

Hardwood Forest



Vermont Fish and Wildlife Habitat Fact Sheet

Legend has it that the early American hardwood forest was so large, dense, and uninterrupted that a squirrel, if it wanted to, could travel from East Coast to the Mississippi River without touching the ground. An exaggeration, no doubt, but nevertheless it must have been a grand and imposing scene, even a forbidding one, that stood before those first white settlers.

But the wilderness meant something other than grandeur to the pioneers of those years, and their approach to it and way of life have left only fragments of the former virgin forest. In our state these areas are but small bridges from presettlement Vermont today.

But though the virgin woodlands no longer dominate our landscape, and despite the changes in the forest that have been wrought, Vermont's woods have retained much of their original character. The hardwood trees that were cleared by our ancestors have returned, and although they exist in a different form from their predecessors, they are still a major component of the state, spatially, spiritually, and in terms of economics.

This is the forest of fall color, picture postcards, and maple syrup. It is a forest of great commercial uses and potential. A forest inspiring art, literature, and song. A place of recreation. It has been the area in Vermont most densely settled, and it harbors a wide variety of plants and animals.

Plants

So the picture of Vermont's plants is not simple, the state's being situated as it is, between several distinct forest types, the Northern and Southern, the Eastern and Western. When the great variety of landscapes, soils, bedrocks, and habitats is added as another component of the makeup of Vermont, we see the reason for Frank Seymour's statement, in *The Flora of Vermont*, that the flora here is five times as diverse as the rest of New England's.

Before the new leaves of the forest have unfurled completely, even before the snow has gone in many places, the wildflowers begin to blossom as the sun warms the sodden ground. The spring wildflowers ("spring ephemerals") of the Eastern United States are a special-in fact unique-flora. As in the case of the trees, China has a similar spring flora, since it has similar geographical and climate regions, yet even there the species differ considerably from those of North America. The native herbaceous plants of Vermont are mostly perennials, taking many years to grow to flowering age, and each fall dying back to a rootstalk. They bloom very quickly during that brief time between the end of winter and the full leafing out of the trees, when the canopy closes out the sun. Broadly distributed in the more generalized northern hardwood habitat are such early-blooming wildflowers as violets,

red trillium, Canada mayflower (false lilly-of-the-valley), and spring beauties.

Where soils are thicker and richer, and especially where calcium has leached out of the parent rocks, the diversity of species increases dramatically. Very early in spring rises bloodroot, with its delicate, almost ethereal white flower. Like other embers of the poppy family, bloodroot has an opaque, poisonous sap, but, as noted by its name, the sap is red rather than the usual white. In addition to bloodroot, blue cohosh, round and sharpe-lobed hepaticas, spring beauty, Virginian waterleaf, and a number of others sometimes carpet this forest floor. Curiously, one common species of the rich woods, especially along river bottomlands, wild leek (or wild onion) put up its leaves at this time; its flowers come later, after the leaves have died. This is the plant whose Abenaki name of "winooski" has been given to a major river and town in Vermont.

Mammals

The mammals in Vermont's hardwood forests, especially the larger animals, have figured importantly in the state's economy through the years, both in the early days of white habitation, when trappers supplied fur to markets far beyond Vermont's borders, and now, when hunting and other recreations dealing directly or indirectly with wild animals are so popular.

In many ways, mammals have been the barometers of what has happened to the land. Numerous species were driven out by the initial cutting of the virgin forests; some left and never returned, but others—often with human help—have come back with vigor to the new forests of the twentieth century.

Before the white settler ever set foot in Vermont, far-ranging wilderness mammals lived over the region. The caribou, today found mostly in Canada and Alaska, was undoubtedly here, probably living in coniferous-forest swamps. So, too, was the elk, or wapiti, now an inhabitant of only our Western mountainous states, but which formerly was the most widely distributed of North American hoofed animals. It is certain the elk was in Vermont, because its antlers and bones have been found in a bog in the western part of the state. The scourge of the northland wilds, the wolverine, a large weasel of legendary ferocity, once lived at the northern limit of the state. And the bison, too, may have roamed into southern Vermont, where the burning of the forest by Native Americans produced an open range that would have been suitable for grazing. Although we have no evidence of the bison's presence in Vermont, it is highly likely they lived here, as their bones have been found in Massachusetts, near Cape Cod.

These species disappeared early, bring true wilderness sojourners and incompatible with the changes brought by the white settlers. They probably were gone prior to 1750. Others remained into times of denser settlement but eventually they gave way to land clearing and civilization. The timber wolf was one of the more famous of these animals.

Birds

After the piercing winds and cold-white silences of winter, the Vermont forests soften under the spring song of birds. But these sounds of rebirth actually begin much earlier, for those who tune an ear. The great horned owl signals the start of its courtship during warm spells in late January or early February. This largest of our common resident owls is the first bird of the season to mate and raise young in the hardwoods or mixed forests, and since the eggs are usually laid about March 1, the parents must incubate them continuously to protect them from freezing temperatures and heavy snow. Its feathers certainly help in energy conservation: the bird is well insulated from talon to beak, and even the toes and nostrils are covered. Among raptors, the great horned owl has the reputation of being fierce, the fiercest of all owls.

Breeding somewhat later, and slightly smaller and more a resident of moist woodlands and richer bottomlands than the great horned owl, is the barred owl. This species has no "ear" tufts, is steely gray-and-brown-streaked, and has one of the most recognizable calls: a hollow, barking phrase that has been described as "who-cooks-for-you, who cooks-for-you-all." The screech owl and the saw-whet owl are the smallest year-round owls in Vermont. Both are cavity-nesters and often use the abandoned holes excavated by woodpeckers. The screech owl is a miniature version of the great horned owl, but has two color phases, red and gray, the reasons for which are not understood. The saw-whet owl is an elfish little thing, half a foot high, and preys on small rodents and insects of the night. It is bold and tame, often perching within arm's

each, at eye level, cocking its head as it looks at you.

Excerpted from Charles Johnson's book
Nature of Vermont