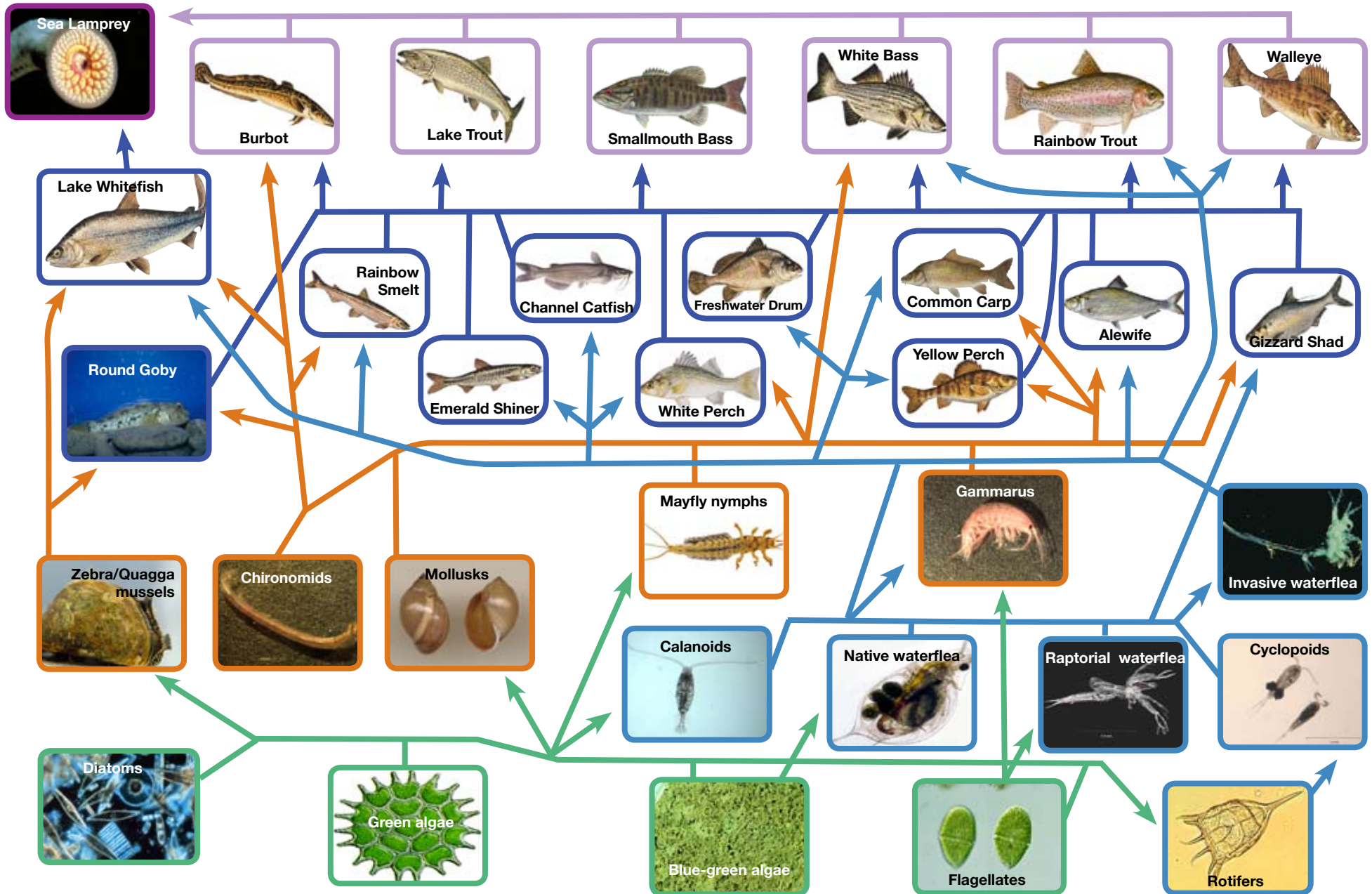




Lake Erie Food Web



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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)



Rainbow trout or Steelhead (*Oncorhynchus mykiss*). A lake strain of non-native rainbow trout, rarely found deeper than 35 feet. Supplemented by stocking.



White bass (*Morone chrysops*). Prefers clear open water in lakes and large rivers. Visual feeders, uses sight instead of smell to find prey.



Smallmouth bass (*Micropterus dolomieu*). Native coolwater species. Intolerant of pollution so is a good indicator of a healthy environment.



Lake trout (*Salvelinus namaycush*). Nearly eliminated by sea lampreys during the 1950s and 1960s. Stocking and lamprey control are resulting in its resurgence.



Walleye (*Stizostedion vitreum*). Native coolwater species found in nearshore areas.



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

Forage Fish



Lake whitefish (*Coregonus clupeaformis*). Native found in cold waters. Bottom feeder—diets have shifted to include zebra and quagga mussels.



Channel catfish (*Ictalurus punctatus*). Prefer cool, deep water with a sand or gravel bottom. Primarily bottom feeders, but also feed at the surface.



Common carp (*Cyprinus carpio*). Large, omnivorous fish. Uproot plants on which ducks feed, muddy the water, and destroy plants and cover needed by other fish.



White perch (*Morone americana*). Invaded the Great Lakes through the Erie and Welland canals in 1950. Diet consists of walleye, white bass, and other fish eggs.



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



Emerald shiner (*Notropis atherinoides*). Very abundant in Lake Erie where they are important forage for sport fish.



Rainbow smelt (*Osmerus mordax*). Native that schools near shore, usually at depths less than 30 feet.



Freshwater drum (*Aplodinotus grunniens*). Gets its name from the odd grunting noises produced by muscles vibrating against the swim bladder.



Alewife (*Alosa pseudoharengus*). Atlantic species that invaded Lake Erie in 1931 via the Welland canal.



Gizzard shad (*Dorosoma cepedianum*). Commonly grows to 9-14 inches. Found in large schools. Has no commercial value.



Round goby (*Neogobius melanostomus*). Invasive, introduced into the Great Lakes via freighter ballast. Feeds on bivalves, including zebra mussels, crustaceans, insects, and small fishes.

Macroinvertebrates



Chironomids/Oligochaetes. Larval insects and worms that live on the lake bottom. Feed on detritus. Species present are a good indicator of water quality.



Mayfly nymphs (*Hexagenia* spp.). A burrowing insect larvae found in warm, shallow water bays and basins, usually in soft sediments. The presence of this sensitive organism indicates good water quality conditions.



Amphipods (*Gammarus*). A common amphipod found in warm, shallow regions.



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 Erie in 1988/89, filter-feeders that remove huge quantities of plankton.

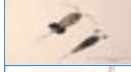
Zooplankton (Microscopic animals found in the water column)



Invasive Spiny waterfleas (*Bythotrephes longimanus*). Visual raptorial predator that can depress native waterflea populations.



Native Raptorial waterfleas (*Leptodora kindtii*). Slow moving and patchy distribution of small swarms at relatively low numbers.



Cyclopoid copepods (e.g., *Cyclops bicuspidatus*). Carnivorous copepods that feed on rotifers and other microzooplankton.



Native waterfleas (e.g., *Daphnia galeata*). Filter-feeding waterfleas that can be important for controlling phytoplankton.



Calanoid copepods (e.g., *Diaptomus* spp.). Omnivores that feed on both phytoplankton and microzooplankton.



Rotifers. A diverse group of microzooplankton that, depending on species, feed on phytoplankton, detritus, or other microzooplankton.

Phytoplankton (Algae found in the water column)



Blue-green algae (aka Cyanobacteria). Often inedible and frequently toxic; blooms in late summer and can look like spilled paint on the water surface.



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.

130 species of fish, including at least 18 non-natives, make their homes in the waters of Lake Erie. Ten species of native fish have been extirpated from Lake Erie. This food web includes only the dominant species.