

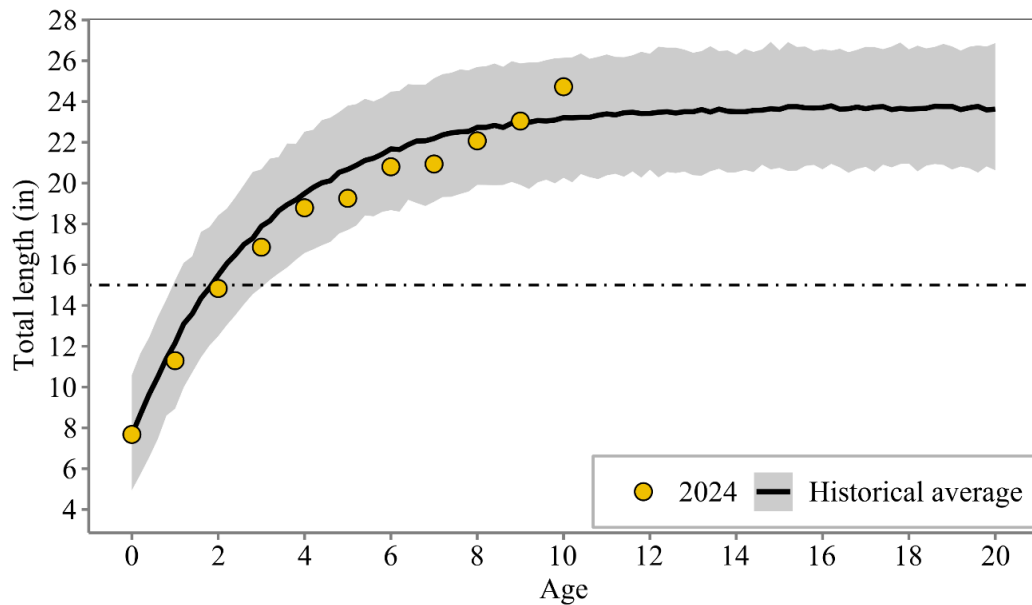
## Walleye Growth on Lake Erie

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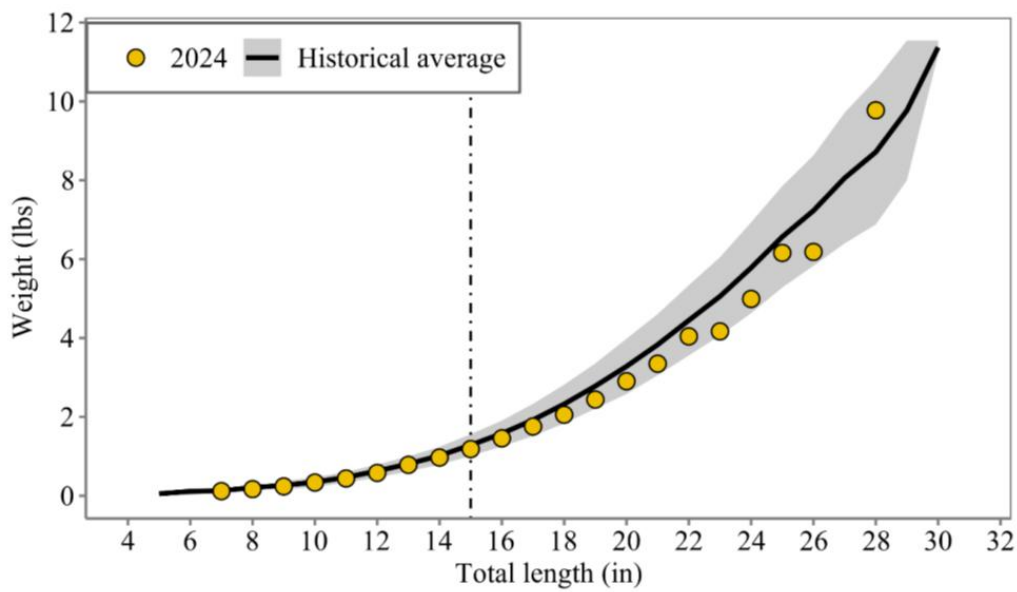
If there is a downside to the string of great walleye hatches we have had on Lake Erie over the last 10 years, it may be the influence that abundance can have on walleye growth. In a previous article for The Hook, Matt Faust used some of this growth data to explain why short walleye have become common in the western basin in recent years. This data also tells an interesting story about walleye growth in general.

First some basics. Fish growth generally depends on the amount of energy (i.e. calories from food/forage base) available to the individual. Growth can be influenced by the amount of food available, competition for this food, and even environmental factors that affect a fish's metabolism. As mentioned in previous articles, adult walleye in Lake Erie often migrate east to deeper, cooler water in summer months to find preferred water temperatures and prey fishes, possibly even to escape competition by spreading out across the entire lake rather than remaining in the west after spawning. Younger, smaller walleye generally stay farther west and do not move as far east as their older counterparts.

The following two figures are from our annual Angler Report (available here: [https://dam.assets.ohio.gov/image/upload/ohiodnr.gov/documents/wildlife/fish-management/Lake\\_Erie\\_Fisheries\\_Angler\\_Report.pdf](https://dam.assets.ohio.gov/image/upload/ohiodnr.gov/documents/wildlife/fish-management/Lake_Erie_Fisheries_Angler_Report.pdf)). The first shows the length-at-age of walleye from our 2024 gillnet survey (yellow dots) compared to the long-term average (black line). The grey area around the average shows the predicted range of lengths for Age-0 through Age-20 walleye throughout the history of the survey. As you can see, walleye growth in Lake Erie can vary. For example, most 10-year-old walleye caught in our survey range from 20" to 26", with occasional larger fish despite our nets not being great at catching the largest walleye in the population.

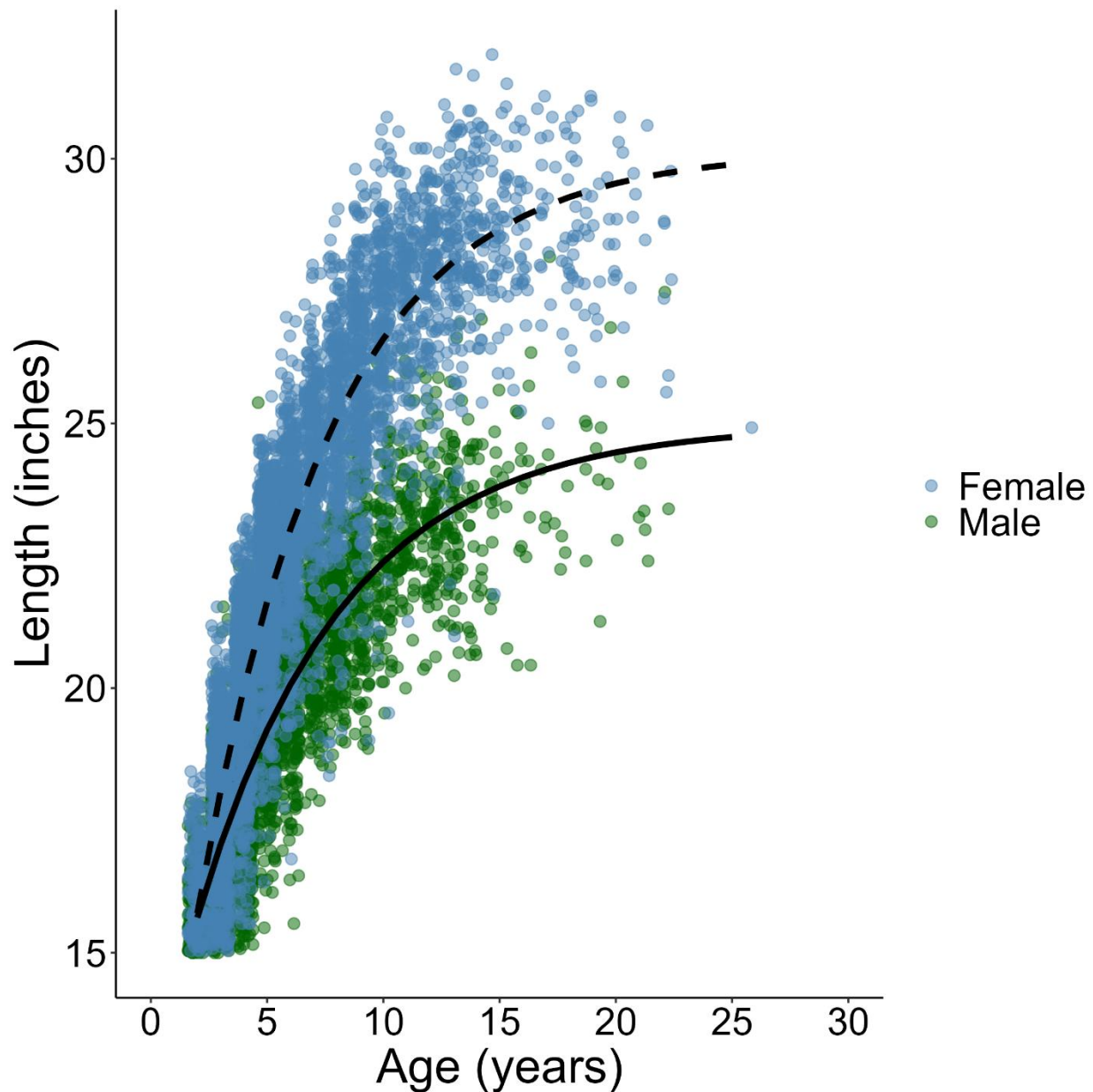


The second figure shows how the weight-at-length of walleye caught in the same fall survey can vary. For example, a 20" walleye can range from 2 to 4 lbs.; a 28" fish (mostly females) can range from 6 to 10 lbs. Clearly, over the history of the survey, there can be a lot of variation in growth in walleye.



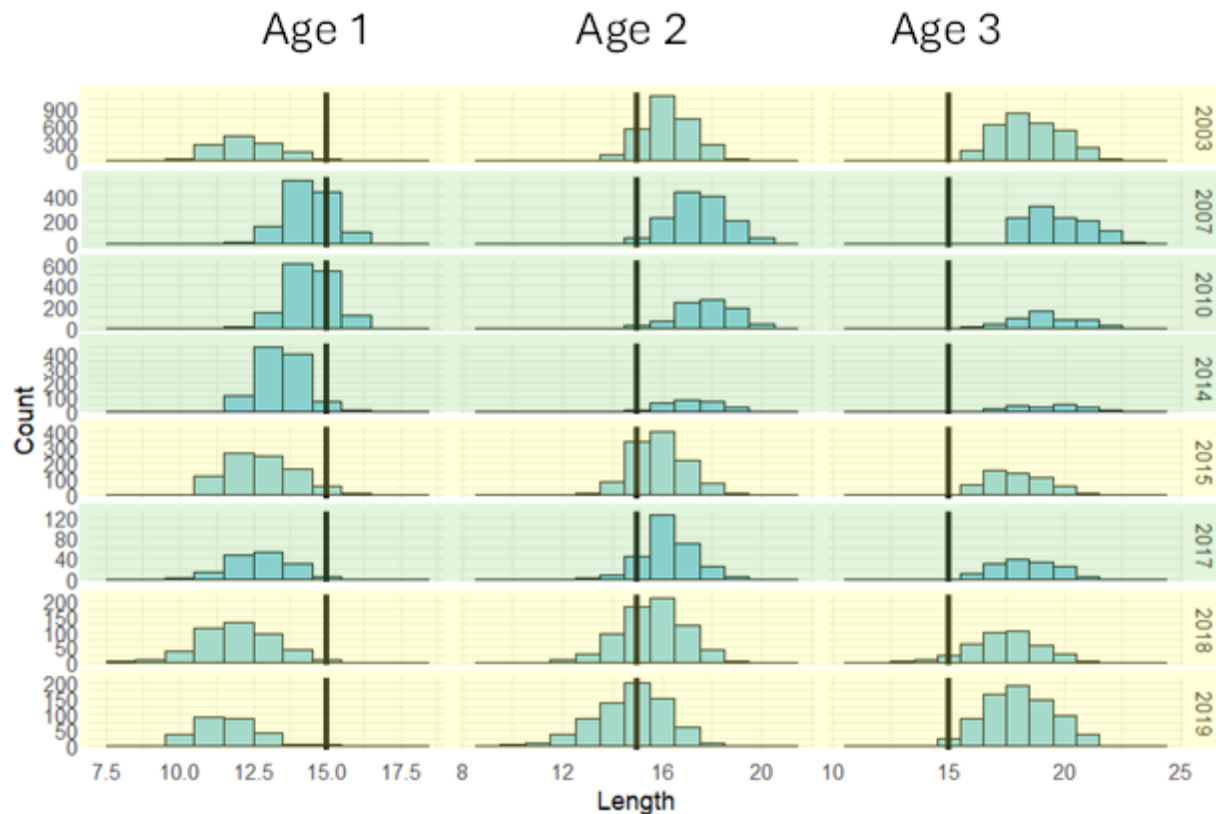
The next figure is a comparison of male (green dots and solid line) and female (blue dots and dashed line) walleye length at age for fish sampled during our creel harvest assessment. Female walleye generally grow larger than males do, with differences in growth becoming apparent at around 20" and longer, although there is some overlap

between the two sexes. There is an advantage for female fish to grow to larger sizes as a larger body can produce more eggs for spawning, which gives them a better chance at successful reproduction. Males don't need the same advantage as they can repeat spawn throughout the spring spawning season. It is also noteworthy that a 21-22" walleye can be as young as age-3 or as old as age-24.



In Matt's previous article he shared the figure below, which shows the range of walleye lengths from Ohio's fall gillnet survey at ages 1, 2, and 3 for large (2003, 2015, 2018, and 2019) and average (2007, 2010, 2014, and 2017) hatches. The black vertical line represents the 15" minimum length limit. Walley from large hatches (yellow highlights) took longer to

reach 15” than those from average hatches (green highlights). In years with large hatches, around half of the walleye caught during fall of Age 2 were 15” long, while most 2-and-a-half-year-olds from average hatches were at or above legal size. This pattern is especially obvious for the 2018- and 2019-year classes, which compete within the year class but also with abundant walleye from the previous hatches.



So, should we be concerned about walleye growth during large hatches or large populations? I would suggest the answer is no. Some variation in growth is natural, like the differences between males and females or natural fluctuations in preferred forage abundance and distribution and environmental conditions. While growth may slow due to competition, walleye are still at healthy sizes even at the highest abundance. While it may be a slight inconvenience that it takes a couple months longer for a large year class to reach the 15” legal size, these large year classes can sustain outstanding fishing on Lake Erie for more than 10 years, far outweighing any inconvenience.