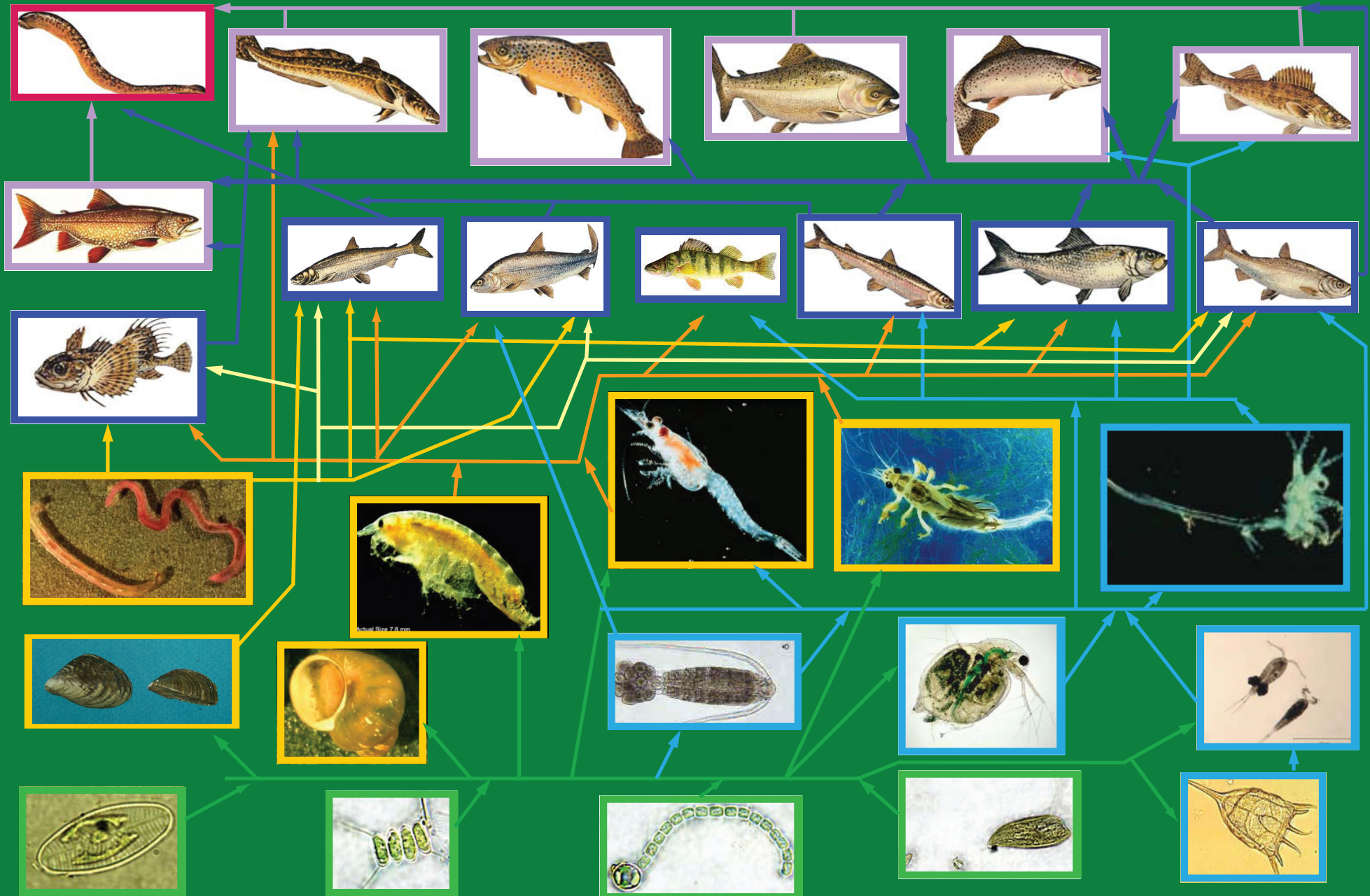




Lake Huron Food Web



Food Web based on model constructed for "Impact of Exotic Invertebrate Invaders on Food Web Structure and Function in the Great Lakes: a Network Analysis Approach" by Mason, Krause and Ulanowicz—2002. Modifications for Lake Huron by Steve Pothoven—2006.

Sea Lamprey



Sea lamprey (*Petromyzon marinus*) - An aggressive, non-native parasite that fastens onto its prey and rasps out a hole with its rough tongue.

Piscivores (Fish Eaters)



Chinook salmon (*Oncorhynchus tshawytscha*) - Pacific salmon species stocked as a trophy fish and to control alewife. Natural reproduction may currently account for 85% of the stock.



Steelhead trout (*Oncorhynchus mykiss*) - A lake strain of rainbow trout, rarely found deeper than 35 feet along the coast. Natural reproduction supplemented by stocking.



Lake trout (*Salvelinus namaycush*) - Once the most valuable commercial fish in the Upper Great Lakes, overfishing and sea lamprey predation nearly eliminated this fish from Lake Huron by the 1950's. Stocking & lamprey control are resulting in it's resurgence.



Brown trout (*Salmo trutta*) - A European species introduced in the late 1880's, mostly supported by stocking. Readily feed on invasive prey species such as alewives, gobies and rusty crayfish.



Walleye (*Stizostedion vitreum*) - Native coolwater species found in nearshore areas. Dominant predator in Saginaw Bay, where restoration efforts appear to have re-established a reproducing population.



Burbot (*Lota lota*) - Elongated, cylindrical, freshwater codfish.

Forage Fish



Lake whitefish (*Coregonus clupeaformis*) - Native found in cold waters including Saginaw Bay in the cooler months. Bottom feeder - diets have shifted to include zebra and quagga mussels as native *Diporeia* have declined. Prized commercial species with annual take exceeding 9 million pounds.



Yellow perch (*Perca flavescens*) Native that schools near shore, usually at depths less than 30 feet.



Rainbow smelt (*Osmerus mordax*) - Carnivorous fish that usually schools in the dark, cool off shore depths. Introduced as food for stocked inland salmon in the 1900s and escaped to Lake Michigan. Currently the dominant forage fish in Lake Huron.



Bloater (*Coregonus hoyi*) - Native deepwater chub feeding on zooplankton and other organisms near the lake bottom. Harvested commercially for smoked fish.



Alewife (*Alosa pseudoharengus*) - Atlantic species that invaded in 1949 via the Welland canal, has experienced recent declines in abundance in Lake Huron.



Deepwater sculpin (*Myoxocephalus quadricornis thompsonii*) - a native glacial relic that lives at the bottom of cold, deep water feeding largely on aquatic invertebrates.



Lake herring (*Coregonus artedii*) - Once abundant in all lakes. Population was reduced greatly by pollution and over-fishing. Now thrive in western Lake Superior.

115 species of fish, including at least 11 non-natives, make their homes in the waters of Lake Huron. 7 species of native fish have been extirpated from Lake Huron. This food web includes only the dominant species.

MacroInvertebrates



Chironomids/Oligochaetes - Larval insects and worms living on the lake bottom. Species present are a good indicator of water quality.



Amphipods (*Diporeia*) - The most common species of amphipod found in fish diets in Lake Huron that began declining in the late 1990's.



Mayfly nymphs (*Hexagenia spp.*) - Mayfly nymphs have been rare in Saginaw Bay since the 1950s, but are common in other shallow bays.



Opossum shrimp (*Mysis relicta*) - Omnivore feeding on algae and small cladocerans. Migrates into the water column at night.



Mollusks - A mixture of native and non-native species of snails and clams are eaten by lake whitefish and other bottom feeding fish.



Zebra and quagga mussels (*Dreissena polymorpha* and *Dreissena bugensis*) - Invaded Lake Huron in 1980's/90's, filter-feeders that remove huge quantities of plankton.

Zooplankton (Microscopic animals found in the water column)



Invasive Spiny waterfleas (*Bythotrephes longimanus*) - Raptorial predator when found at high densities. Can depress mature water-flea populations.



Cyclopoid copepods (*Cyclops bicuspidatus*) - One of 11 carnivorous cyclopoid copepod species in Lake Erie.



Native waterfleas (*Daphnia galeata*) - More than 50 species of native filter-feeding waterfleas live in Lake Erie. Photo Credit : Dr. James F. Haney, 1999



Calanoid copepods (*Diaptomus spp.*) - Eleven species of native calanoid copepods live in Lake Erie. Calanoid copepods are omnivores but prefer active prey.



Rotifers - Omnivorous microscopic animals that package the smallest particles, including small phytoplankton and detritus into a form that can be eaten by larger zooplankton.

Phytoplankton (Algae found in the water column)



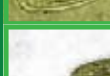
Blue-green algae - Largely inedible and frequently toxic, these algae often form large blooms that contribute to shoreline slime accumulations.



Green algae - Microscopic (single-celled) plants that form the main support of the summer food web. Also includes large nuisance species such as *Cladophora*.



Diatoms - Cold-loving microscopic (single celled) plants encased in silica shells that support the first wave of production in the spring.



Flagellates - Motile, single-celled plants or animals frequently found in high numbers. Most eat bacteria and so may help funnel bacterial products back into the food chain.