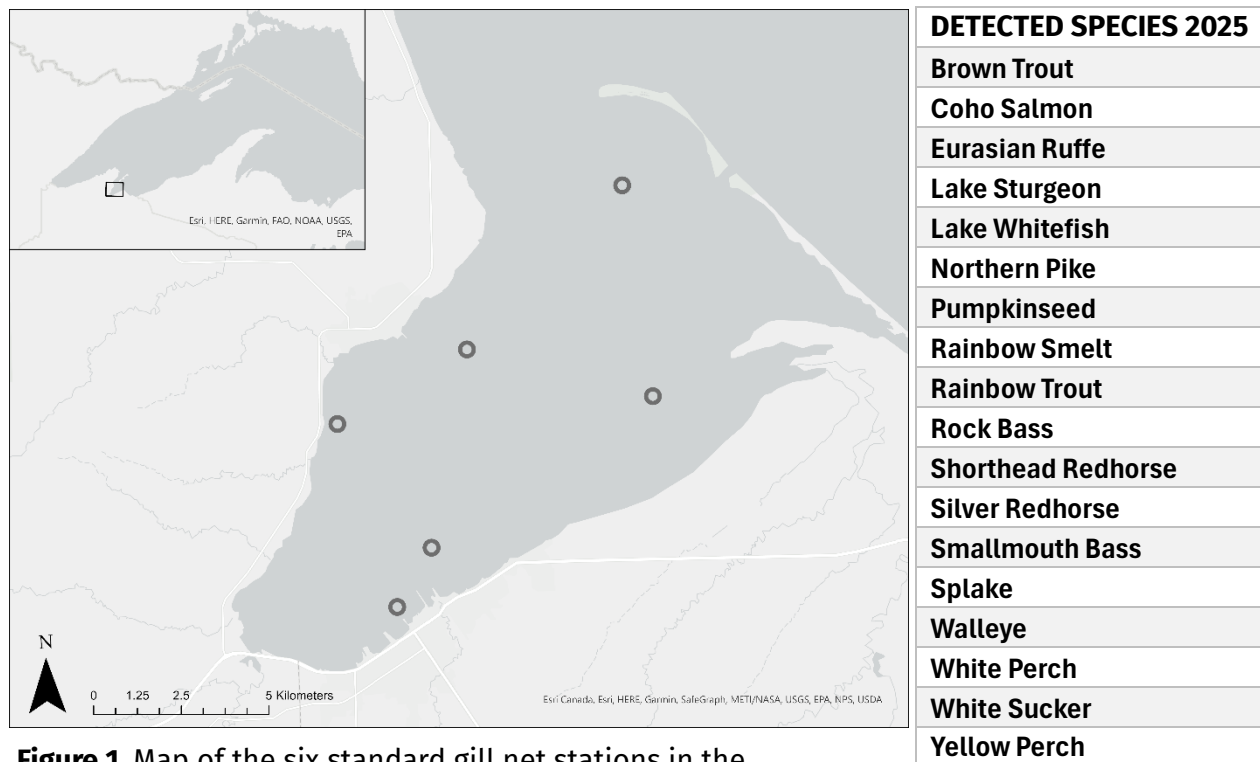


Figure 1. Map of the six standard gill net stations in the Chequamegon Bay Fall Survey (left) and list of the species detected in the 2025 gill net survey (right).

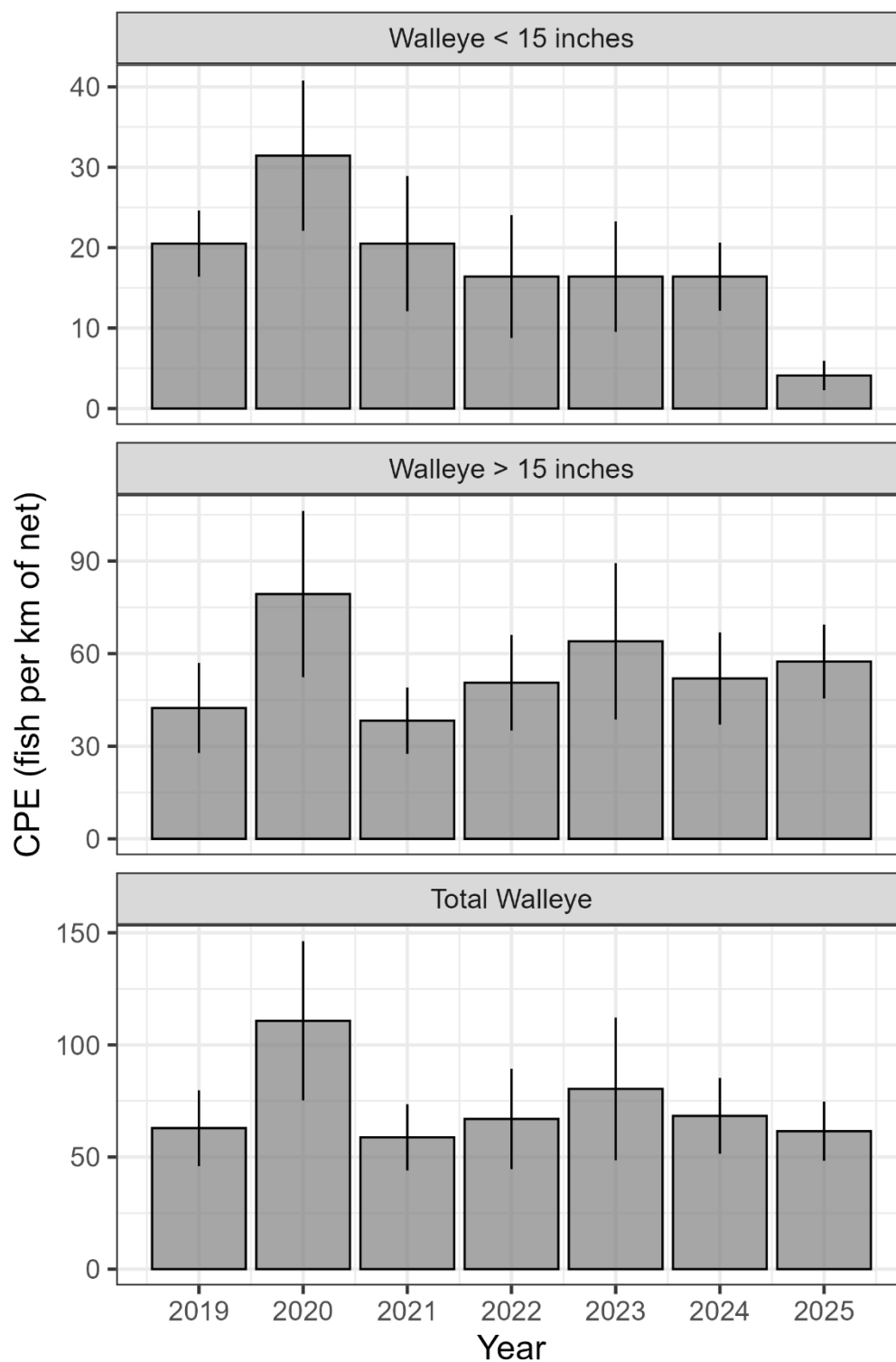


Figure 2. Mean catch-per-unit-effort (CPE) of walleye smaller than 15 inches, harvestable walleye greater than 15 inches, and total walleye catch in the Chequamegon Bay Fall Survey from 2019 to 2025.

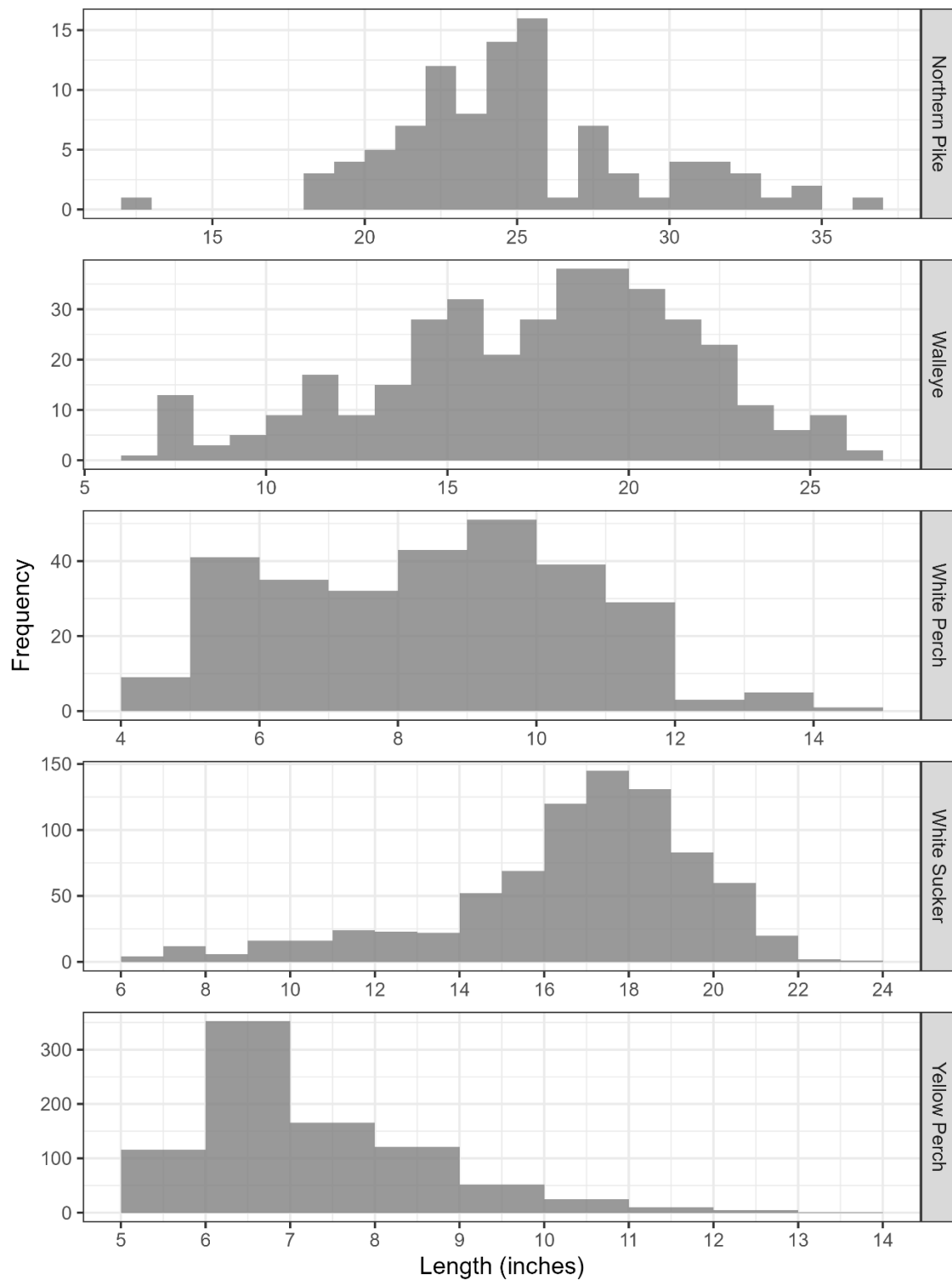


Figure 3. Combined length frequency of 5 common species observed in the Chequamegon Bay Fall Survey, 2019 to 2025.

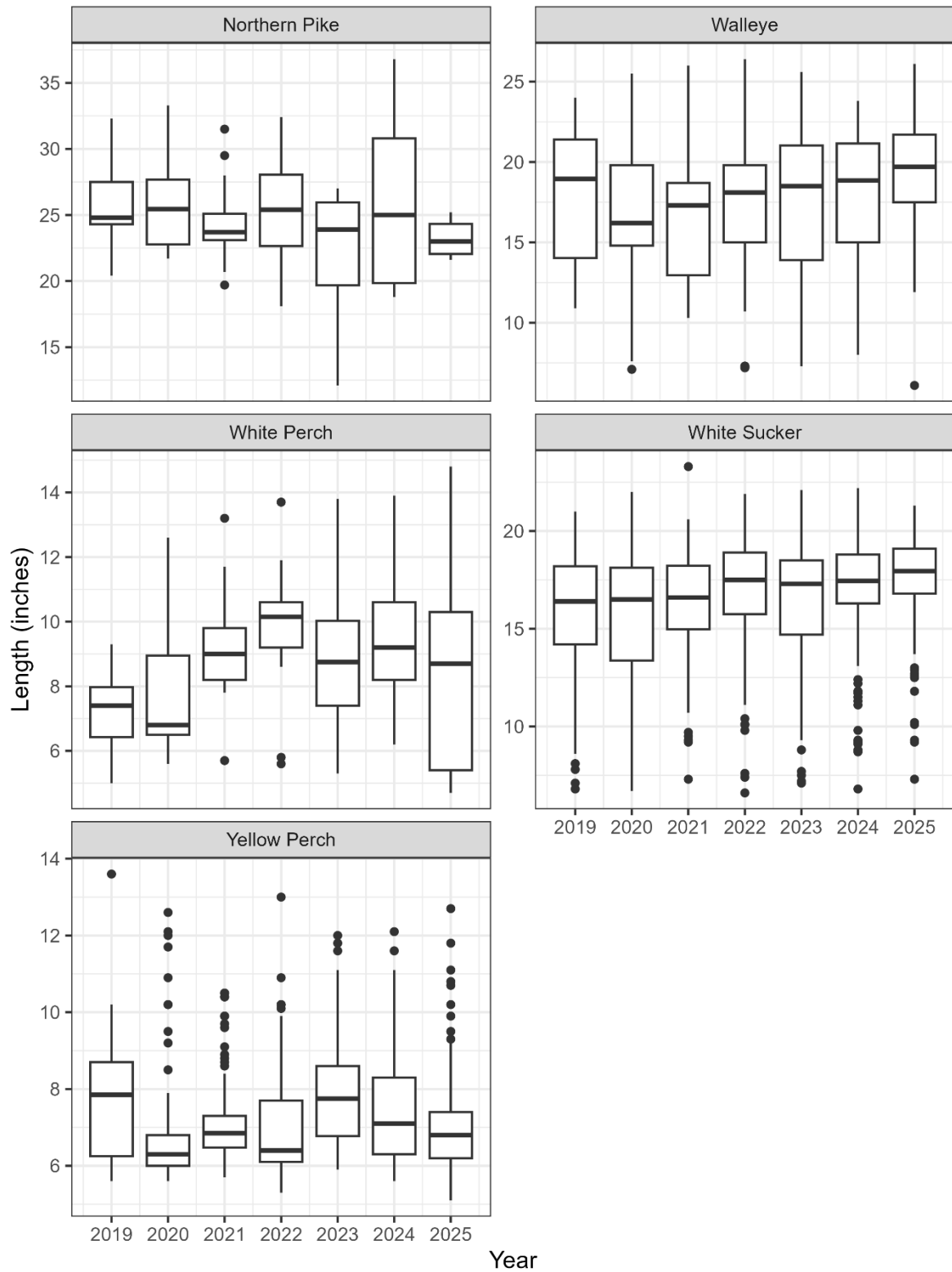


Figure 4. Annual length distributions of 5 common species observed in the Chequamegon Bay Fall Survey from 2019 to 2025.

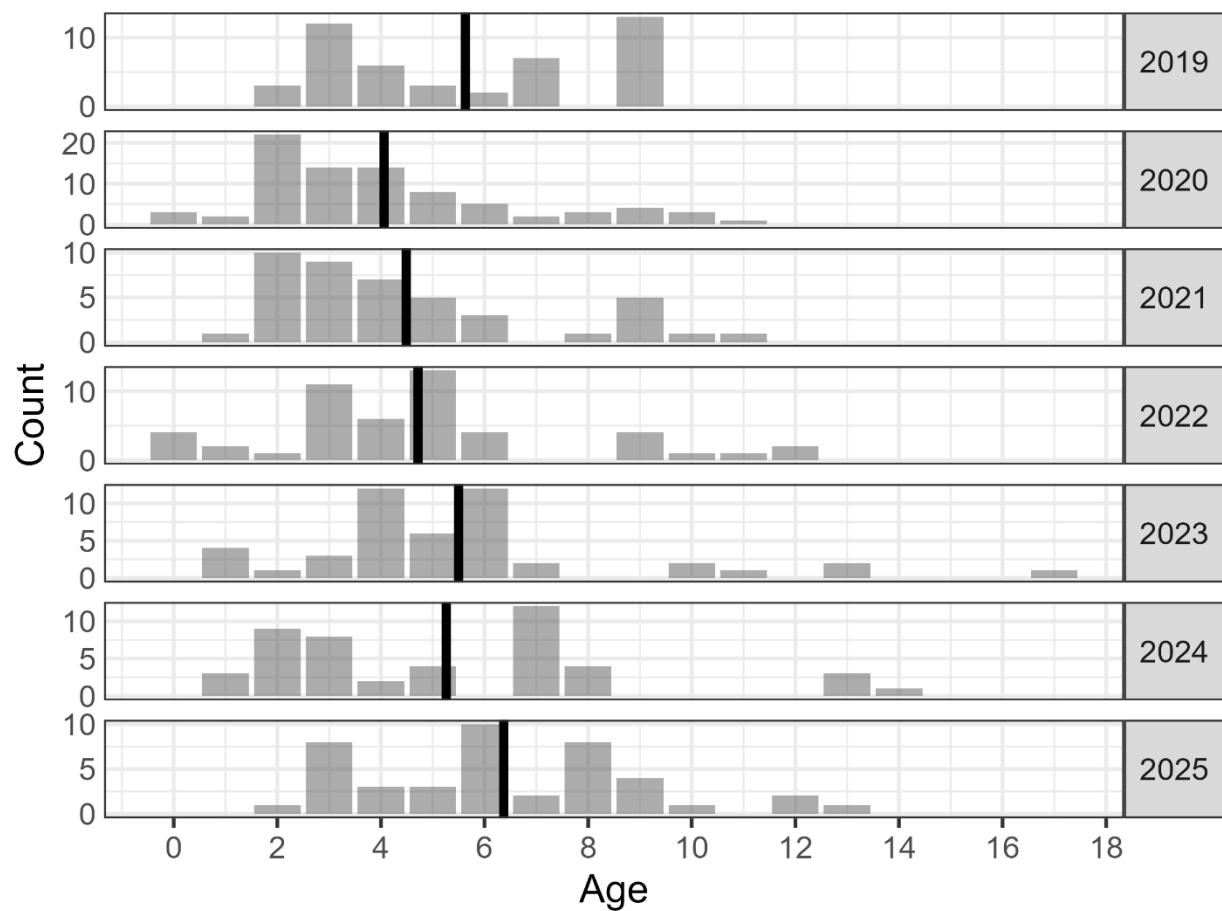


Figure 5. Annual age distributions of walleye observed in the Chequamegon Bay Fall Survey from 2019 to 2025. Vertical black lines represent mean annual age.

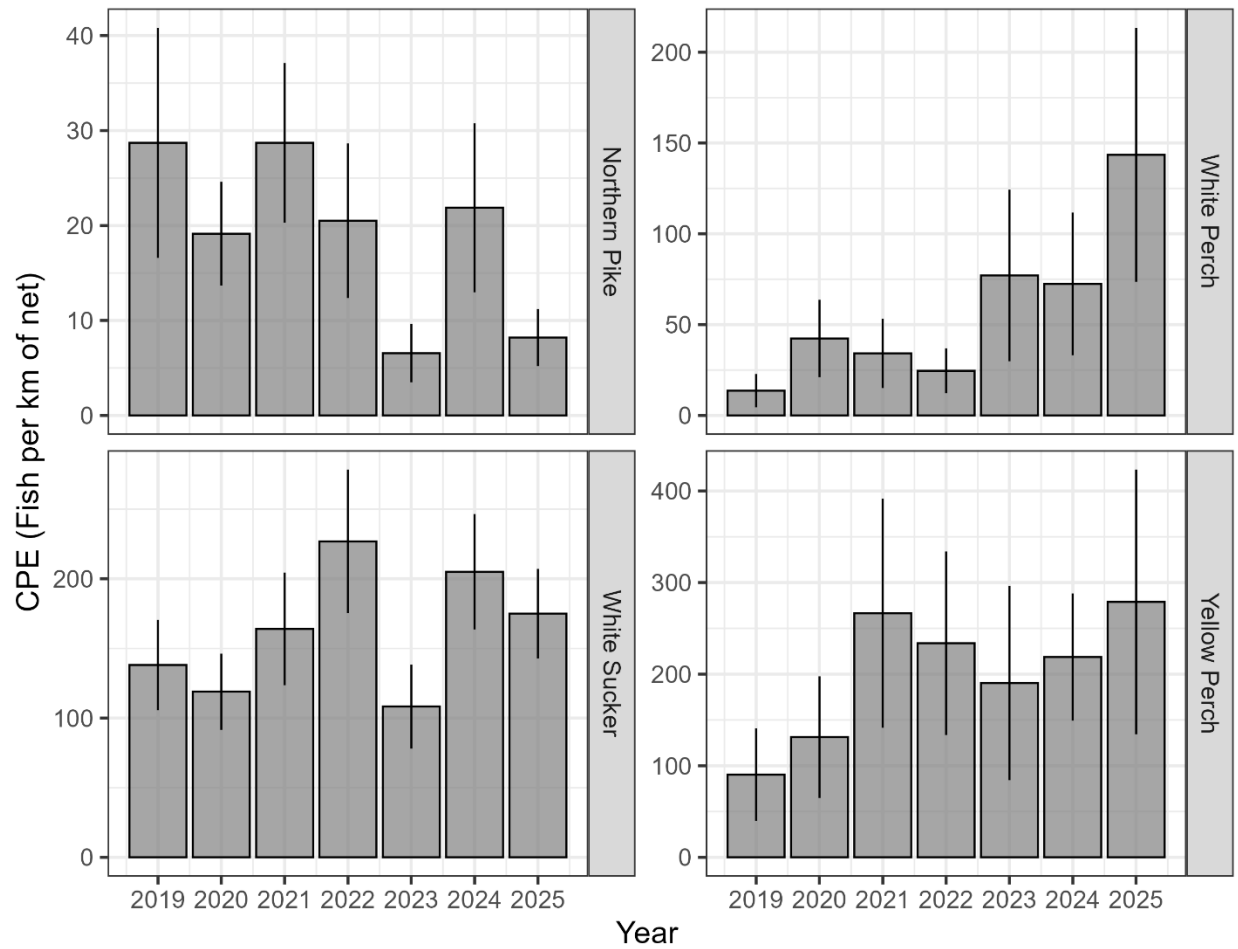


Figure 6. Mean catch-per-unit-effort (CPE) of four common species observed in the Chequamegon Bay Fall Survey from 2019 to 2025.

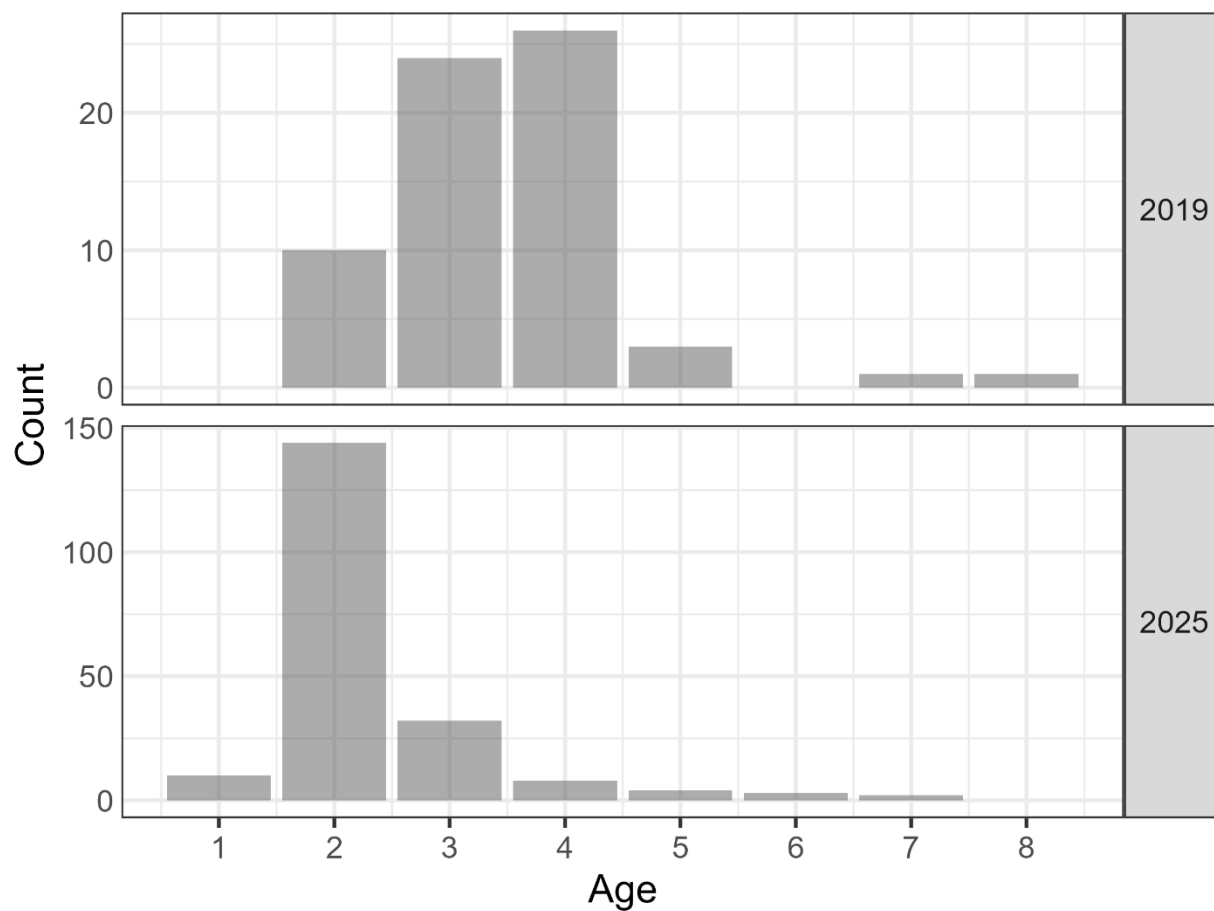


Figure 7. Annual age distributions of yellow perch observed in the Chequamegon Bay Fall Survey in 2019 and 2025.