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Introducing Our Non-game Fish

Some would claim that watching fish can be just as much fun as catching them. Either from shore with the help of Polaroid sunglasses or, even better, from under the water with a mask and snorkel, fish-watching can indeed be an absorbing pastime. In addition to our many well known game species, the Kawarthas boasts a number of fascinating non-game fishes to observe, as well. They are definitely worth getting to know.

The minnows (family Cyprinidae) make up the largest family of freshwater fish in the world. Approximately two dozen species can be found in our area. This diverse family even includes the carp. Because many species are superficially similar, identification can be difficult, but certainly not impossible. To complicate matters however, the term “minnow” is often incorrectly used to describe any small, non-game fish.

The creek chub is one of our most common minnow species. Along with another common minnow, the fallfish, it plays the role of top predator in streams where trout are absent. Creek chub average 10 cm (4 inches) in length but can grow much larger. Fallfish sometimes reach lengths of up to 50 cm (20 inches). These species are very similar in appearance but can be told apart by the presence of a black spot at the base of the dorsal fin in the creek chub. Fallfish also have dark pigmentation on the front of each scale. Both of these species are also popular bait fish.

Most minnow species are spawning this month. Chub spawn in clear streams when the water temperature reaches 16 to 21 C. The eggs are deposited in a mound-like nest of stones constructed by the male. Breeding males have orange lower fins and blue on the side of the head. They also develop 6 to 12 large, sharp tubercles on the head. Because of these tubercles, this species used to be known as “horned dace.” It is possible in the spring to watch creek chub spawning and defending nests by sitting quietly on the bank of a clear, gravelly stream at the head or lower end of a riffle.

Fallfish, too, have interesting spawning behaviours. Their nests are truly impressive and can reach a diameter of more than a metre in size.

Two other common minnows in our area are the closely-related bluntnose and fathead minnows. Only half the size of a creek chub, fatheads are olive-brown with a short, flat-topped head. The snout is blunt looking. There is also a dusky stripe running along the side of the fish. This species is able to survive in poorly-oxygenated, warm water habitats that are unsuitable for most other species of fish. These habitats include muddy pools and ponds, intermittent streams and even ditches. Fatheads have a very long spawning season and extremely high reproductive rates.

Red-belly dace is another familiar minnow to many people. They inhabit small streams and ponds, most often in or near beds of emergent and floating plants. They commonly occur with creek chubs, fathead minnows and brook sticklebacks. Dace are a small fish, rarely exceeding 75 mm (3 in) in length. The male sports a vibrant scarlet belly during the mating season. The dace’s spawning ritual is quite unusual in that a group of males will chase a female into a mass of algae where she will lay several dozen eggs. These are then fertilized by the males. It is thought that usually two males and one female are involved. The female then heads off to another algal mass to do the same thing.

Northern redbelly dace will often mate with other species of dace and sometimes even form all female populations. They are an interesting and beautiful fish to have in a school or home aquarium.

Another non-game species to get to know is the Iowa darter. Members of the perch family, darters are rarely seen swimming or resting in normal fish fashion but spend most of their time remaining motionless on lake and stream bottoms. Then, just as the name implies, the fish will suddenly dart forward in a quick burst. The Iowa darter averages about six centimetres in length and frequents the shallow, slow-moving waters of streams, rivers and small lakes. They prefer habitats with plenty of submerged aquatic plants and algae. Spring males are so vividly colored that you might think you are looking at an escapee from a tropical fish aquarium. The only other species in the Kawarthas that rivals it is the pumpkinseed. In the May-June breeding season, the male's belly becomes a flaming orange or yellow with alternating blue and red or orange bars on the sides. The lower fins become yellow-orange and, to top it off, the first dorsal fin is banded in blue, red and green.

The Iowa darter is an ideal species for fish-watching because it spawns so close to shore. The male establishes and defends a definite territory. The female deposits her eggs beneath undercut banks of lakeshore or along the shore of quieter sections of streams. The sticky eggs are laid on fibrous roots or organic debris. The eggs receive indirect protection from the male as he continues to guard his territory and to attract additional females. The best places to watch for these fish are in the quiet, shallow waters along the shore of a lake. They are best viewed underwater, but be careful not to stir up the bottom. Iowa darters are found throughout the Kawarthas.

Finally, the brook stickleback deserves a special mention. Belonging to its own, separate family, the stickleback has a series of spines ("stickles") down the back. Its most unique characteristic, however, concerns its reproductive behaviours. In the spring, the male establishes a territory, turns jet black in color. Using a secretion from the kidney, he glues fragments of vegetation to the stems of aquatic plants and actually builds a three-dimensional nest about the size and shape of a golf ball. He even fashions an entrance way. The male then proceeds to make a series of darting movements along with nips and nudges to coax the female into the nest. After she lays her eggs, the male chases her away, and then enters the nest himself and proceeds to fertilize the eggs. Once he is done, he will do his best to lure in other spawning females. The hard-working father guards the eggs until they have hatched and the young have grown to a centimetres or so in size. The young then leave the nest and fend for themselves. The brook stickleback is another species that makes an interesting aquarium fish.

Late May and early June is also a great time to walk along the banks of the Otonabee River or any of our lakes and observe the nesting behaviour of more familiar fish like bass, pumpkinseeds and bluegills. And, even if you have no idea of the species, it is always a pleasure just to watch the intriguing behaviours and movements of fish in their mysterious underwater world.

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