• MUSHROOMS • WRENS • WETLANDS • ORIOLES •

• RABBITS • BLACK OAKS • SKUNKS • BOGS • SQUIRRELS •

• WOODPECKERS • SWEET FERNS • TREE FROGS •

• PITCH PINE • WARBLERS • BURR OAKS • SALAMANDERS •

NATCO PARK

An Introduction

▪NATCO PARK▪

An Introduction

This brochure about Natco Park is a brief introduction to a highly diverse geographical area of brackish lake, salt and fresh water marshes, clear streams, a bog, a spring pond, Pine Barrens, and hardwood forest wetlands.

■

Under the jurisdiction of the Hazlet Township Committee, which has given its fullest aid and encouragement, it is cared for by members of the Hazlet Township Environmental Commission and other volunteers.

■

Become a volunteer
each time you visit this woodland.
"Take only pictures. Leave only footprints."
Protect and enjoy your park.

NATCO

Acknowledgements

This booklet was prepared with a grant from the New Jersey Department of Environmental Protection, Office of Environmental Services.

Matching funds were provided by the Township of Hazlet.

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Printed on recycled paper with vegetable-based inks.

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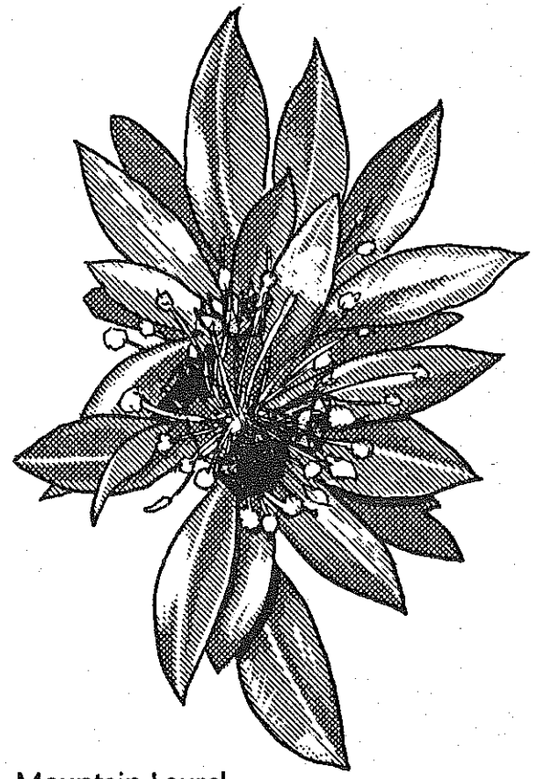
Moccasin-Flower *or*
Pink Lady's Slipper
(Cypripedum acaule)

NATCO

Introduction

Following is a brief survey of some of the ecosystems that can be found in Natco Park. Noted and described are some of the major forest types, with a few of the plants typically associated with them. Where possible, we have given locations and flowering and fruiting times. Also noted are some of the more obvious animal species found in Natco Park.

It should be noted by the reader that many of the listed plants and animals are no longer common to this part of New Jersey, even though they appear abundant in the Park. This area of the Township is quite unique, and remains as the last stronghold for many of the species that commonly occurred here in the past. Its small size, and isolated location make Natco Park an important and fragile area, and one that is under constant pressure from all directions. It is for this reason that anyone entering the Park should be careful not to disturb the plant or animal life they find there.



Mountain Laurel
(Kalmia latifolia)

Preface

This publication, the first concerning Natco Park, acquaints the reader with the largest assemblage of vacant land to be acquired for public purposes in Hazlet Township. In fact, there is no other area remaining within the township that could be assembled in equal size to Natco Park, and because of the developed status of the municipality, it is quite unlikely that another tract of equal or greater size will be established in the future.

The largest parcel in the assemblage was at one time owned by the National Fireproofing Company (Hence the name "NatCo") which mined clay and manufactured fire bricks and hollow tile in a factory building on Rose Lane, north of State Highway 36. The lake areas on both sides of the highway resulted from the clay mining operations, with considerable mining done below sea level. Although dikes were maintained around the perimeter of the mining operation and water pumps utilized to keep ground, spring and rain water out of the pits, a breakthrough in a dike allowed such volumes of water to enter that the company decided it would not be feasible to attempt to dewater the pits. Included in their reasoning was a declining demand for the clay products, and a diminishing, although not exhausted, clay supply.

It was in 1978 that the Hazlet Township Committee concluded that continued residential development would soon envelop the Natco Lake area. Contact was made with the officials of the State of New Jersey Green Acres Program to determine if an acquisition program could be approved. With a favorable response from the state, a non-binding referendum question was placed on the ballot for the November 1978 General Election in Hazlet Township. This would determine whether there was public support for the proposal to purchase about 250 acres of vacant land, saving it for future recreational use for present and future generations.

The answer came in an overwhelming vote of 5059 in favor and 711 opposed. This 7 to 1 favorable vote inspired the Township Committee to move forward with haste,

notwithstanding that one tract of about twenty-five acres had, during the interim, been processed and approved as a major residential subdivision and had to be, for economic reasons, dropped from the list of properties to be acquired.

The application for funding readily progressed and in due course the New Jersey Green Acres Program approved a grant of a little over one million dollars. The total assemblage comprised about 216 acres at a cost of about $3 million.

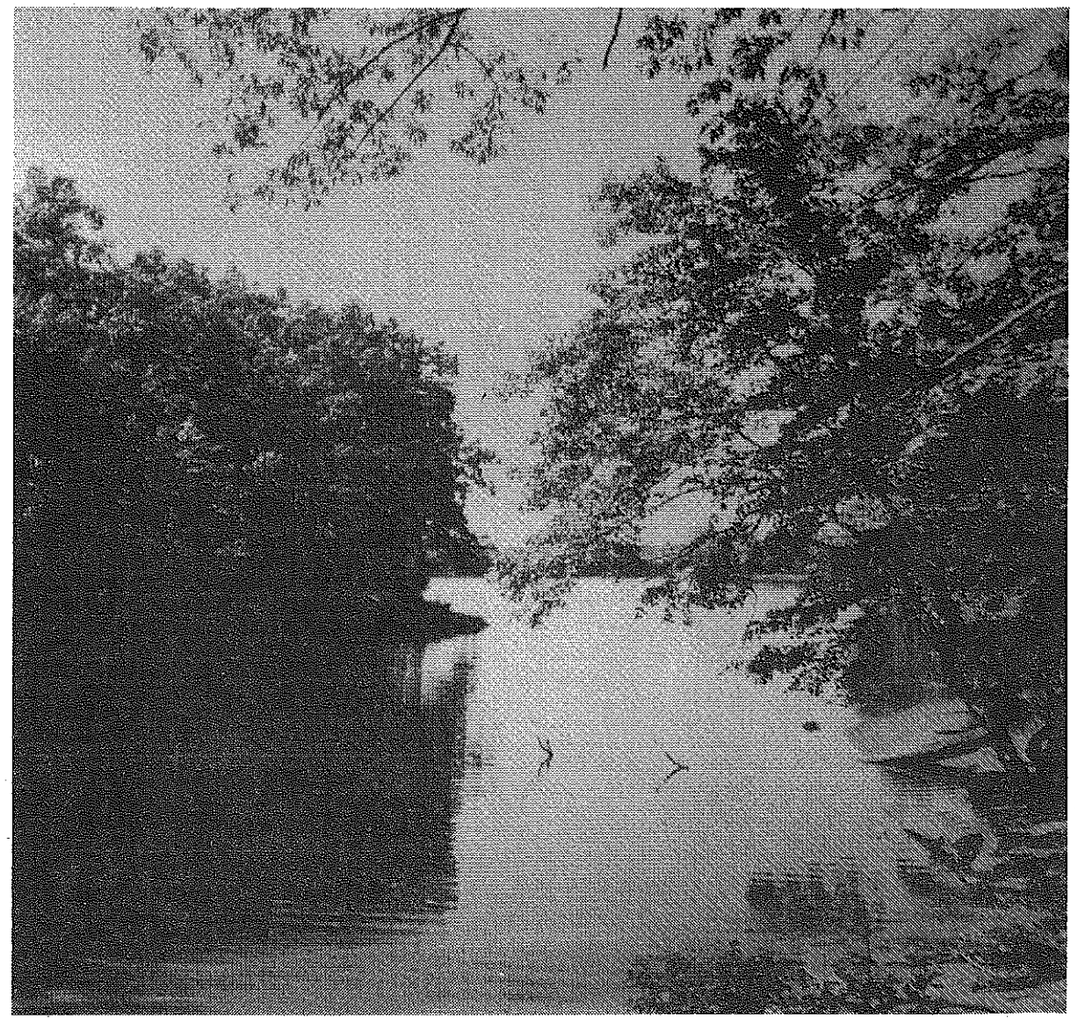
The Natco parcel, which includes the lake on the south side of State Highway 36, totals about thirty three acres. Assistance in purchasing this portion of the overall tract was provided with the utmost cooperation and assistance of the Monmouth Conservation Foundation, a nonprofit organization comprised of civic-minded recreationally and environmentally concerned citizens, which purchases sensitive parcels of land and holds them for eventual conveyance at near cost to a public entity. In this instance the Foundation was able to negotiate directly with the owners and purchased the tract at considerably less than the market value, which in turn saved the taxpayers many thousands of dollars.

Starting in mid 1980, titles to the various parcels were attained and this continued during the next year. Since this initial program to acquire the 216 acres, two more abutting properties have been acquired; one by direct purchase by Hazlet Township and the other by donation from an out-of-state owner. Natco Park presently totals about 220 acres.

It seems most appropriate to continue use of the Natco name in identifying the Park. By redefining NAT as "Nature's" and retaining CO as "company". Everyone who takes a leisurely trip through Natco Park will agree that, while relaxed and observant, they are truly in nature's company — Natco Park.

This pamphlet touches upon a number of the recreational and environmental attributes of Natco Park. To really appreciate it first hand, one must take the time to casually walk the various identified trails and enjoy nature's bounties, that, if they could speak, would only say, "Enjoy me — don't destroy me".

— Robert Weigand
January, 1992



Natco Lake, Natco Park, Hazlet, New Jersey

Natco Park is approximately 260 acres in area. About 216 acres of the park was purchased with Green Acres funds matched by the Township as a passive recreation area. International Flavors and Fragrances owns the adjacent undeveloped property in the north west section abutting Union Avenue.

The entire park serves as a rest stop for migrating birds and a nesting area for many. Warblers are numerous in the spring and fall. Nesting birds include robins, finches, cardinals, sparrows, song thrushes, towhees, chickadees, owls, hawks, crows, jays, flickers and many more for the avid birder. Ducks, geese, gulls, egrets, herons and kingfishers all use the lake as a feeding and nesting area.

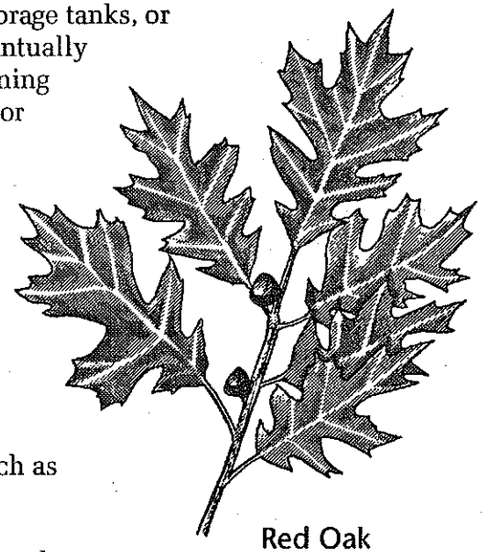
Great Horned Owl fledgling *(Bubo virginianus)*

Many small mammals inhabit the Park. These include raccoons, Striped Skunks, Eastern Cottontails, moles, mice, bats, chipmunks, Eastern Gray Squirrels, and others. Reptiles and amphibians found in Natco include snakes, toads, frogs, salamanders and turtles. It is interesting to note that the area in and around the lake supports a variety of species that did not occur there before the quarry flooded. Also, because of the tidal nature of the lake and the fact that it contains brackish water (a mix of salt and fresh), there can be found species that would not otherwise be found if the lake had remained fresh.

At 20 feet above sea level, 90% of Natco Park has been identified as fresh water wetlands. It could be called a wood-swamp. Beneath the leaves and soil, which appear dry, is an area saturated with water. Repeated traffic on the trails compacts the soil and the water comes to the surface. The park is land locked — no roads bisect it — and motorized vehicles are by law not permitted. Despite this, vandals

have destroyed bridges and caused erosion and flooding of trails with the illegal use of motor bikes and ATVs. The noise of these machines also disturbs the wildlife of the park.

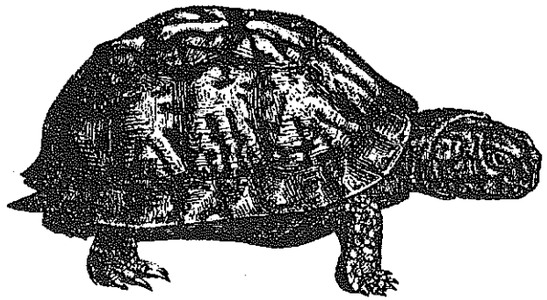
This wetlands portion is quite diverse. It contains many streams, marshes, a bog and the lake. This land holds back flood waters and is a recharge area for a large underground source of drinking water, as is most of Hazlet. This drinking water source is known as the Englishtown Aquifer. This points up one of the major problems for the Park — non-point source pollution. As the low area for the surrounding watershed, Natco Park acts as a sink basin, receiving the water flow from storm drains, streets, parking lots and lawns. Included in this drainage is increasing amounts of pesticides, herbicides, fertilizers, oil paving products, gasoline, antifreeze and other pollutants which have been used on lawns, leaked from cars and underground storage tanks, or been dumped carelessly. These products eventually end up in or under the Park, eventually draining into the bay by way of the lake and streams, or contaminating the groundwater. Nothing should be dumped on lawns or streets which we don't want to eat or drink — or that we want to poison the wildlife of our park.



Red Oak *(Quercus rubra)*

Trees found in this area include many types of oak, such as red, black, white, chestnut and willow. Here also are found quaking aspen, white and grey birch, red maple and sweet gum. Also abundant here are ferns, such as cinnamon and bracken.

At the edges of this swamp, as the area rises to the upland, are sassafras, black cherry, shining sumac, sweet pepper bush, spice bush, and sheep and mountain laurels.



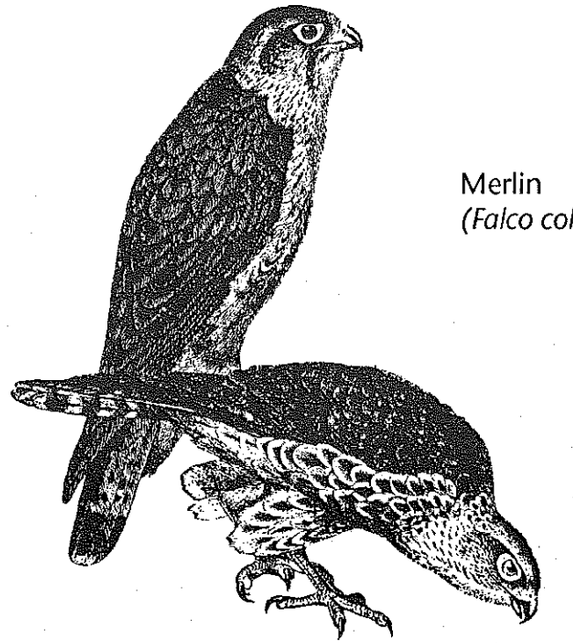
Eastern Box Turtle
(Terrapene carolina carolina)

The headwaters of Thornes Creek — which flows to the east of the lake — originate in Natco Park. Swamps and tributary streams in the northeast section of the park drain into Thornes Creek and also into the lake. The water of Thornes Creek above the tidal marsh is clear, cold and sparkling, its purity has not been substantiated, so it is not recommended for drinking.

A fresh water marsh lies along the sewer right of way that cuts into the Park from the Raritan High School. This swamp empties into East Creek near Union Avenue on the west side of the Park. Some of the typical plants of this type of marsh include swamp magnolias, skunk cabbage, sphagnum mosses, reed grasses, phragmites and a carnivorous plant, roundleaf sundew. This marsh is fed from springs and streams inside the Park, and from streams outside the Park's boundaries.

Just north of the High School football field is a small bog. Bogs can be described by three words: peat, water and acid. As you might expect, footing here is very unstable. Hummocks of sphagnum moss supply some stability, but it is not recommended that anyone walk in this area. Bogs are typically very fragile ecosystems, and the animal and plant species that inhabit them are in a delicate balance with the area's physical aspects, such as soil level and composition, drainage patterns, salinity, etc. This type of ecosystem is easily disturbed. There are no trails. Poison ivy and low shrubs abound here. Interestingly, this area is in transition, presently succeeding — naturally advancing from one type of ecosystem to another — from a shallow, flooded bog to a lowland swamp as water flow continues to change both entering and within the Park.

Toward the northwest, adjacent to the International Flavors and Fragrances property, there is a small depression caused when sand was stolen from the area. This has filled with water and now supports tadpoles and Sun Dews. The water level fluctuates with the seasons and sometimes dries up before the tadpoles become toads. The adjacent private property (IFF) is the site of an abandoned farm which has not been used for decades. Common species of plants here include Sassafras, Bayberry, many types of grasses, Blueberry, Deciduous Holly, Dwarf Sumac, Black Cherry and wild bean. It is surrounded by swamp and tributary streams which flow into East Creek. This area remains as a relatively undisturbed sanctuary, attracting many species of birds.

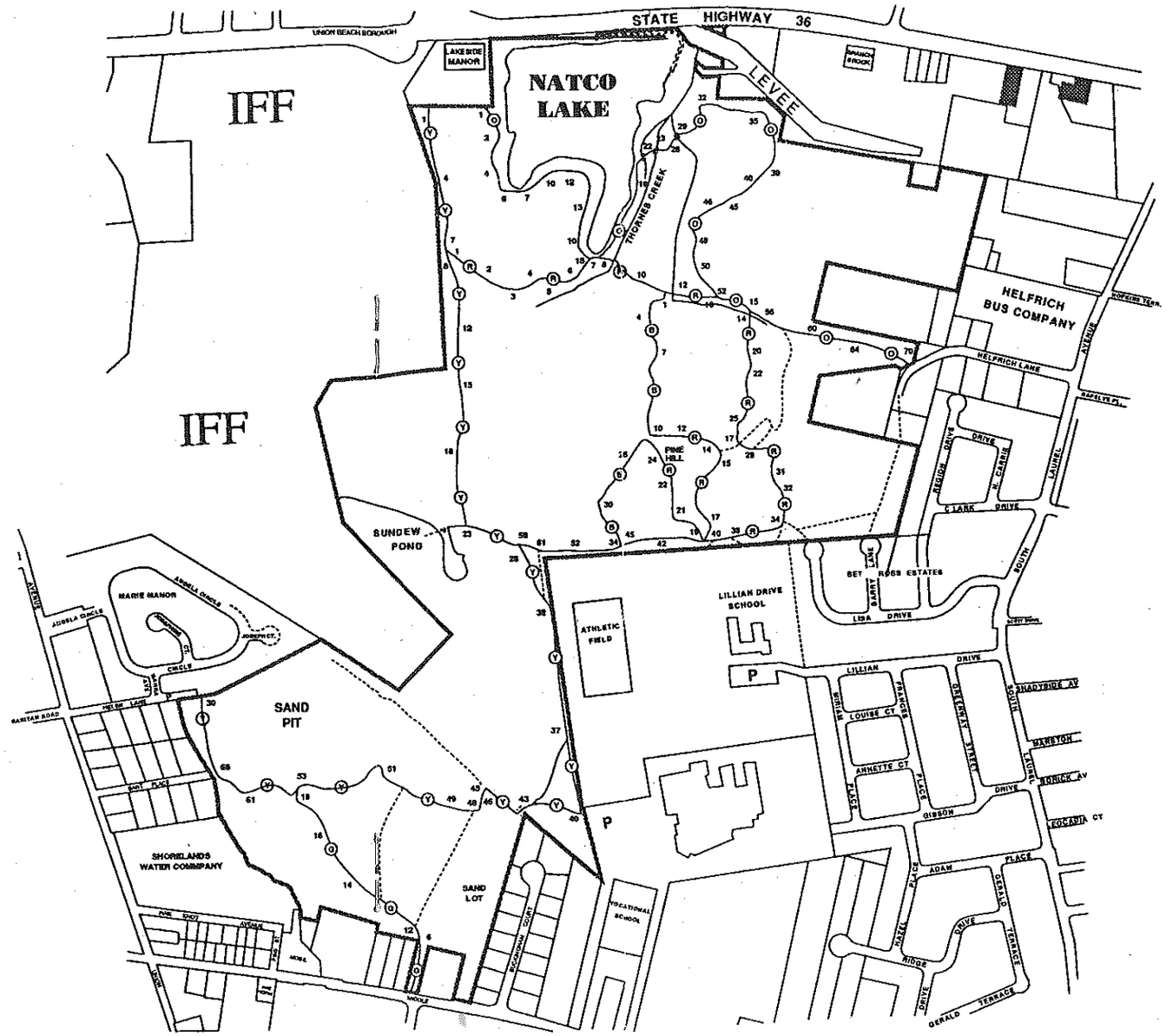


Merlin
(Falco columbarius)

NATCO Park
Hazlet Township
New Jersey

Legend

- PINE HILL TRAIL (BLUE)
- FERN TRAIL (RED)
- LOWLAND-UPLAND TRAIL (YELLOW)
- LAKE TRAIL (ORANGE)
- SANDY TRAIL (GREEN)
- UNMARKED TRAIL
- BRIDGE
- P PARKING



NATCO

NATCO

This area is very low in comparison to its surroundings. The southern portion of the Park is an area of Pine Barrens.consisting of gentle hills about 87 feet in height. The soil — mostly white sandy Cape May Quartzite — is thin, acid and well drained and is typical of pine barrens. These woods are dominated by Pitch Pine and Black Oak. Frequent fires have kept the oaks from growing and overtaking the pines as the dominant tree type. Pitch Pine is not killed by fires. Blackened trunks of Pitch Pine can be seen sprouting new green growth, and in fact, this tree has evolved to spread its seeds after a fire.

A fire in the park scorches the ground, but usually leaves the pines undamaged

Other plants of this pine barrens include mosses, lichens and laurel. An American Chestnut here has produced nuts, but shows signs of blight. High Bush Blueberry and Huckleberry abound in the upland area on the south west side of the Park. Pink Lady Slippers occur here, but are rare. To pick the flowers of a Lady Slipper means death to the plant, so many have died.

The Lake

Soil maps of 1927 show this area as "made land," a quarry. The Lorilard-Natco Company (National Tile Co.) mined the soil to obtain the clays used to manufacture bricks and hollow tiles, some of which may be seen at Environmental Commission headquarters.

In the 1930s the mining equipment went deep enough to meet the underground layer of earth which contained the waters of the Englishtown Aquifer. The excavated areas in Union Beach and Hazlet became fresh water lakes in a very short time, so short, in fact, that much of the mining equipment had to be abandoned and remains at the bottom of the lake.

In the late 1930s it was thought that it would be possible to drain the water-filled area. A ditch was dug to connect the lakes and they in turn were ditched to Thornes Creek. However, at high tide, the bay level is higher than Thornes Creek, so the tide came in and brought salt water from Raritan Bay, mingling it with the fresh water in the lakes.The lakes are now what is known as brackish water, a mix of salt and fresh.

In June 1982 a dive was made in Natco Lake, Hazlet, by volunteers, at which time two fresh water springs were found. There is a 5-8 ft.-deep bottom sediment of black, organic material described as smelling of hydrogen sulfide.

The area supports a diversification of plant and animal life in and around the lake. Rockweed, red seaweed, sea lettuce, worms, snails, barnacles, crabs, striped bass, bluefish, flounder, pipe fish, salamanders, toads, frogs, snakes, turtles, herons, egrets, kingfishers, ducks, and gulls all are found here. The lake is not safe for swimming nor should any fish or crabs taken from the lake be eaten because of the danger of contamination from the bay and from leaching from the surrounding land areas.

Blueberry *(Vaccinium corymbosum)* and Huckleberry *(Gaylussacia baccata)*

Blooms: May. Fruit: June to August
Habitat: Swamps or dry upland woods

Both bushes are so abundant throughout the park, one cannot walk on any trail without coming across one or the other.

The Huckleberry plants are extremely close relatives of the Blueberry plants, so close that often people confuse them. There's a marvelous, fun way to tell the plants apart. Pick a leaf from a plant which you believe to be a huckleberry, and press its undersurface onto the back of your hand. If after peeling the leaf away, there remains a bright yellow imprint of the leaf on your hand, you can be sure it is a leaf from a huckleberry plant. The yellow color is left by resin dots on the underside of the leaves. Blueberry leaves have no dots. This identification trick works best in spring and early summer, as later in the season, the surface resin sometimes dries up.

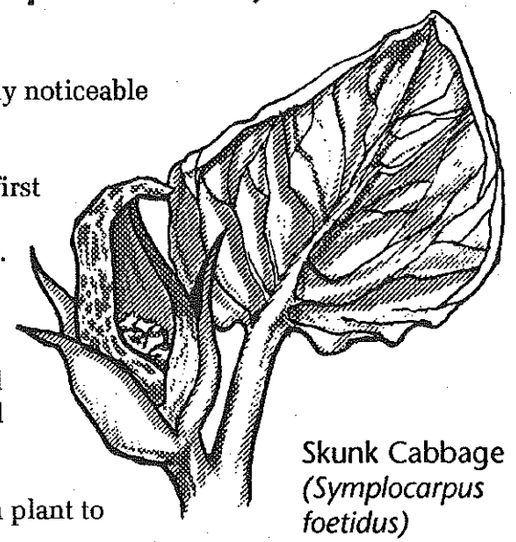
Blueberry *(Vaccinium corymbosum)*

Blueberry and Huckleberry flowers are bell-shaped, dangling in clusters, and are white-pink or reddish in color. Pollination is accomplished by bees and in summer the plant is full with sweet edible fruit. Both plants are very important to wildlife. The berries are relished by songbirds and small woodland creatures; the twigs and foliage are eaten by deer and rabbits. In autumn their display of glowing red foliage is a spectacular site to behold.

Skunk Cabbage *(Symplocarpus foetidus)*

Blooms: February - March
Habitat: Brooks and streams — highly noticeable along the Red Trail.

After the long winter stillness, one of the first and most picturesque plants to emerge from the frigid earth is the Skunk Cabbage. Along with the arrival of the Red-winged Blackbird, this plant thrusts its purplish-streaked green and yellow hood up through the ice of the bog. Inside the hood is a fleshy floral spike, studded with small pinkish-purple blossoms.



Skunk Cabbage *(Symplocarpus foetidus)*

It may take up to seven or more years for a plant to be large enough to produce flowers.

One of the most amazing features of Skunk Cabbage can be seen in late winter. The flower buds begin to enlarge, and as they do so they actually produce heat, often enough to melt snow around them. The heat is produced by the respiration of the plant. The knob of flowers, or spadix, starts to produce heat once the temperature is above freezing and will actually keep itself at a fairly constant temperature of slightly over 70°F.

Honeybees are among the first visitors to the flowers, and it has been suggested that if they are active in cold weather, they may take advantage of the warmth produced by the spathe before flying on to the next flower.

The flower spike has a slightly unpleasant odor which attracts carrion flies. It is this insect that fertilizes the blossoms. Then the magnificent bright green leaves grow to two feet or more in length. The blossom hood dries up, but the odor persists in the plant's juice — break a stem or bruise a leaf and there it is — leaving no doubt about the plant's name.

Sassafras *(Sassafras albidum)*

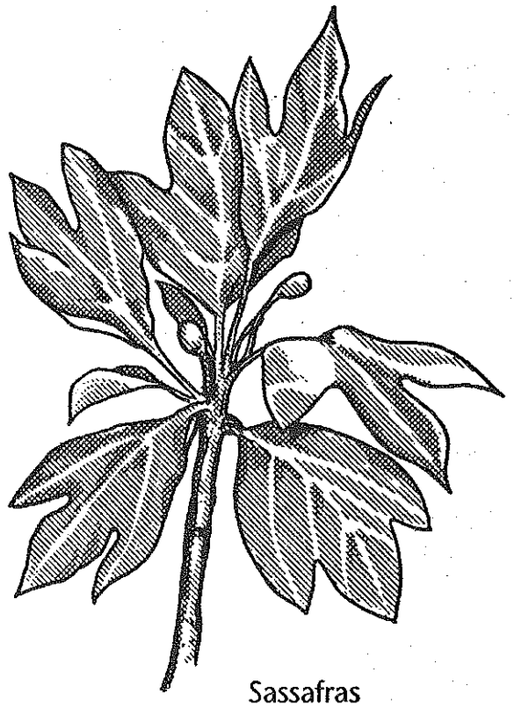
Blooms: April
Habitat: Dry woods

Sassafras, called Green Stick by the Indians because of its bright green twigs, is quite common in the park. Just about every part of this tree has either a pleasant taste or smell. The outer bark of the root is reminiscent of old-time root beer.

The blossoms are greenish-yellow and have a wonderful spicy fragrance. The leaves are particularly unique. Sassafras is one of the few plants in the world on which three different leaf shapes, one oval, one mitten-like and one three lobed, can be found on the same twig. The leaves also display brilliant yellow, orange and red autumn colors.

The tree attracts the beautiful tiger-swallowtail butterfly. The female of the species lays her eggs on the leaves. Birds, including quail, feed on the dark blue fruit.

In colonial days Sassafras was used as a medicine and a tonic. Today in springtime, as in days of old, people still go out in search of Sassafras, presuming that an outing in the spring air and a tea made from the roots of the earth can only improve one's health and spirits.



Sassafras
(Sassafras albidum)

Shadbush *(Amelanchie arborea)*

Blooms: April
Habitat: Dry woodlands
Most noticeable along the Yellow Upland Trail.

The Shadbush, also known as Juneberry, is one of the earliest white-flowered shrubs to bloom in Natco Park. The most frequently used common name, Shadbush, was given to this plant by early settlers on the Atlantic Seacoast. They knew that each year the Shad Fish would leave the ocean and swim inland up streams to mate and lay their eggs. This migration occurred the same time as this plant flowered. The bark of the bush has long twisting, rather dark vertical lines running through it, and it looks as though fish are swimming up stream. It's a neat way of identifying the bush, especially in winter. This particular species of Shadbush often grows to tree height.

Many also refer to this plant as Shadblow, "blow" being an archaic word meaning "a show of blossoms," which most certainly does describe this lovely shrub.

Shadbush
(Amelanchie arborea)

Sweet-Pepper Bush *(Clethra alnifolia)*

Blooms: July to September
Habitat: Wetlands, especially swamps and sandy woods.

Sweet-Pepper Bush
(Clethra alnifolia)

One of the Park's most delightful shrubs is the Sweet-pepper Bush, and in early summer when nearly all our flowering shrubs are past their glory, the fragrant blossoms of the Sweet-pepper Bush begin to exude their perfume and the forest could not smell sweeter.

The long creamy white flower spikes mature from the bottom up, a few new blossoms opening each day. An interesting aspect of the Pepperbush's development is that while the flowers of its blooming spike point outward in all directions (so that the plant can provide the greatest amount of access to the visiting insects), its fruit as they mature turn upward. Their function has changed, and they are now small cups that must hold the seeds and allow them to be shaken out gradually by wind and passing animals. Long after flowering, it's dry fruiting capsules remain in vertical spikes and help identify this plant in winter.

Pitch Pine *(Pinus rigida)*

Blooms: April - May
Habitat: Sandy Areas

At first glance, the Pitch Pine, which is the dominant pine of the park, may not be the prettiest of pines, but those who look more closely at its artistic nature and individuality are forever hooked on its beauty.

It is a rather short tree, rarely over thirty feet, with uneven branching. Its slender yellow-green needles grow in groups of three. The lower branches bend down gracefully, often touching the ground below. The bark is a reddish-brown and rich in pitch or resin. The cones are egg shaped, prickly, buff-brown in color and persist for several years on the tree.

Pitch Pine
(Pinus rigida)

As the warm sun heats the fallen pine needles, one has only to take a short walk on the Yellow Trail, to experience the lovely fragrance of the holiday season anytime of the year.

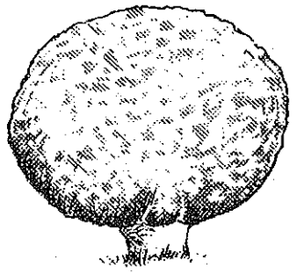
Mushrooms

Natco Park supports a variety of fungus species. Many of them are beautiful to the eye, and a few are pleasing to the palate. It must be stressed, however, that mushroom identification is a very difficult undertaking. Many experienced mycologists (ones who studies mushrooms) have been fooled by look-alike species. As with all edible plant identification, but especially with mushrooms, NEVER eat a mushroom which you have not identified to be the EXACT species listed in the literature. Having said that, there are many species of mushroom which can be found in the Park, and a few of them are edible. A few of the more noticable fungi are highlighted below.

The Sulphur Shelf is a fungus that grows on the sides of trees, forming a large, multi-layered shelf-like mass. In its earlier stages, the fungus displays a beautiful orange color on top, and a bright sulphur-yellow underneath. This makes it one of the easiest mushrooms to identify, and, this fungus is edible and very good.

Sulphur Shelf *(Laetiporus sulphureus)*

The reader should note that the Death Cap, *Amanita phalloides*, is very common in the Park, as it is elsewhere. This mushroom grows on the ground, has a white to whitish-grey or whitish-brown cap, sometimes flecked with white. It usually has a "skirt" falling from the stem near the underside of the cap. This mushroom is DEADLY POISONOUS.



Earthball
(Scleroderma citrinum)

Many species of puffballs are found throughout Natco. In particular, the Earthball is common, as is the Common Puffball.

Many of these fungi can be found throughout the Park, most commonly after an Autumn rain.

Poison Ivy *(Rhus radicans)*

Blooms: May
Habitat: Disturbed areas, dry to moist upland woods.

Description: A shrub, growing to 3 feet, or a climbing vine of greater length.

Poison Ivy
(Rhus radicans)

Leaves: Three glossy, dark green leaflets on a single stem, which turn various shades of red as autumn approaches.
Flowers: Small, yellowish-green, growing in clusters.
Fruit: Small, roundish, waxy white, maturing in August to October.

"Leaves of three, let them be." Unless you are certain of the identification of plants that have three leaves on a stem, it is wise to remember this saying. The plant it refers to is Poison Ivy. One cannot walk through any wooded area without the possibility of coming across it. This plant should be left alone, as all parts of it contain a chemical which causes a serious skin rash in most people.

Although Poison Ivy is not extremely prevalent along the main trails in Natco Park, it does exist along the more wilderness ones. It is especially noticeable along the Orange Trail.

Recommended Books and References

Lenehan, Michael. Natco Lake Map and List of Marine Life and Wildlife of Natco Lake. (Available at the Environmental Commission Office, 317 Middle Road, Hazlet.

New Jersey Outdoors Magazine

Peterson, R.T. *A Field Guide to The Wildflowers.*

Peterson, R.T. *A Field Guide to the Birds of Eastern North America.*

Stokes, *Wildflowers.*

Vetter, Karl. Soil Survey of Selected Areas of Hazlet Township.

Wnukowski, Stan and Lejda, Barbara. Plant list. (Available at the Environmental Commission Office.)