

Deane Haag Nature Frai

Kenilworth Drive

Clinton Connecticut

INTRODUCTION

The forest is an exciting, colorful and complex place. The most obvious plants are the trees, but numerous shrubs, herbs, mosses, and lichens are also important. Many animals including various mammals, birds, reptiles, fish and insects are also important components. Many organisms, too small to be seen and termed microorganisms – for example, fungi and bacteria – are extremely important parts of the forest. Non-living features of the forest including soil, rocks, streams and ponds are additional fundamental ingredients. All of these components contribute to the structure and function of the forest ecosystem.

In the following sections we provide introductory information on various features of this forest that we hope will encourage you to want to learn more!

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William H. Smith, Ph.D. November, 1977

SOCOSOSOS THE NATURE TRAIL SOCOSOSOSOS

The numbered sections that follow refer to points identified by numbered signs along the trail. At each location the numbered tree is identified and its common latin name, size and some interesting facts concerning the tree or its surrounding area are given.

The reference (left) or (right) after the number refers to the location of the tree to the left-side or right-side of the trail as you proceed around the loop in clockwise fashion.

(left) American Beech Fagus grandifolia Ehr. 15.5" diameter

Trees, like people, have two formal names. For trees the official or scientific names are always written in latin. The first name of a tree (always capitalized) tells the general group or genus that the tree belongs to. In the case of beech, the first name (genus) is Fagus. The second tree name tells the specific kind or species. For American beech the species name is grandifolia. The first letter of the species name is always written as lower case. The letters following a formal tree name are an abbreviation of the last name of the person that first described and officially named the tree. The name Fagus grandifolia was officially given the American beech by Friedrich Ehrhart (abbreviated Ehr.).

American beech has a very broad range throughout the eastern United States and extends from Maine to central Florida and west to central Wisconsin in the north and eastern Texas in the south. Beech is very easy to recognize all year long because of its distinctive smooth blue-gray bark.

The average size of American beech is 70-80' in height and 2-3' in diameter. A maximum size of 120' height by 4' diameter can be obtained. American beech may attain an age of 300 to 400 years.

The root system of American beech is shallow and extensive and has a strong tendency to produce sprouts. These root sprouts are very characteristic of beech and mature trees are often surrounded by thickets of young sprouts (number 31). Large crops of seed are produced only at irregular intervals. Beech nuts are a favorite food of ruffled grouse, wild turkey, bobwhite, pheasant, black bear, raccoon, red and gray foxes, whitetail deer, cottontail rabbit, gray, red and flying squirrels, porcupine and opossum.

The wood of American beech is hard and while difficult to work with hand tools, it does machine satisfactorily. It is excellent for turning. One of the main commercial uses of beech is for crates, bas-

kets and fruit containers. Limited use for furniture includes the curved and turned parts of inexpensive chairs. It is used for handles and brush backs and for various woodenware and novelties, including toys, spools, clothespins, and a variety of other small turned articles.

American beech is an extremely important ornamental tree in Connecticut.

Unfortunately a very serious disease of American beech has been developing for the past several decades in northern New England. This malady is termed the beech bark disease, and is caused by the joint activities of an insect and a fungus. We hope the spread of this problem in Connecticut will never be as severe as it has been in New Hampshire.

(right) yellow birch Betula alleghaniensis Britton 12" diam'tr

Yellow birch occurs throughout the northeast, in the lake states and down the Appalachian Mountains. Stature at maturity is typically 60-70' in height and $2-2\frac{1}{2}$ ' in diameter. A maximum size of 100' in height and 4' in diameter may be obtained. Growth is moderately rapid, and maturity is reached in 120 to 150 years. Occasionally old trees may reach 300 years of age.

Yellow birch regularly produces abundant seeds. These seeds are small, light and readily distributed by the wind. Seeds vigorously germinate on almost any moist place, frequently including moss-covered rocks and old partially decayed stumps.

The woods of the different species of birch are difficult to separate with certainty. Yellow birch and black birch are harder, heavier and stronger than the other native species (paper, gray and river birch). The largest and best logs of yellow and black birch are used for veneer. Your kitchen cabinets may be covered with birch veneer.

Birch is a principal furniture wood in the United States and is commonly used for television and stereo cabinets. It is also used for boxes, baskets, novelties, toys, spools and toothpicks.

Oil of wintergreen may be obtained by distilling the young twigs or inner bark, but the amount is much less than in black birch.

Wildlife utilizing yellow birch for food include ruffed and sharptail grouse, prairie chicken, whitetail deer, moose, cottontail rabbit, and red squirrel.

(right) white ash <u>Fraxinus americana</u> L. 9" diameter

The range of white ash is throughout the eastern United States.

The general size of mature ash is 70-80' in height and 2-3' in diameter. Largest trees may reach a height of 125' and 6' in diameter. The bark of ash is distinctive and is finely furrowed into close diamond-shaped areas separated by narrow interlacing ridges. The species is flexible regarding habitat and occurs in deep, moist soils as well as thin, dry soils, and in young as well as old forests. White ash is a fast-growing species and may attain a height of 6' in three seasons.

White ash wood is hard, strong, stiff and wears smooth with use. A primary use of white ash is for sporting goods. Practically all baseball bats and oars, and a considerable number of paddles, tennis racket frames, snowshoes, skis, polo and hockey sticks are made from white ash. It is also used for furniture, particularly bent parts and chair bottoms.

As a fuel wood ash ranks with oak and hickory.

(left) northern red oak Quercus rubra L. 1512" diameter

The range of northern red oak includes the eastern United States except for the south Atlantic and Gulf coastal plains. The tree is medium-sized at maturity and is typically 60-70' in height and 2-3' in diameter. Largest trees are 150' in height and 7' in diameter.

Some acorns are usually produced each year, with large bumper crops occurring irregularly. Red oak acorns do not germinate in the fall like those of white oak, but rather delay germination until the following spring. This may be a welcome feature to a squirrel somewhat behind in his fall nut collection! Northern red oak is also a prolific sprouter and may rapidly overgrow an area opened by cutting or fire.

The northern red oak wood is heavy, hard and strong. The commercial uses of the wood are similar to those described for white oak in number 14.

Northern red oak is widely used as an ornamental because of its ease of transplanting, rapid growth, fall color and symmetrical form.

5 (right) yellow birch Betula alleghaniensis Britton 10" diam'tr

To the left of this yellow birch you will notice a standing, dead yellow birch with many "horse hoof" shaped structures on it. These structures are parts of a fungus that is actively breaking down the dead birch wood. Fungi serve an extremely important role in the forest as they are the primary organisms that decay dead wood and return the nutrients (food) in the wood to the soil where they can be used again by the living trees for growth.

You will also notice several "holes" in the bark and wood of the

dead birch. These are feeding holes made by woodpeckers - who make these holes as they search for insect larvae to eat. It is important that a natural forest have dead trees standing to serve as feeding stations for birds such as woodpeckers.

(right) yellow-poplar or tulip tree <u>Liriodendron tulipifera</u> L.

Height 74' - with a 17½" diameter. Yellow-poplar is distinguished by its excellent form, rapid growth, attractive foliage, height, and is one of the most valuable hardwoods in the eastern United States. It is the tallest tree of the eastern broad-leaved forests and average mature trees are 100' tall and from 4-6' in diameter. The maximum height recorded is 198'. Trees may live 250 years or more.

The trunk is tall, straight, remarkably clear of side branches for a considerable distance above the ground. Both the leaf shape and flower structure appear "tulip like", hence the common name tuliptree. The other common name, yellow-poplar, is somewhat misleading. Yellow refers to the wood color, but poplar is less easy to explain. Tuliptrees belong to the magnolia family and are not related to poplars at all. Perhaps the fact that the leaves "tremble" in the slightest breeze, similar to true poplars, is the reason.

Indians and settlers made dugouts from yellow-poplar. The Delaware Swedes called it the "canoe tree". George Washington, who had considerable knowledge of many trees and their uses, planted yellow-poplars at Mount Vernon. Two of them, nearly 120' tall, still vigorous and growing, are now the tallest trees at this great estate.

The wood of the yellow-poplar is moderately light, soft and weak, but is easy to work, glues well and holds paint exceptionally well. Large, clear logs are well suited to the manufacture of rotary-cut veneer and are extensively used for berry and fruit boxes and for interior finish, cabinetwork and corestock.

The twigs and branches of very small yellow-poplars are tasty to deer, which sometimes cause extensive damage to young stands. The seeds are eaten by squirrels and songbirds.

On size alone, yellow-poplar must be crowned king of the nature trail. This particular tree (number 6) may be the tallest of the nature trail area. Keep in mind, however, it is a "peanut" by west coast standards. The tallest tree in the world is believed to be a 367.8' redwood in California. A Douglas fir tree in Ryderwood, Washington is 325' tall.

- (left) northern red oak Quercus rubra L. 19%" diameter
- 8 (left) sugar maple Acer saccharum Marsh. 14" diameter

While the range of sugar maple includes the entire eastern United States, except for the south Atlantic and Gulf coastal plains, it is a very "New England" tree. Sugar maple grows slowly but lives 300 to 400 years, reaching heights of 80-100' and diameters of approximately 2'.

This species is particularly known for the beauty of its autumn foliage, the quality and hardness of its wood, and the sweetness of its sap. It is the State tree of Vermont.

The species name <u>saccharum</u> refers to the sweet sap from which maple syrup and sugar are boiled when winter is on the wane. Like the sugarcane and sugarbeet, this plant is characterized by an unusually high concentration of sugar, produced the summer before and stored in roots and trunk during the dormancy of winter. With the imminence of spring, and with leaf buds swelling, the sap rises and is tapped just inside the bark by driving in a spout and attaching a tube or hanging a bucket beneath it. Unfortunately, approximately 35 gallons of sap must be boiled down to make one gallon of syrup.

Seed years occur irregularly at 2-4-year intervals. When they occur, trees put forth myriads of yellow, clustered flowers and appear to envelope the tree in a yellow haze. By fall the ground is littered with winged fruits, and the following spring thousands of seedlings begin to develop.

The wood of sugar maple is heavy, hard and very strong. The uses of the wood are very varied. Logs showing curly, wavy or "bird's eye" figures are especially prized for veneer for furniture and musical instruments. Lumber is used for flooring subject to severe use, for example bowling alley, dance, and factory floors. Bowling pins, handles, toys and butchers' blocks are also made from sugar maple.

(right) yellow-poplar <u>Liriodendron</u> tulipifera L. 74' high, 19"d.

(left) black birch or sweet birch Betula lenta L. 10" diameter

Black birch has a limited range that includes most of New England and several mid-Atlantic and Appalachian Mountain states. It is extremely common in the forest of Connecticut. It is a medium-sized tree 50-60' in height and 12-24" in diameter.

Oil of wintergreen is still prepared commercially from the twigs and bark of black birch, but a synthetic product has now largely replaced it in the trade. Fermented sap has traditionally been the ingredient of the real "birch beer". Buds and seeds are eaten by ruffed and sharptail grouse and the twigs are browsed by whitetail deer, moose, and cottontail rabbit.

Unfortunately, the trunks of the black birch are frequently disfigured by "target" shaped cankers. These cankers are caused by fungal infection.

The wood of black birch is the heaviest and strongest of all birches. Commercially, however, the woods of black and yellow birch are not distinguished, and the uses of black birch are the same as those described for yellow birch in number 2.

- 11 (right) northern red oak Quercus rubra L. 17" diameter
- 12 (right) red maple Acer rubrum L.

This red maple consists of three sprouts from one stump. This versatile tree grows throughout the entire eastern United States. Its growth is rapid and maturity is reached in 70-80 years. Some individuals may reach an age of 150 years. Typical size is 50-70' in height and 12-24" in diameter.

The wood of red maple is not so hard as that of sugar maple, but it is not "soft". The wood is largely used for the same purposes as hard maple, except where exceptional strength and hardness are required.

(right) yellow-poplar Liriodendron tulipifera L. 67'high, 172"dia.

This tree has a frost crack on the southeast side. While the exact mechanism for the formation of these cracks is unknown, they are presumed due to unequal expansion and contraction of the wood during rapid freezing and thawing. The south, southeast, and southwest faces of a tree can be warmed considerably by the sun, even on the coldest winter day.

(left) white oak Quercus alba L. 11" diameter

White oak is the State tree of Connecticut, a priviledge we share with the State of Maryland. White oak has been known and respected since the earliest days of settlement in the New World. It reminded the colonists of the English oak, a very similar species. White oak grows from New England south to Florida through the middle west to the lake states, and as far west as Oklahoma and Texas.

On good sites, white oak is a large tree 80-100' in height and 3-4' in diameter. The growth of white oak is not fast, and like many slow-growing trees it may attain considerable age, in some instances a maximum of 500-600 years.

White oak is often a prolific seeder, but good acorn years may not occur regularly. Unlike red oak, white oak acorns germinate in the fall soon after they are released. Frequently the roots do not have time to penetrate the soil and the seedlings are killed by freezing temperatures. Indians showed the colonists how to boil and eat these large acorns. Twigs and acorns of white oak form a large portion of the food consumed by many game birds and mammals.

From the earliest days the wood of white oak has provided valuable timber for houses, ships and furniture. The wood is heavy, hard, high in shock resistance and machines well. Oak is the principal lumber used for flooring because of its hardness, resistance to abrasion and attractive figure. It is used for furniture, especially desks, tables and chairs, millwork and cabinets. Historically it was widely used for tight and slack coverage (barrels). Locally along the shoreline it was, and still is, used for boat-building. As many of you realize it is also an excellent firewood.

- Opposite this tree on the left side of the trail you will notice a large rock outcrop. This is a portion of the bedrock or solid rock underlying the soil of this forest. These outcrops are frequently locally called "ledge". For more information see the Geology section of this guide.
- (right) sugar maple Acer saccharum Marsh. 18"diameter
 - (left) sugar maple Acer saccharum Marsh. 13" diameter

To the rear of this tree you can see a large rock with many lichens (pronounced "likens"). Lichens are actually dual organisms formed from symbiotic (mutually beneficial) association of two plants, a fungus and an alga. They are a cosmopolitan and varied group of plants and occur on rocks, tree trunks, old walls as well as on the ground. These strange plants provide the dominant flora in large areas of mountain and artic regions where few other plants can survive. Many lichens are very susceptible to certain components of polluted air found in urban and industrial areas. The presence of lichens in the Nature Trail area suggests that the air of Clinton is cleaner than many urban and industrial portions of Connecticut.

The range of the black oak is throughout the eastern United States. The tree is usually 50-60' tall and 2-3' in diameter when fully grown.

Black oak is featured by a deep taproot. It is a persistent sprouter. Good acorn years are infrequent and often no seeds are borne for several years. Growth is slower than red oak, and trees over 200 years old are rarely found.

The wood and its uses are similar to those described for white oak in number 14. The inner bark of black oak is bright orange or yellow.

- 19 (left) American beech Fagus grandifolia Ehr. 32" diameter
- (right) white ash Fraxinus americana L. 9" diameter

Please refer to number 15. for mention of the rock outcrop you see near this tree. The trees on the rock that appear to be growing out of the rock actually have their roots in the soil.

- 21 (right) northern red oak Quercus rubra L. 13½" diameter
- 22 (right) white ash Fraxinus americana L. 512" diameter

To the southeast (left) of this point is a large "wetland" area. This wetland occupies a significant portion of the Nature Trail property. It was once thought that wet areas were useless and that the best thing that could be done was to fill these poorly drained sites so that they could be made useful to people. It was gradually realized, however, that these areas perform extremely important natural functions very useful to people as well as nature and now wetland areas, both tidal and inland, are protected by Connecticut State law.

Why are wetlands, such as the one you are looking at, valuable? The reasons are several. Wetlands act as a reservoir. They can receive large volumes of precipitation from storms, store this water and permit some to enter the ground water, some to evaporate and some to move gradually downstream. By serving as a buffer they protect downstream properties from peak flows or floods. They also, because of gradual release, sustain the flow of brooks and streams during dry periods. This reservoir function also allows some wetland areas to recharge underground aquifers. Aquifers are water-bearing porous layers below the soil that provide water for our wells. All of us in Clinton depend on well water for our water supply and wetlands play an important part in recharging underground water resources. Wetlands also act as a filter for water passing through them. Poisons and various potentially toxic materials are subtracted from the water by organic matter and bacteria in wetlands. Non-toxic sediment is also removed by wetlands and this filtration process improves the clarity of downstream water. Wetlands also serve as the unique habitat for numerous species of plants, birds and other animals that are not found in the upland forest. A carefully protected wetland resource can provide a town with a well distributed "open space" network. These open space areas provide a welcome buffer to the sights, smells and sounds of our hectic activities.

All the marshes, wooded swamps, bogs, flood plains, lakes, ponds and streams in the Town of Clinton are regulated by the Inland Wetlands Commission. Tidal wetlands (marshlands along Long Island Sound) are regulated by the Department of Environmental Protection, State of Connecticut.

- 23 (right) black birch Betula lenta L. 8" diameter
- 24 (left) American hornbeam <u>Carpinus caroliniana</u> Walt. 5" (1241-137)

This tree is generally small and frequently of poor form. It is distinctive and interesting, however, because of its "muscular-appearing" smooth dark gray bark. It is frequently called blue beech or ironwood. The latter undoubtedly because of its sinewy look.

Wood of this tree is heavy and tough. Its use is limited by its size but is locally employed for handles and fuel wood. Charcoal from American hornbeam was formerly used in the manufacture of gunpowder.

The fruits are eaten by many birds, including ruffed grouse, bobwhite, pheasant, and wild turkey and by gray squirrels. Cottontail rabbit and whitetail deer prefer the twigs.

- (right) white oak Quercus alba L. 10" diameter
- 26 (left) northern red oak Quercus rubra L. 14½" diameter

The stone fences behind this tree and throughout the forests of Connecticut have a very interesting history. In 1820, almost 80 percent of the land in Connecticut was open field and under cultivation. As the farmers worked their fields small rocks deposited here by the glacier (see Geology section) were continually uncovered. These rocks were moved by the farmers and their horses to the borders of their fields to get them "out-of-the-way" and to help keep animals in and deliniate property lines. Even when a farmer managed to pretty well clear his fields of rocks, the frost action of the next winter would bring new ones to the surface. It must have been a very frustrating experience and added significantly to the desire to move westward. As farms were abandoned the forest gradually came back and converted the fields back to woodlands. The walls remain, however, as silent reminders of a rich agricultural heritage and of very industrious farmers.

(right) red hickory Carva ovalis Sarg. 13" diameter

The range of the red hickory is the eastern United States except for the south Atlantic and Gulf coastal plains. It is a medium sized tree 50-60' in height and 12-24" in diameter.

The hickories are quite difficult to identify and it is best to use the fruit for identification if available.

Hickory wood is very heavy and strong. Because of it toughness and resiliency hickory is the best wood for impact tool handles such as hammers, axes, picks and sledges. It is also preferred for sporting goods such as skis, gymnastic bars and golf club shafts. It is also an excellent fuel wood and produces high-grade charcoal. Historical uses of hickory wood include wagon wheels and barrel hoops.

The nuts are eaten by squirrels, opossums, wild turkey and occasionally by ducks. Twigs are browsed by rabbits and deer.

28 (left) black oak Quercus velutina Lam. 19" diameter

The fluted base of this tree suggests it may have considerable internal decay in the lower portion of the trunk. This decay is caused by fungi (see number 5.).

(left) shagbark hickory <u>Carya ovata K. Koch 6" diameter</u>
This is a distinctive tree decause of the bark that breaks up into thin plates which curve away from the trunk and give the tree a "shaggy" appearance.

The range of this tree is the eastern United States similar to red hickory (number 27). It is at maturity a larger tree than red hickory and reaches 70-80' in height and 12-24" in diameter. The largest shagbark hickory is 120' tall and 4' in diameter.

Large crops of seed are produced nearly every other year, especially by trees in the open, and it is not unusual to obtain two to three bushels of nuts from a single large tree. The nuts are of course edible!

Shagbark hickory is a slow-growing tree and attains an age of 250-300 years. Unfortunately, it is attacked by several leaf infecting fungi which may make the foliage unsightly in late summer. The wood uses are similar to those described for red hickory (number 27).

- (left) white oak Quercus alba L. 141' diameter
- 31 (right) American beech Fagus grandifolia Ehr. 8½" diameter

Please notice the abundance of root sprouts beneath this American beech. At least 12 major sprouts can be counted in a very small area. This process is discussed in number 1.

(right) sugar maple Acer saccharum Marsh. 14" diameter Notice the excellent form (straightness) of this tree.

33 (left) yellow-poplar <u>Liriodendron tulipifera</u> L. 163" diameter

(right) yellow-poplar Liriodendron tulipifera L. 112" diameter

(left) white ash Fraxinus americana L. 6" diameter

ooooooooo GEOLOGY ooooooooo

The elevation (height above mean sea level) of the beginning of the Nature Trail is 120'. The size of the forest is approximately 12 acres.

The primary surface material in this area is glacial till. Glacial till is the most widely distributed overburden material found in the State of Connecticut. It was formed from rock and soil particles that were picked up and carried on, within and under glacial ice sheets thousands of years ago. The last glaciation retreated from southern New England approximately 10,000 to 12,000 years ago. When the ice melted, the materials being carried were left in place and have come to be known as "glacial till". Till is a heterogeneous material composed of various mixtures of boulders, gravel, sand, silt and clay particles, none of which is significantly sorted or stratified according to grain size. Within the streambed and floodplain of the brook that bisects the Nature Trail area, there may be some inclusions of stratified (sorted by size classes) glacial sands and gravels and remnant till pockets.

The bedrock (underlying rock) in this area is a rock group termed by geologists the Monson Gneiss (pronounced nice). The Monson Gneiss consists of changed or "deformed" igneous rocks. The changes were caused by extremely high temperatures and pressures. Igneous rocks solidified from molten or partly molten materials which may have been valcanic and flowed on the land surface or formed within the earth willions of years ago. In Connecticut, the Monson Gneiss comprises a variety of gray quartz-feldspar rocks containing little or no potassium feldspar. The term gneiss is a descriptive word meaning the rock is a relatively coarse-grained metamorphic type in which fairly wide bands, several feet in thickness and rich in granular mineral crystals, alternate with groups of narrow bands, usually just inches thick, that are rich in platy, flat and elongate minerals.

Soils are formed from the geologic material in an area by the forces of weather (freezing-thawing, wind, precipitation) and the activities of various plants and animals. Soil scientists classify soils into various "categories" according to the nature of parent geologic material, size of soil particles, slope, wetness and other factors. They describe local soils by providing a name containing soil series, soil type and soil phase. All soils in the United States having the same series name are essentially alike in profile (cross-section) characteristics such as horizon (horizontal layers in the soil cross-section) thickness, number, arrangement, color, texture and structure. Each soil series is named for a town or some other geographic feature near the place where the soil was first described and mapped. Soil type describes the texture of the uppermost (top) soil horizon. Soil phase usually calls attention to some important characteristic that may be significant to the use or management of the soil.

The Nature Trail area consists of two soils:

a) Paxton stony fine sandy loam 3 - 8% slopes Soil series soil type soil phase

b) Ridgebury very stony fine sandy loam Soil series soil type

Most of the upland Nature Trail area consists of the Paxton series soil. This soil is well-drained to a depth of approximately 2'. Drainage below this depth is typically restricted by the presence of a flagipan (hardpan, poor drainage layer in the soil). Since the flagipan restricts internal drainage, there may be a temporary "perched" water table above the flagipan in wet seasons and after heavy rains. The surface and subsoil textures are fine sandy loam. Paxton soils are on slopes ranging from gently sloping to steep. Surface stoniness varies from essentially stone-free areas where stones have been removed to very stony.

Most of the "flat" area of the Nature Trail forest is underlain by the Ridgebury soil series. This is a poorly drained soil with a flagipan at about 2' below the surface. The soil is characterized by a relatively thin, dark colored surface horizon and mottled subsurface horizon. Ridgebury soils occupy low-lying nearly level- to very gently sloping- areas. The ground water table is near the surface from late fall through early spring, but it may drop 6' in late summer and fall. Most areas of Ridgebury soils are very stony on the surface. This soil is associated with the stream through the forest and with the large "wetland" area in the southeastern portion of the tract.

oooooooooo METEROLOGY oooooo

While we do not have specific weather records or data for the Nature Trail area, we do know much about the average climatic conditions for this region:

Mean (average) annual precipitation - 48"

Mean annual total snowfall - 35"

Mean annual number of days with snow cover (1" or more) - 45

Mean daily maximum January temperature - 38° F.

Mean daily minimum January temperature - 20° F.

Mean daily maximum July temperature - 80° F.

Mean daily minimum July temperature - 62° F.

Mean length of freeze-free period (days) - 180

Animals, like plants, occur in specific communities - limited by food, climate, and topography. Animal communities tend to be primarily defined by the amounts and kinds of food and cover that are available. The Nature Trail area is entirely woodland, and this restricts the animal species here to woodland types.

Some of the more common animals that live or pass through this woodland area include:

REPTILES AND AMPHIBIANS

Painted turtle Common garter snake

MAMMALS

Opossum Eastern gray squirrel
Shrews White footed mouse
Moles Deer mouse
Bats Eastern wood rat
Raccoon Eastern cottontail
Skunk Whitetail deer

BIRDS

Mourning dove Black-capped chickadee Hairy woodpecker Tufted titmouse Downy woodpecker White-breasted nuthatch Blue jay Robin Crow Wood thrush Starling Cardina1 Red-winged blackbird Evening grosbeak Baltimore oriole American goldfinch Common grackle Slate-colored junco Scarlet tanager and Others!

The total bird list would be VERY long! Some of the most common species are listed above.

ooooooooo VEGETATION oooooooo

Foresters (persons who manage forests for varied purposes) classify forests according to the dominant tree species present. In the Northeast, five forest regions are generally recognized; oak-yellow poplar (27% of the total forest area), beech-birch-maple (25%), spruce-fir (21%), white pine-hemlock-hardwood (21%), and yellow pine-hardwood (6%).

The forests throughout Middlesex County in Connecticut are appropriately classified in the oak-yellow poplar type. The oak-yellow poplar region might be divided into a white oak-northern red oak-hickory type in the more northerly shallow-soil sections (for example, the Nature Trail area), and a yellow-poplar-white oak-northern red oak type at more southerly (New York, New Jersey) locations.

The forest of Connecticut in general and the area of the Nature Trail in particular is of two kinds. The first kind has been continuously forested, and the second has developed during the last 100 years. Of the first, most has been cut, all has been ravaged by fire, insects, drought, fungi, and wind storms - but never completely cleared for agriculture. The second forest has grown on land once pastured or plowed. Stone fences, abundant in this area, delineate the boundaries of former fields used for grazing or growing by previous generations. Because of the wetness and slope of the Nature Trail area, most probably belongs to the "first" forest kind.

This GUIDE was prepared for the Clinton Land Conservation Trust Inc. by William H. Smith, Assistant Dean and Associate Professor of Forest Pathology of the School of Forestry and Environmental Studies of Yale University. To Dr. Smith, a Clinton resident, our sincere appreciation for his efforts.

The Deane Haag Trail is located on 12.2 acres of upland which was a gift to the Trust by the Barnett Development Corporation of Madison, Connecticut. The original tract was planned and laid out by Howard Tuomi and David Crosby. Improvements on the Trail were made by the Clinton Jaycees under the direction of Peter Hlousek. The 35 stations (listed below) were developed by the author of the GUIDE, William Smith.

The Trail was named in memory of Deane Haag, a charter member of the Trust, who appreciated nature's gifts and worked at preserving Clinton's and Connecticut's heritage.

occocco List of Identified Tree Species occocco

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1.	. American Beech	13. Yellow-poplar	25. White Oak		
2	. Yellow Birch	14. White Oak	26. Red Oak		
3	. White Ash	15. Yellow-poplar	27. Red Hickory		
4	. Red Oak	16. Sugar Maple	28. Black Oak		
5.	. Yellow Birch	17. Sugar Maple	29. Shagbark Hickory		
6.	Yellow-poplar	18. Black Oak	30. White Oak		
7.	Red Oak	19. American Beech	31. American Beech		
8.	Sugar Maple	20. White Ash	32. Sugar Maple		
9.	Yellow-poplar	21. Red Oak	33. Yellow-poplar		
10). Black Birch	22. White Ash	34. Yellow-poplar		
11	l. Red Oak	23. Black Birch	35. White Ash		
12	2. Red Maple	24. Ironwood			
46					