# A Work in Progress: Restoring the Great North Woods

The McCoy-Chapman Forest, acquired in 2018 by the Mahoosuc Land Trust, is a 500-acre preserve featuring most of Maine's varied forest types, as it rises more than 1,000 feet from the Androscoggin River to the lower slopes of the Mahoosuc Range. The second largest MLT property, it is bisected by the North Road, running parallel to the river from east to west, with acreage in the towns of Gilead, Bethel and Newry. It lies four miles west of Valentine Farm in Bethel, another popular MLT destination on the Androscoggin, acquired in 2016.

### Managing for Wildlife

As you encounter the upland sections of McCoy-Chapman to the north of the kiosk, you may see evidence of recent harvesting activity, occurring in sections designated under comprehensive management plans for the property. As you climb the slopes, you'll see gradual yet distinct changes in the composition of the forest and the animals that live there.

Properties like McCoy-Chapman serve as a gateway to the Globally Important Bird Area outlined by Audubon for 17 million acres of northern and western Maine. Maine forests are "baby bird factories" for dozens of species, and even more pass through in their spring and fall migrations. Many species of wildlife – including mammals, amphibians, insects and plants – will benefit from careful management, but birds are one of the most visible, and audible, of the signs indicating healthy forests.

The populations of songbirds in the United States fell by almost 30% from 1970 to 2020 – some three billion birds. But conservation works: Of bird species listed as threatened or endangered, the extinction rate has been slowed by 40% over the same period, with notable success stories. Birds increasing their numbers since then include waterfowl and raptors – species that had the benefit of concerted efforts to improve their habitat and reduce chemical threats.

Keeping and improving healthy forest habitat can be a complex undertaking, with active land management an important part of the picture. Beginning in September 2020, MLT has contracted with loggers, guided by licensed foresters, to carry out prescriptive harvesting in accordance with a management plan completed in October 2019.

Traditional harvesting, as carried out for two centuries on this property, tends to leave even-aged stands that lack diverse habitats and the necessary "structure" for many species to prosper. Restoring the "mosaic" of forests as they existed earlier will take time and, over the next two decades, a variety of forestry and habitat restoration techniques will be employed. Without similar projects going on throughout the Mahoosuc region, these steps will recreate unfragmented wildlife corridors along rivers and streams, and throughout the landscape.



Old log landing

More than 120 different birds have been identified on MLT properties along the Androscoggin River, and even more will be discovered on McCoy-Chapman as surveys continue. Along the river and streams, you may see the spotted sandpiper and winter wren. In the woods, depending on the habitat, there are a number of characteristic species.

The scrub growth of a recent clearing is hospitable to the common yellow-throat and chestnutsided warbler, examples of the migrating species that make Maine a birding hotspot every spring. The tangled growth of a mixed forest understory is a good place to look for another warbler, the black-throated blue. And, in mature softwood such as these tall white pines, you may find the Blackburnian warbler hanging out. You'll likely have to look into the upper canopy to find the scarlet tanager, though its song can be heard even when you can't see it.

Some of our most beautiful songsters are found in dense growth and along downed logs – the hermit thrush and ovenbird, which often continue their music into summer. Finally, the cavities carved by the northern flicker into "snags" (standing dead trees) provide homes for many other animals – not only chickadees and nuthatches, but bats, flying squirrels and owls.

Looking at the life cycle of a single species can show how all types of forest cover work together. The Canada warbler (Cardellina canadensis) needs three "stories" of forest cover – the canopy (or



The charismatic male Canada warbler has been called "flashy as an opera singer," in its distinctive yellowbreasted breeding plumage, with yellow-and-white spectacles, orange legs, and a song to match. It isn't seen on bird feeders, the open woods, or treetops. For nesting, it prefers a damp tangle of downed trees, ferns and moss in which to nest. The male stands guard in a branch about 10 feet above the ground and the female incubates the eggs.

A late arrival among warblers, Canadas spend only a short season in Maine before winging 3,000 miles to their winter homes on the lower slopes of the South American Andes. Without more suitable northern habitat, their numbers – which have declined 60% over the past half century – will continue to drop. The Canada warbler is now on the "Yellow Watch" list for Partners in Flight. Projects like McCoy-Chapman's habitat restoration can help ensure that the warbler's song continues to ring through our woods.

### How It's Done

The harvesting you'll see in these woods is very different from that practiced on commercial timberland, where the price at the sawmill is among the principle objectives. Prescriptive cutting includes many techniques specifically oriented toward wildlife and habitat restoration. Forest management practices to improve habitat will be carried out in selected areas of McCoy-Chapman, guided by two plans complementing each other: a forest management plan guided by a licensed forester and two forest ecologists; and a 10-year Wildlife Habitat Restoration Plan developed by the New England Forestry Foundation. These improvements are supported by the Healthy Forest Reserve Program through the Natural Resources Conservation Service.



In the upland sections, forest stands of varying size are slated for harvests over the next decade that will achieve the objectives laid out by MLT. Thinnings for wildlife habitat will take place on stands ranging from 15 to 47 acres. Small gap openings are slated for parcels between two and eight acres.

Three harvests are currently planned for the next decade: in 2020, 2025 and 2029. Each will focus on a different part of the property, and are illustrated in the accompanying map. Each will produce different ecological and habitat benefits. Each tree to be cut will be marked by a forester; trees important to wildlife will be marked by a large "W," to make sure they are preserved.

The first harvest will be conducted primarily on stands just to the north of the North Road, those marked H and K. Weaker trees will be removed, while stronger trees with good growth potential, known as "dominant" will be kept. Some dead trees, known as "snags," will be retained, too, since they are important homes for cavity-nesting birds, such as woodpeckers. Downed logs can serve the same purpose.

The scheduled 2025 harvest will move to higher slopes, with cutting taking place in stands E, F, G and H. Stand F is where a "mast tree" harvest is planned. Finally, in 2029 harvests are slated in Stands A, C and D, the highest elevations and the most northerly portions of McCoy-Chapman.

Today, McCoy-Chapman is typical of forest tracts throughout western Maine that have been harvested primarily for homestead sustenance and commercial values for more than two centuries. Such cutting, while sustainable, produces mostly even-aged stands with trees of the same size and growth potential. Returning the forest to a condition that existed before European settlement depends on careful, patient management. By cutting selected plots within the forest, it is possible to mimic the natural processes of storm damage from wind and icing, which clears out the overstory and allows new seedlings to develop.

Sensitive areas, and in fact nearly one-third of the forest, will see no harvesting. Natural Habitat Areas, including Chapman Brook's three branches retain extensive buffers, as does the entire frontage along the Androscoggin River. These areas feature the only known "rare species," designated by the State of Maine – a plant called pubescent sedge (Carex hirtifolia), which will be protected. This perennial plant grows up to two feet in height, and – true to its name – the stem, leaves and seed sack all have dense "pubescent" hair growing on them. Sedges and grasses are an important food source for many wildlife species, including waterfowl and black bear. On McCoy-Chapman, the sedge has been found near the confluence of Chapman Brook and the Androscoggin River, where a suitable combination of light and soil nutrients exists. It should, of course, remain undisturbed.



White pines



### Bear Trees

The "mast tree" project on Stand F will focus on large beeches that can produce huge amounts of the seeds and nuts craved by large mammals. Mast-bearing trees, including oak, beech, cherry and birch, help sustain wildlife populations when other food sources are lacking. Mast is vital to the health and survival of many species, including large mammals such as deer and bear.

American beech, once a mainstay of the northern forest, but whose growth cycle has been disrupted by beech bark disease, can produce thickets of sprouts that inhibit the development of stronger trees. Beech is often found mixed with poorly formed red maple and aspen in these "patches." This is the species that's targeted for improvement cutting on a site where "bear trees" have been observed and documented.

Scars from black bear claws on the smooth-barked beeches are one of the northern forest's remarkable sights – and a clear sign that these trees benefit important wildlife species. A bear climbs directly up the trunk of larger beeches in pursuit of the food it most desires, leaving marks much like those a lineman climbing a pole. These scars persist for many years, and bears may return to the same trees, over and over.

The patch cut will remove growth from around the bases of healthier beeches, including the thickets of beeches that indicate dying or diseased stems. Over time, the healthy crowns will spread, producing more mast and more opportunity for bears to fatten up before their long winter slumber.



Androscoggin maple

### Lasting Benefits

Countless other species of mammals, amphibians and birds will benefit as, over time, the forest begins to acquire the diversity of size, age and species distribution necessary to full forest health.

Timing is important, too. There will be no harvesting, for instance, during the nesting season for birds and fowl, running from early spring to the end of June. When properly prepared, both winter and summer harvests can be carried out.

The natural regrowth of harvested acreage will produce woods more pleasing to humans but, more importantly, inviting to a much larger number of plants, birds and mammals. As an ecological assessment states, "McCoy-Chapman has the capacity to support long-term, sustainable forestry operations without compromising the site's important connectivity functions, biodiversity values, water resources and recreational uses." Active management, it says, can "increase long-term forest health, climate resilience, and timber value."

The efforts you see being put into practice here are being made in cooperation with other landowners in the region who are pursuing the same forest values. Several adjacent and nearby parcels have restoration plans or are in the process of acquiring them. In years to come, the entire Mahoosuc region can become a model for 21st Century conservation, as existing public lands – such as Grafton Notch State Park and a major Maine Public Reserved Land area – are integrated with the efforts of private landowners aimed at scientific study, recreation and enjoyment, as well as restored habitat.



Chapman Falls

## What to Expect



Visitors can expect to see evidence of human activity at various points of the property, both past and present. The remains of a few buildings and abandoned log piles flank the trails. Old log "landings," where timber was collected before transport, now have the benefit of providing openings in the canopy, enhancing diversity by supporting a variety of plant and animal species.

The aftermath of recent, low-impact logging may also be visible. Forests are dynamic, and are constantly changing, even though many of the changes are evident only through close and repeated observation.

Also be prepared to spend time exploring the esker to the south, Chapman Brook to the north. Even the road section has its highlights, including a towering stand of old-growth white pines, that will be afforded special protection.

Experience is a great teacher. The continuity of ownership and management of this forest by the Chapman and McCoy families, and now the Mahoosuc Land Trust, provides a solid foundation for monitoring and assessing change within this small part of the great North Woods, as global warming reshapes the world.

Preserving natural resource values and promoting wise human use, while adapting to new conditions, is MLT's vision as it welcomes everyone seeking to experience the outdoors in new, thoughtful and imaginative ways.



Journey's End





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