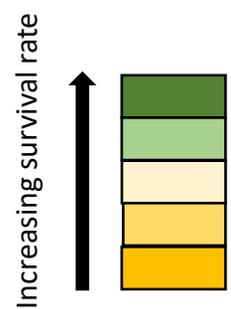
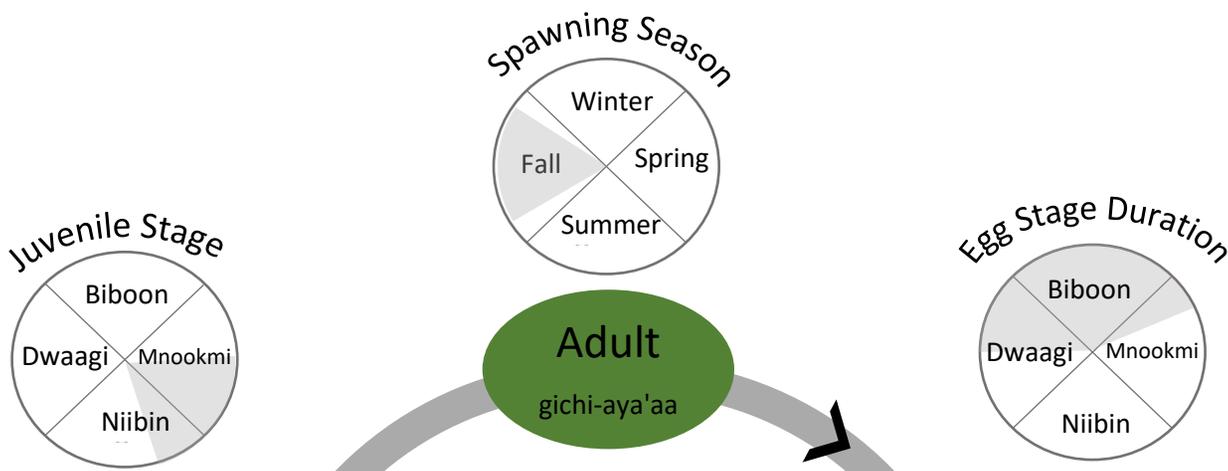


Coregonid Life Cycle



Larvae growth, which is increased with feeding and high temperatures, determines when this stage begins. Coregonids that survive to the juvenile stage will most likely recruit to the fishery!

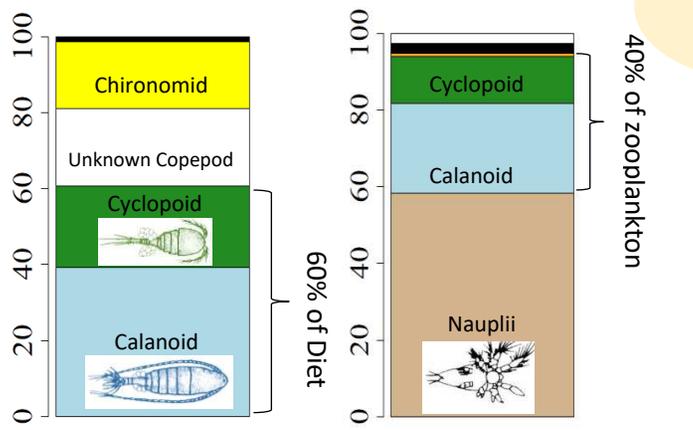
Eggs incubate for 10-15 weeks, which is 5x longer than other Great Lakes fish.

Larval coregonids mostly eat adult calanoid and cyclopoid copepods (blue and green groups), but these zooplankton are limited in the environment.

Longer egg stage means that coregonids are larger when they hatch and can feed more efficiently as larvae than other Great Lakes fish species.

With emphasis on larval stages in Northern Lake Michigan 2015-2019

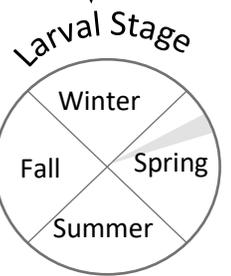
adikameg oodoniibiins bimaadiziwin waawiyebii'igan



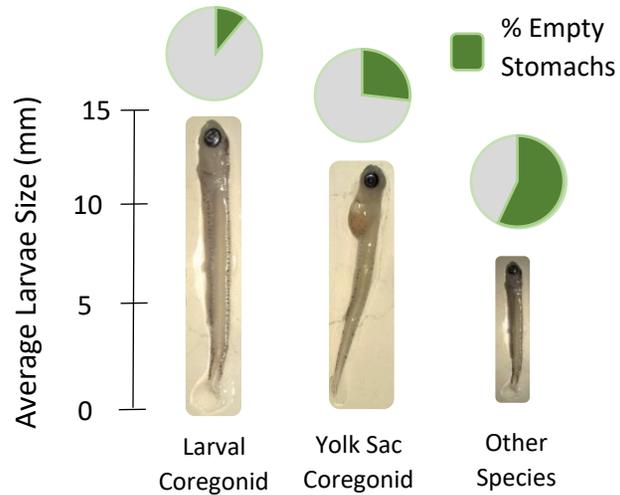
40% of zooplankton

Larvae

Yolk sac larvae



Larvae are most abundant when water temperatures are 8–10°C, typically in May.



Larvae Diets (% Biomass)

Environment Zooplankton (%)

Larval Coregonid

Yolk Sac Coregonid

Other Species

Coregonids in Northern Lake Michigan 1836 Treaty Waters

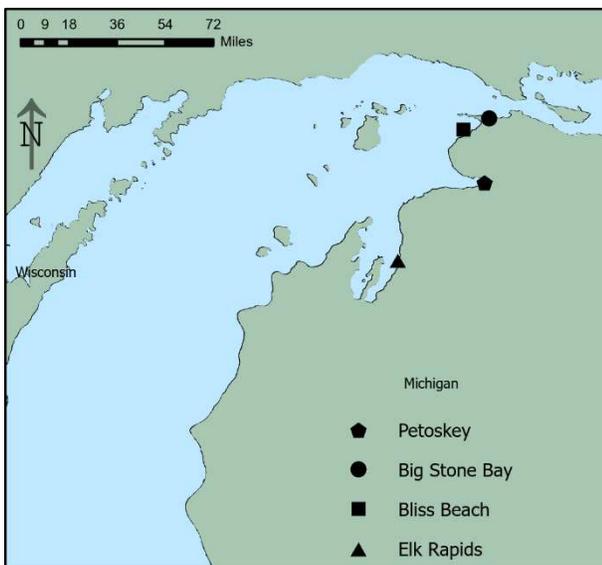


Who are Coregonids?

Coregonids are group of fish relatives (including lake Whitefish and cisco) that are native to the Great Lakes. Coregonids are an important member of the lake community: They interact with nearshore shallow areas when they are young and they interact with deep shallow areas as adults. Native people, including the Odawa, have fished lake whitefish, cisco, and other relatives in the coregonid family for centuries.

Importance of Larval Stage

When coregonids hatch in the spring, they are called fish larvae. Larvae are the future of the adult fishery, and their survival is of great importance. Larvae experience a high chance of mortality because it is much easier for them to be eaten or starve in comparison the later life stages. Fast growth during the larval stage depends on water temperatures and how much larvae eat. However, the abundance and type of zooplankton available for larvae to eat is changing in northern Lake Michigan.



LTBB Odawa Coregonid Larvae Monitoring Program

The fisheries biologists in the Odawa Natural Resource Commission monitor larval coregonids and their food sources in northern Lake Michigan during the spring. Through monitoring, the lake can share with the biologists what larvae are eating, and if food that larvae prefer are available in the environment. Additionally, biologists can track the abundance of larvae and their hatch timing over multiple years. The information shown in the coregonid life cycle (back), are from 2015-2019 monitoring at the four sites shown on the map.

Migwetch

Here we voice gratitude and thanks for the many lifeforms (fish larvae, zooplankton, and others) that provided the knowledge included in this handout.

We also gve thanks for the people who contributed to this projet: Kevin Donner, Paris Collingsworth, Tomas Hook, Bo Bunnell, Patty Aermenio, Darren Kirkendall, Lindsie Egedy, Erika Ededuwa, Dan Burns, Hope Charters, Irene Miles

Zooplankton pictures provided by (citation)

