

Ponds and Lakes



Vermont Fish and Wildlife Habitat Fact Sheet

We sail out into open water. We have come to where the current stops and the water is gathered into reservoirs of many sizes and shapes, the receivers of the water from the uplands before it continues on its way to the ocean.

These reservoirs are usually classified as ponds or lakes, but the distinction is not always clear. Ponds are on the whole smaller and shallower than lakes, and have more extensive bottom vegetation. Since ponds are shallow, their waters are heated uniformly in summer or cooled uniformly in fall, whereas lakes are deep enough to develop thermal layers. In summer, a warm layer lies above a cool one; in winter, cool above warm (in reality, the lower layer remains more constant in relation to the changeable upper layer). As we shall see later, this stratification, or lack of it, determines to a great degree the types of fish that inhabit each body.

Some lakes occupy sites that have been around for millennia, dating back to geological processes associated with crustal movements and plate tectonics more than 500 million years ago. Lake Champlain, as we mentioned before, sits in a deep, long trench thought to be created when a massive block of bedrock dropped down more than 700 feet between the Adirondacks and the Green Mountains; Lake Dunmore, near Brandon, is a low place in a series of metamorphic-rock folds on the western side of the

Green Mountains. Of course, these ancient sites subsequently were much modified by the glaciers, and most of the lakes we see today owe at least part of their character in one way or another to the ice sheets.

Fish

More than 80 species of fish inhabit Vermont ponds and lakes, from the tiny minnows to one of the largest freshwater fish in the world, the lake sturgeon. Most of these species are the so-called warm-water variety, those that prefer ponds and shallow lakes, where the waters are uniformly heated in summer and abundant vegetation grows at shoreside.

Of these warm-water fish, the yellow perch is, by far, the most common. It is often ignored by sport anglers but it actually constitutes, in total pounds taken, the most important food fish in Vermont. It can be caught almost any time, anyplace, and is most popular in winter, when it can be taken through the ice and its flavor seems best. Chain pickerel, northern pike, largemouth bass, sunfish, bullhead, suckers, and some people regard these as "trash" fish, worthless for sport and harmful to game species, but others value them. For example, northern pike have long been considered by many to be vicious predators; some people will take every opportunity to eliminate them, including shooting them in flooded fields, marshes, and shallows as they spawn in the early spring. Other

people, however, look at the northern pike as a fine sport fish, with a spirited fighting nature and a good trophy size; many come miles just in search of the pike.

Rainbow trout are often found in the cold waters, as are the lake trout. The latter, largest of our trout species, prefers the very deep lakes where there is a high dissolved-oxygen content. It is a nonmigratory native species, feeding and spawning in the deepest parts of the open water (unaccountably, however, in some lakes outside Vermont it spawns in shallow areas). A fine sport fish summer or winter, the lake trout may weigh 25 pounds or more and maintains stable populations in such cool northern lakes as Willoughby, Maidstone, and Seymour, and Great and Little Averill ponds. It is known to have inhabited Lake Champlain in fair numbers before 1880 but, for as yet unexplained reasons, has virtually disappeared from there. There are several hypotheses for the fish's decline, among them severe depredation on young trout by the smelt (a species that shares its region of the lake) and a general worsening of conditions in Lake Champlain. These, however, seem implausible, given the general good health of Lake Champlain today. The most likely principle cause, say many fisheries biologists, is the sea lamprey.

Birds

On Vermont lakes in summer, especially the large ones, the "sea

gulls" are ever-present in greater or lesser numbers. The ring-billed gull is the species seen most often in the state now, as it also feeds in the smaller lakes, swarms around town dumps, and follows the plow in many a farmer's field. It is interesting to note that it had not even been sighted in Vermont until the 1940's, at which time its population exploded everywhere in the East and moved inland. It even outnumbers the herring gull on Lakes Champlain and Memphremagog, and may, in fact, be driving that gull out. The competition focuses on the shared breeding sites: both species nest on islands in Lake Champlain, some of which are really no more than rocky emergences from the lake. Here ringbills form large colonies and the herring gulls smaller, more isolated groups on the fringes of the ringbills', where they seem barely able to hang on. Over 7,000 pairs nest (1997) on Young Island (off Grand Isle), and on one of the Four Brothers Islands more than 12,000 ringbills now nest each year. Elsewhere on the lake small colonies of them are also scattered, occasionally sharing the sites with colonies of the common tern.

Excerpted from Charles Johnson's book
Nature of Vermont