





# *FOREST RESOURCES*

When the first European settlers arrived in Kent, they found a patchwork of habitats: grasslands along the rivers, areas of open, park-like understories and a mature forest of virgin hardwoods and softwoods interrupted by stands of young and middle-aged growth. This mix provided specialized habitats for a wide variety of native plants and animals. In the next two centuries nearly 80% of the existing forest was either clear-cut or burned for agriculture and the booming iron industry. The remaining 20% has been logged time and again and diseases previously unknown in the New England forests have taken hold to wipe out important native species such as chestnut and American elm. It is widely believed that no virgin forest remains in this part of Connecticut if, indeed, any remains in the state at all.

### **The Big Picture**

Today, the State of Connecticut is more than 60% covered with second-growth forest. Nearly 85% of those forests are held by private landowners, including land trusts and utility companies. They are much more uniform in age and species and are thus considerably less diverse than the virgin forest here before European settlement.

Kent is more wooded than most Connecticut towns with approximately 79% of its acreage forested. Of this percentage, four-fifths is privately owned. Landowners with at least 25 contiguous acres of woodlands may qualify for a tax break under Public Act 490 by submitting an Inspection Report by a Certified Forester to the Town Assessor's Office. Some 68% of the forest land in Kent is currently covered by the PA 490 program. As of 2007 this broke down to 202 tax parcels owned by 103 property owners who average 161 acres of forest land each. (see Map #14 PA-490 and Unprotected Open Space)

Kent's forests provide habitat for fish and wildlife, protect watersheds and soils, absorb precipitation, purify the air, sequester CO<sup>2</sup> and moderate climate, as well as affording many types of recreational activity. The preservation and maintenance of large blocks of unfragmented forest—areas not fragmented by roads, development or large open areas—are of even greater consequence. Many species—both plant and animal—can maintain “critical mass,” or survival populations, only in large undisturbed areas. This applies most definitely to such larger mammals as bears, bobcats and coyotes, but also to many bird and tree species. Consequently, the areas in Kent managed primarily as forests must be given particular attention in assessing forest and woodland viability.

### **Forests and Successional Growth**

Forest vegetation communities can be distinguished because of differences in regional climate, i.e. North or South, inland vs. coast, altitude, sun exposure (warmer on south-facing slopes, shadier and cooler on north-facing slopes and in ravines). Hydrology (dry, wet or prone to flooding), soil (deep vs. shallow, acid vs. alkaline), fast or slow drainage, natural and human disturbance, and temporal stage in the natural succession of farmland to forest, also contribute to the speciation of forest communities.

Most of Kent's current forests have established themselves on what was once abandoned farmland, and have gone through a predictable series of successional stages. In the first stage the abandoned fields are taken over by fast-growing sun-loving herbaceous weeds and grasses, including ragweed, asters and goldenrod. The “old field” stage that follows includes shrubs such as juniper, sumac and gray-stemmed dogwood. Today, it also brings non-native, invasive shrubs such as multiflora rose, barberry, Russian olive, Oriental bittersweet and honeysuckle, as well as sun-loving, fast-growing pioneer trees.

In Kent, which is a transitional area between southern and central New England as far as climate is concerned, the first trees to establish are often red cedar and gray birch on warmer sites and white pine, gray birch, aspen and shrubby cherries in cooler locations. Cedars and pines are unappetizing to cattle and will withstand grazing.

When allowed to develop further, tree species such as red and white oaks, red and sugar maples, beech and ash will invade and grow into a dense, young, even-aged forest, shading out the red cedar and other shade-intolerant plants. Young forests are crowded with thin, tall saplings. Some species, such as sugar maple, American beech, hemlock and flowering dogwood survive very well under shade. Sugar maple seedlings can sprout up quickly to assume canopy status themselves when gaps in the canopy permit the entrance of more sunlight.

Eventually a mature second growth forest develops, consisting of several vegetation layers and a mix of species adapted to the local climate, hydrology and soils. The succession picture is more complex than this, however. Under extreme environmental conditions, as on high, windy peaks, in streambeds, or where mowing or grazing takes place, this succession may be arrested in an early stage. Blow downs or other disturbances may cause local regressions, too, temporarily reintroducing pioneer species.



### **Major Forest Communities and their Ecological Preferences**

Kent is situated in the transition zone between the Northern Hardwood Forest and the Central Oak-Hickory Forest. It is dominated by deciduous trees that shed their leaves each fall as an adaptation to cold winters and relatively long, warm and humid growing seasons. Species that are more common further north tend to be more dominant on cooler and more humid sites, whereas southern species dominate on drier and more exposed locations. The major communities are as follows:

**Northern Hardwood Forest** of central New England, including Northwest Connecticut and the Great Lakes region. In our area this community is found mostly on north facing slopes, on moist lower slopes and in shaded valleys. The dominant trees are sugar maple, American beech, yellow birch and eastern hemlock, with lesser numbers of paper birch, gray birch and quaking and bigtooth aspen. Striped maple and flowering dogwood are common understory trees; mountain laurel and hobble bush are common shrubs on these lower slopes as well. White pine may establish on exposed or disturbed sites, or in planted stands.

In nutrient-rich, moist conditions such as are found in the marble valley of Kent, white ash and American



basswood become common, while the herbaceous ground cover grows in greater abundance. In shady ravines hemlocks often dominate.

**Oak-Hickory Forest** of the Appalachians and southern New England. These are our typical upland forests, dominated by nut-producing trees. Dominant canopy trees today are red, black, scarlet, white and

chestnut oaks, pignut, mockernut and bitternut hickories, red maple, and sometimes tulip tree. Until the 1920s and the spread of chestnut blight, American chestnuts were the most numerous. In the understory witch hazel, hop hornbeam, and mapleleaf viburnum are common species. On bedrock summits and ledges the vegetation more often is dominated by low, open scrubby woodlands with pitch pine, chestnut oak, bear oak, and a low shrub layer of lowbush blueberry and huckleberry. In disturbed areas black locust or red cedar may be dominant.

**Northern Riverine or Floodplain Forests.** These are found along rivers and streams on alluvial soils with regular flooding. Along faster sections of the Housatonic River, for example, sycamore, box elder, red maple, American elm, bitternut hickory and eastern cottonwood are dominant trees, with black willows in the shrub layer. Silver maple becomes the dominant floodplain tree where the river has very little gradient. Spicebush, silky dogwood, arrow wood and elderberry are most common floodplain shrubs.



**Swamp Forests.** Most swamp forests in the region are dominated by red maples on poorly-drained, water-saturated soils, with skunk cabbage a typical presence in the herb layer. In nutrient-rich conditions such as in the marble valleys, black ash, yellow birch, pin oak and swamp white oak are often present, too. Spicebush, red osier dogwood, alders, willows, alder leaf buckthorn, and sedges are common in the understory. On poorly-drained, non-alkaline till soils with large water fluctuations, as found along many small streams and drainage ways, only black ash and American elm commonly join the red maple. Ferns replace the sedges

here. In nutrient-poor depressions with acid soils and seasonal flooding, pin oak, black gum, hemlock and/or white pine can be present, with dense thickets of high bush blueberry, swamp azaleas, winterberry and sweet pepperbush in the more open areas.

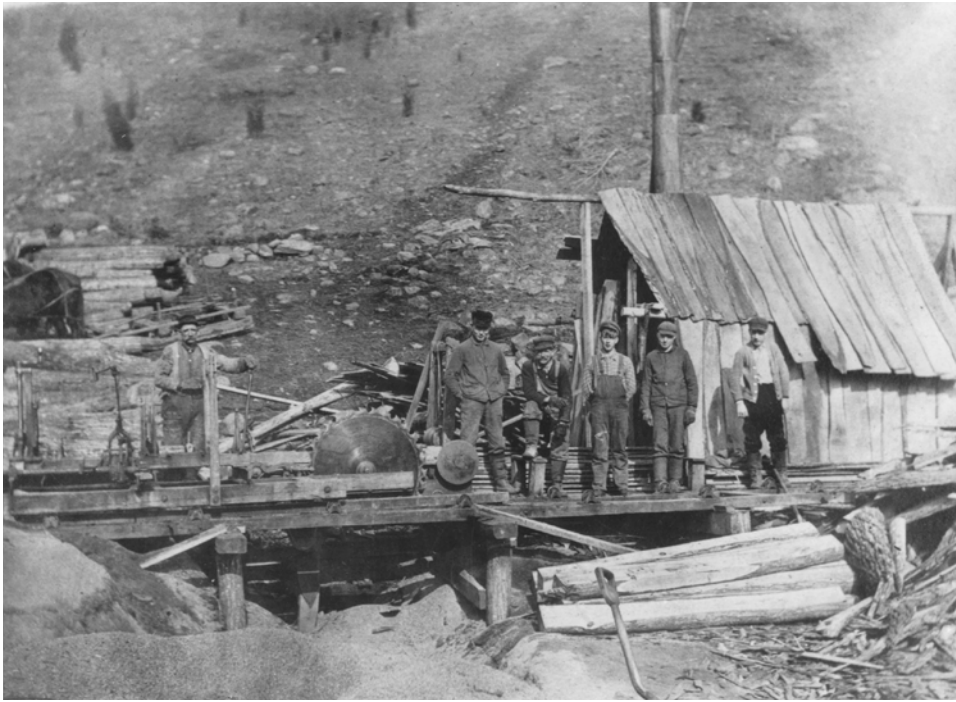
Much less common than the red maple swamps are the northern white cedar swamps that occur in seasonally flooded depressions on calcium-rich soils; and the black and red spruce bog forests, which occur in peat-filled acid depressions. Black spruce bogs are found on Skiff Mountain and near the Spectacle Lakes.

### **Kent Forest Lands**

Kent is fortunate in having one of Connecticut's 32 state forests. Located in the northeast corner of town, Wyantenock State Forest comprises some 4,000 acres, with Kent's portion being approximately 670 acres divided among three parcels. The remainder of the land is in Cornwall and Warren. Wyantenock is managed by the Division of Forestry, a subsection of the state's Department of Environmental Protection. Wyantenock, which has practically no recreation areas for public use, is part of the Connecticut State Forest System established in 1903. Wyantenock remains one of the least known and consequently least visited state forests. A rugged, remote place, it provides open space, wildlife habitat, opportunities for the production of commercial forest products, and watershed protection.

The forest was originally considered part of Mohawk State Forest when the first land was acquired in 1925. As land was added, Wyantenock received its own designation. Though it has no formal trails, one of the more convenient access points is off Kenico Rd. Notable are several constructed marshes within the forest, the first created in the 1950s to promote greater habitat diversity.

Long-term management plans for Wyantenock, as for other state forests, include programs for natural diversity (including threatened and endangered species), the preservation of unique sites (both geological and archaeological), the maintenance of wildlife and fisheries habitats, and the sustainable provision of raw materials as forest products. State



foresters are charged with planning and overseeing commercial harvests, prescribed fires and other maintenance work to insure that these forests remain healthy and vigorous while serving the needs of Connecticut citizens.

Unfortunately, the State DEP is understaffed and underfinanced, with the result that various forms of encroachment (defined by the Council on Environmental Quality (CEQ) as “unlawful action that is harmful to preserved land”) have occurred. The CEQ cites one particularly egregious incident in which an old dirt and gravel road running through the Kent portion of Wyantenock was graded

and paved and utilities and culverts installed in the 1990s by an adjacent landowner as part of plans to subdivide and develop neighboring private land. (This segment is now part of Kenico Rd.) The state took no effective action at the time, despite the landowner’s failure to get DEP permission and the effecting of considerable damage to the adjacent forest. The town also bears responsibility. The P&Z and Camp KenMont owners forced the developer to use this access instead of KenMont Rd.

Kent also has three mixed-use state parks (Macedonia Brook, Kent Falls and Lake Waramaug) that add approximately 2,600 acres of forest and many miles of trails. Here, forestry takes a back seat to recreational uses. Kent’s best example of protected contiguous forest exists on the west side of the Housatonic River and includes Macedonia State Park, Pond Mountain Preserve and the Appalachian Trail Lands, this last a linear band of federally protected forest along the interstate hiking trail. The Trail Lands are an important physical link to neighboring forest blocks.

A recent major acquisition to protected forest lands can be found in the Skiff Mountain area. Through the combined efforts of a group of Skiff Mountain landowners, the Kent Land Trust, the Sharon Land Trust, the Trust for Public Land, the Connecticut State DEP, and the U.S. Forest Service’s Forest Legacy Program, some 1,150 acres of forest land are being permanently protected from development. The area will provide important linkages to more than 6,000 acres of existing protected land in Kent and Sharon.

One of the forest areas immediately aided by this program is the 873-acre Skiff Mountain Wildlife Management Area owned by Northeast Utilities Company. The wildlife management area spans the Kent-Sharon town lines and is currently managed as a public hunting and multiple use area under contract with the Connecticut DEP, but is essentially undisturbed.

Two other forested blocks west of the river are the John B.



Currie Sanctuary and the Preston Mountain Club property. The Currie Sanctuary consists of 80 acres of woodlands and trails along the north side of Rte. 341 East (62.26 acres lie in Kent and 17.25 acres lie on the New York State side of the state line.) The Currie Sanctuary was donated to the Nature Conservancy in 1974 by Dr. Bethia S. Currie in memory of her late husband. It was transferred for protection to the Kent Land Trust in 1997. The preserve's northeastern boundary abuts Macedonia Brook State Park.

The Preston Mountain Club, a private hunting and fishing club founded in 1923, owns approximately 1,230 acres of forest in the southwest portion of town. With an adjoining 1,257 acres in Dover and 148 acres in Amenia, NY, this holding is one of the largest privately held forest blocks in the region. Portions of the club's forest are logged periodically.

There is also much forested land on the east side of the river. Aside from a few isolated parcels (Kent Falls, Wyantenock State Forest, Iron Mountain Reservation, Cobble Preserve and Emery Park) most of this forested land is privately owned.

### **Forest Management Regulations and Practices**

Connecticut towns' forestry activities are primarily controlled by state regulations, the most important being the Forest Practices Act passed by the General Assembly in 1991. Kent is one of 18 towns in the state to have its own forest practice regulations. Administered and enforced by the Inland Wetlands Commission, the regulations require a Forest Practices permit wherever forest products are harvested commercially on private land.

Such harvest is required to use best management practices as defined in the regulations and must be approved by a Certified State Forester or a Certified Supervising Forest Products Harvester in accordance with section



23-65h of the Connecticut General Statutes. This seeks to insure that forests and the diversity of forest life within them remain healthy, viable and sustainable for future generations. Some of our most valuable timber species include white pine, red and white oak, cherry, sugar maple, ash, tulip poplar and black, yellow and paper birch.

Sound forest management encourages the periodic harvesting of trees to make room for the healthiest, most vigorous or more desirable trees to grow. This enables the forest to better withstand diseases, defoliating insects, and the effects of natural disasters such as fires, hurricanes and tornadoes. Both harvesting and thinning can open up the tree canopy to induce the regeneration of pioneer species critical for wildlife habitat, especially song birds and game birds. Thinning can also produce modest income, which can pay for the cost of timber stand improvement. Regular thinning, pruning and removal of dead trees can yield at least one cord of firewood per acre annually while leaving a sustainable forest for years to come.

It is recommended that at least two dead trees, or "snags," be left standing per acre to provide habitat for cavity-nesting birds, including resident woodpeckers (hairy, downy, pileated, red-headed, flicker) and yellow-bellied sapsuckers, chickadees, nuthatches, titmice, bluebirds, screech owls, wood ducks and others. Red maple and basswood serve this purpose particularly well for, when they decline, they often hollow out, becoming what foresters call soft snags.

### **Biological Threats**

Like forests all over the Northeast, Kent's forests are subject to a number of biological threats. Many of these threats are imports for which our native species have no natural defenses. Chestnut blight was first detected in New York in 1904 and by 1926 had devastated Kent's remaining chestnuts, which represented perhaps as much as 25% of our forest trees. Dutch elm disease took almost all the American elms by the 1940s, including those in Kent. The gypsy moth, which came

from Europe more than a century ago, has not killed off any tree species but periodically results in massive defoliation of forests, and these episodes make the ravaged trees more susceptible to other biological assaults.

The hemlock woolly adelgid, an insect of Japanese origins, was first spotted in Connecticut in 1985 and has since had devastating effects on the hemlock population. The Japanese cedar long-horned beetle, while still considered a threat primarily to the nursery industry, is being monitored for potential damaging effects by the Connecticut Department of Agriculture, as is the Asian long-horned beetle. Still other threats are hemlock scale, emerald ash borer, dieback in ash, oak, and other hardwoods, heart rot in mature hardwoods, especially oak, anthracnose in sycamore and dogwoods, and thrips in sugar maples.

Invasive plants and animals also pose a grave threat to healthy forests. Forest edges, hedgerows, and wood road corridors are most severely exposed to invasives. Lastly, an overabundance of white-tailed deer locally inhibits forest regeneration by browsing and overgrazing young trees and saplings. Sound forest management, vigilance by forest landowners and licensed hunting can limit some of these problems.

### **Other Forest Products**

Kent's forests, or more specifically the sugar maples, support a small maple sugar industry by providing the raw material for maple syrup. This renewable product is made by tapping trees in late winter when sap rises as daytime temperatures warm the ground. The collected sap is boiled off to remove most of the water—the ratio of watery sap to product is roughly 40:1—leaving sweet-flavored syrup.

Another forest product, witch hazel, from the native American understory tree of that name, produces an astringent liniment.

Historically, the liniment was made by distilling the bark of the tree.

For many years stems were harvested on Skiff Mountain and shipped by train to the E.E. Dickinson distillery in Essex, CT, for processing and bottling. Christmas tree nursery operations might also be counted as “forest-related,” but are dealt with in the preceding Agricultural Resources Chapter.

Nowadays few jobs in Kent depend directly on forestry. Most of the timber cut here is

for the purposes of clearing building lots, opening scenic views, and gathering fire wood.

Although not a product in the usual sense, our forests are probably best known for their brilliant show of fall colors, usually peaking in mid-October. This display brings many “leaf peeping” visitors, adding to the local tourist industry, while providing many weeks of exceptional beauty for everyone. Another such forest “product” is the bird life abundant throughout the town, especially along the wooded River Rd. on the west shore of the Housatonic. This stretch is given the highest rating by the Connecticut Ornithological Association as a spring migration area, particularly attracting a number of rare bird species as well as birdwatchers from near and far. Nearly 20 species of warblers can be identified during the spring migration! For more on Kent's remarkable bird life see Chapter Nine, Critical Habitats and Wildlife, as



well as the Appendix.

As for the future, if Kent manages its forests wisely, lesser-valued tree species could conceivably be harvested for biomass energy, requiring much less energy to grow than the corn used for corn-based ethanol. Also our forests may qualify as carbon sinks for tax credits to counter global warming, as they continuously sequester carbon in their tissues.

## RECOMMENDATIONS

1. Assemble the forest vegetation inventories and evaluations done for all the PA 490 forest lands to get a better idea of Kent's forest resources.
2. Allow some sizeable, remote and relatively undisturbed forest areas to develop naturally towards an old-growth condition, as distinct from managed forestry areas.
3. Prohibit "High Grading," the practice of selectively clearing only the oldest and strongest trees on a woodlot
4. Limit forest fragmentation.
5. Strengthen logging regulations as they pertain to the protection of vernal pools.
6. Strengthen regulations regarding clearing of land to provide the same kind of controls now applied to commercial forestry.
7. Discourage large-scale clearing of forest undergrowth for esthetic purposes, as it severely reduces diversity of plant life and habitat value for most wildlife.
8. Control the spread of invasive plant and animal species (including free-roaming pets) into the wild, by educating the public and with the aid of state grant programs.
9. Develop a registry of "significant trees" on the basis of age, size and rarity and promote their protection. Any such trees brought to the Kent Conservation Commission's attention by landowners or hikers, or found during forest inventories, should be mapped, measured and described as part of such a program.

## REFERENCES

- Ct. DEP website: [ct.gov/dep](http://ct.gov/dep), Report of the Connecticut Council *On Environmental Quality*, "Preserved but Not Protected," December 20, 2005
- Ct. Forest and Park Assoc. website: [ctwoodlands.org](http://ctwoodlands.org)
- Fazio, James R. (1987) *The Woodland Steward*. Farcountry Press, Helena, MT
- Jorgensen, Neil, (1977) *A Guide to New England's Landscape*. Globe Pequot Press, Guilford, CT
- Kent Inland Wetlands Commission *Forest Practice Regulations*
- Kricher, John and Morrison, G. (1988) *Eastern Forests. Peterson FieldGuides*. Houghton Mifflin Company, Boston
- Metzler, Kenneth and Juliana Barrett. (2006) *The Vegetation of Connecticut, A Preliminary Classification*. State Geological and Natural History Survey of Connecticut. CT Department of Environmental Protection.