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# Diet of The Round Goby in the St. Clair River and Lake St. Clair, 1993

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*Abstract*.–The round goby *Neogobius melanostomus*, a species indigenous to the Black and Caspian Sea region of Europe, was first discovered in the St. Clair River in 1990. Since that time, they have expanded into Lake St. Clair and have also been collected from Lake Michigan and Lake Erie. Food habits of the round goby in the St. Clair River and Lake St. Clair have not been previously described. The stomach and intestine of round gobies obtained in 1993 from St. Clair River anglers (84 fish) and Lake St. Clair survey trawls (39 fish) were examined. Only one of the 123 fish examined was empty. The most common food item consumed for both locations was the non-indigenous zebra mussel *Dreissena polymorpha*. The only other important component of the diet for St. Clair River fish was caddisfly larvae. Zebra mussels were found in the diet of 96% of all St. Clair River round gobies; in contrast, the diet for Lake St. Clair round gobies consisted of amphipods, snails, ostracods, fingernail clams, caddisfly and chironomid larvae, in addition to zebra mussels. Although zebra mussels were found in 67% of all Lake St. Clair round gobies, the frequency of occurrence for several other food items, such as amphipods (63%), was relatively high. The study revealed little evidence of piscivory in round gobies from either area. Only one fish, a 28mm brook stickleback *Culaea inconstans* was found in the 123 round gobies examined.

Two species of gobies, the tubenose goby *Proterorhinus marmoratus* and round goby *Neogobious melanostomus*, were discovered in the St. Clair River in 1990. Jude et al. (1992) described the initial discovery of these two species and briefly discussed their possible effects on the native benthic fish community. Since 1990, round gobies have become a nuisance species for walleye *Stizostedion vitreum* anglers in the St. Clair River. Round gobies aggressively attack earthworms, the preferred bait for walleye in the St. Clair River. In fact, many long-time walleye fishermen believe the abundance of round gobies and their appetite for earthworms is impeding walleye fishing success in the river. Tubenose gobies have not been caught by anglers.

Observations by recreational divers in the St. Clair River also suggest that the abundance of round gobies has increased dramatically since 1990. These same anecdotal reports indicate that abundance of previously common species such as logperch *Percina caprodes* and sculpins *Cottus* spp. declined sharply during the same time period.

We enlisted the help of walleye anglers in collecting round gobies from the St. Clair River. We also incidentally caught round and tubenose gobies in trawls in Lake St. Clair, while collecting yellow perch *Perca flavescens* for a