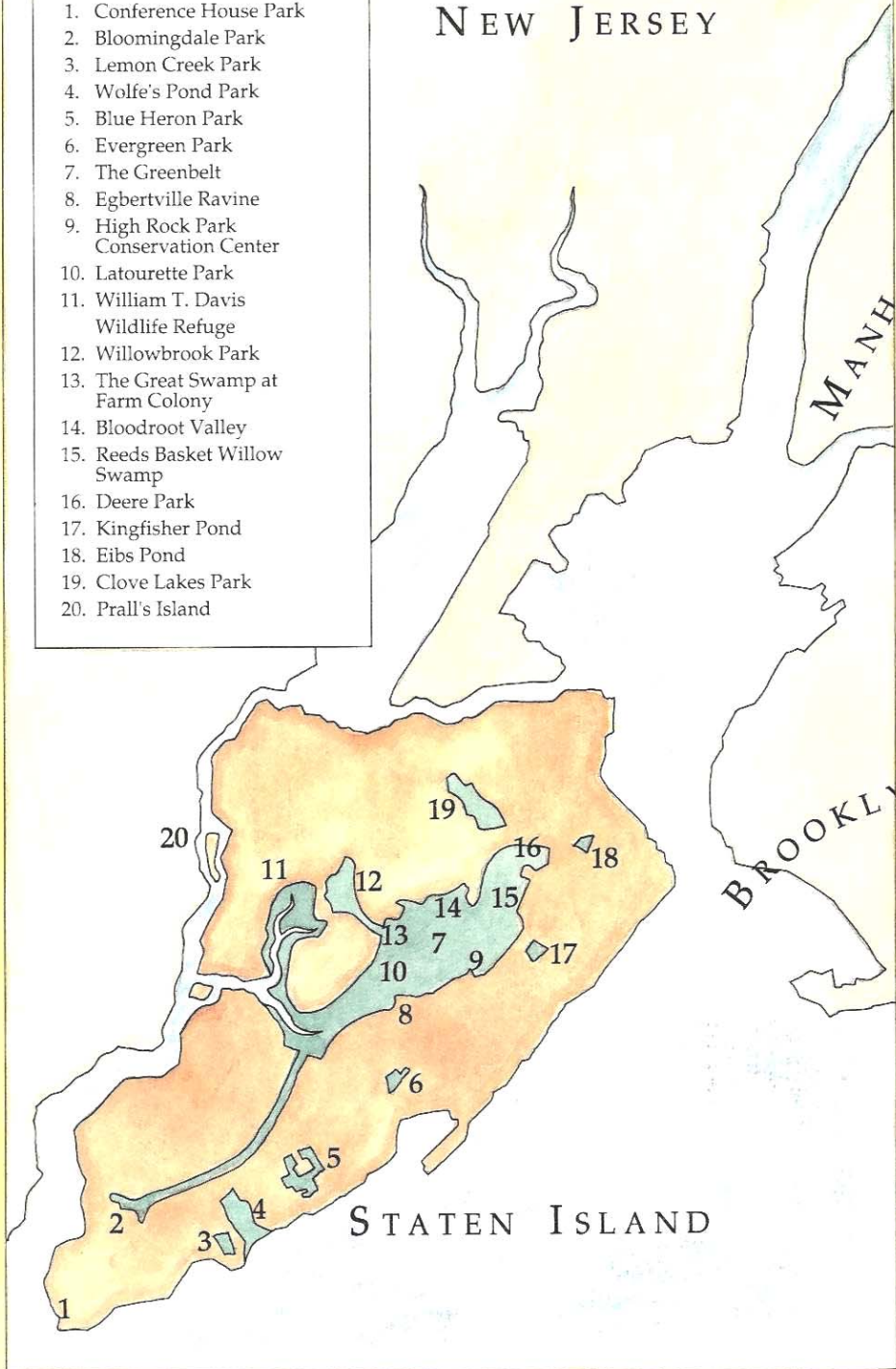


A vertical photograph of a dense forest. Sunlight filters through the canopy, creating a bright, dappled light effect. The trees are mostly deciduous, with some showing early autumn colors. The overall scene is lush and green, with a sense of depth and natural beauty.

**Staten Island
Natural Areas**

NEW JERSEY

1. Conference House Park
2. Bloomingdale Park
3. Lemon Creek Park
4. Wolfe's Pond Park
5. Blue Heron Park
6. Evergreen Park
7. The Greenbelt
8. Egbertville Ravine
9. High Rock Park Conservation Center
10. Latourette Park
11. William T. Davis Wildlife Refuge
12. Willowbrook Park
13. The Great Swamp at Farm Colony
14. Bloodroot Valley
15. Reeds Basket Willow Swamp
16. Deere Park
17. Kingfisher Pond
18. Eibs Pond
19. Clove Lakes Park
20. Prall's Island





Staten Island Natural Areas

THE WHOLE ISLAND IS LIKE A GARDEN...

– HENRY DAVID THOREAU, 1843

In the summer of 1843, the author of *Walden* explored a naturalist's paradise on Staten Island, where he tutored for a nephew of the poet Ralph Waldo Emerson. Thoreau wrote of unspoiled nature in his letters home: "There is a beautiful red honeysuckle now in blossom in the woods here". From the rise now known as Emerson Hill, he watched ships in the bay: "I can see New York, Brooklyn, Long Island, the Narrows, through which vessels bound to and from all the world chiefly pass".

The harbor that captivated Thoreau drew industry into the bustling port of New York, and with it, pollution that destroyed some of the natural beauty he so admired. A tidal strait separates Staten Island, New York City's least-developed borough, from New Jersey and the nation's most industrialized corridor. Dutch farmers called the strait "Kill" meaning channel. Today the name holds unfortunate irony, the rich marshland that was once Fresh Kills is now the world's largest trash heap. Arthur Kill has been fouled by massive oil spills. Amid this toxic mess, slender herons seek sanctuary. They nest in a New York City park — their island in the storm. Prall's Island, home to hundreds of herons, glossy ibises, and three types of egrets, is one of 25 Staten Island parks, many

with natural areas that would dazzle Thoreau even today.

Within earshot of passing traffic, there are sweetgum forests, massive tulip trees, and rare stands of tropical paw paw. Carpets of fern, dotted by pink lady's slipper orchids, provide a rich understory for mature forests. Joe-Pye weed trims meandering trails, and amber mushrooms dot green mossy ravines. In late May, horseshoe crabs venture ashore from the Atlantic to mate, as they have for millions of years; in July, Turk's cap lilies bloom by the thousands; in October, monarch butterflies migrate across the island's southern shores.

More than 400 acres of Staten Island's parkland were acquired by the New York City Parks Department during the last 15 years. This initiative, combined with the vision of Staten Islanders in protecting wildlife and maintaining the extensive natural areas of the Greenbelt, is helping to improve the City's environmental health and improve New Yorkers' quality of life.

While conservation issues seem focused on the exotic — the elephants of Africa, the rainforests of Brazil —



Henry David Thoreau was inspired by the view of the Narrows from Emerson Hill.

the true challenge is to sustain the green space in our own neighborhoods. Parks on Staten Island provide habitat for 21 rare, endangered, and threatened plant species. The birds of Prall's Island are not on the endangered list, but the Prall's Island colony is one of the largest rookeries in the region.

This brochure is a guide to the natural parklands of Staten Island. These areas of green in the heart of urban sprawl, are filled with wonder and diversity.



Geology

Staten Island is one of the more complex land forms in the eastern United States. It is the sole place along the eastern seaboard where the geological elements of the coastal plain, foothills, and mountains merge. The soil and vegetation reflect this mosaic. Two plant zones overlap here, so that southern trees like tulip and sweetbay magnolia mingle with maples and birches typical of northern forests.

The spine of the island is a broad ridge of serpentine rock that surfaces in outcrops on hills. The serpentine was formed during the Ordovician period (435-500 million years ago) when heat and pressure altered rocks rich in magnesium and iron. You can see serpentine at the crest of the hill in Clove Lakes Park and at Todt Hill, at 410 feet, the highest natural rise on the eastern seaboard from Maine to Florida. Ash green in color, serpentine is named after the snake-skin pattern of the rock. Its mineral composition

includes fibrous chrysotile (known commercially as asbestos), talc (the source of talcum powder), oluvin (green lava grains) as well as ferromagnesia, a mineral containing magnesium and iron. Iron was once mined on Staten Island; the Dutch name for Todt Hill was *Yserberg*, meaning iron hill.

A second ridge on the island marks the southernmost advance of the Wisconsin glacier. Seventeen thousand years ago the glacier covered all of New England and most of New York State including Manhattan, where the ice sheet was 1,000 feet thick — three quarters the height of the Empire State Building. The glacier retreated about 12,500 years ago, leaving a ridge composed of boulders and soil called the terminal moraine.

Large pockets of ice trapped in the soil during the glacier's retreat created a series of basins, and hills. These holes and hills, called "knob and kettle" terrain, characterize much of the island. The southern tip of Staten Island, untouched by the glacier, became part of a vast outwash plain as meltwaters flowed to the sea. Two geological formations, the Raritan, and on top of this the more recent Mogothy formation, can be seen at Conference House Park. They also appear at Lemon Creek Park, where debris deposited by glacial outwash is 300 feet thick in some areas. Salt marshes on Staten Island were created about 4,000 years ago. As the earth's climate warmed, southern species like tulip tree and persimmon began to appear on the island. With continued global warming, the advance of southern species continues today.

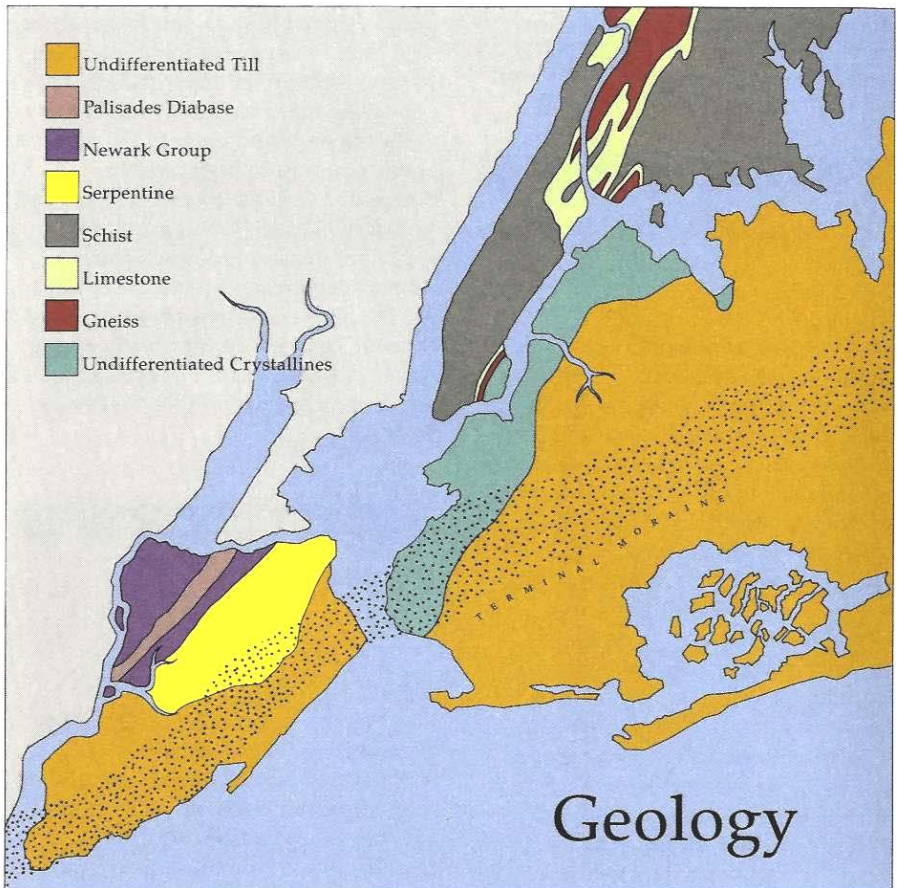


Natural Communities

A wide variety of ecosystems has resulted from Staten Island's complex geology. A system is an assemblage of independent units that make up a whole. Take a TV set for example. It consists of a power supply, picture tube, and on/off switch, among other components. Each part has a specific

function, but none can function properly unless all function.

An **ecosystem** is a system in which plants, animals, and aspects of the physical environment (soil, minerals, water, etc.) are components. The system in question can be as small as the tiny world of insects that spend their whole life among purple milkweed flower clusters. Or, it can be as large as the serpentine meadow in which the purple milkweed grows. The scope of the term "ecosystem" depends on one's frame of reference. But whether the ecosystem is a mud



puddle or a Brazilian rain forest, it is defined by the interactions between plants and animals and their physical environment.

The **community** is the most conspicuous part of an ecosystem. It is an assemblage of interdependent plants and animals. Most plant and animal species forming a community are relatively scarce. The few common species are considered the dominants; in terrestrial communities plants are usually dominants. By considering dominant plants we will examine some of the common natural communities of Staten Island. In a few cases we will examine ecosystems by discussing the physical factors that determine why some communities occur where they do.



Forests

Two types of forest community are common on Staten Island. Forests dominated by red, black and white oaks, with hickories, American beech, and black birch grow on well-drained, upland soils. Common shrubs are maple-leaved viburnum and witch hazel, and highbush blueberry on more acid soils. The forest floor may be covered with hayscented fern, Canada mayflower, Solomon's seal and white wood aster. Squirrels and chipmunks forage and nest among the oaks. Wood thrush, rufous-sided towhee and red-bellied woodpecker can be found in oak forests. Red-tailed hawk and great horned owl preside over this community; the hawk by day; the owl by night.

The other forest community type grows in wetter, poorly drained soils which may be flooded in the spring. These forests are dominated by sweetgum and red maple with tulip tree, pin oak, and swamp white oak. Catbrier, arrowwood, and panicked dogwood grow here. New York, cinnamon and sensitive ferns crowd the forest floor. Black-capped chickadees, tufted titmice, and yellow-shafted flickers are common breeding birds. Less common breeders include American redstart and blue winged warblers. Many more migrating warblers feed and rest here during the spring and fall.

Extensive pine barrens once covered parts of Staten Island's southwest shore. This forest was similar to the vast New Jersey pine barrens. Rare orchids and plants like the lance-leaved violet grew in the Staten Island barrens. What now remains of this unique community is dominated by pitch pines with post and blackjack oaks. Development and the suppression of natural fires which renew the poor sandy soils and encourage the pitch pines to drop seeds, have severely reduced the Staten Island pine barrens. Remnants of this ecological community survive in Clay Pit Ponds State Park.



Wetlands

Staten Island was once the site of many freshwater wetlands. Draining, dumping, and development have reduced these areas to a fraction of their original extent. Wetlands were generally viewed as "wastelands" until recently, and so were designated as sites



Dragon flies & damsel flies

frequent lakes and ponds. These "living flashes of light" as Alfred Tennyson called them, belong to the family Odonata, meaning "tooth", so called because they are voracious eaters. Dragonflies can eat twice their weight in mosquitoes each day.

for city landfills. It is estimated that around 1870 there were 1,000 ponds on the island, now only 28 remain. Wetlands can take several forms. Pond edges support a variety of plants. Cattail, decodon, pond lily, and shrubs like buttonbush and sweet pepperbush grow in and around ponds. Swamp rose mallow with its large hibiscus-like flowers is perhaps one of Staten Island's prettiest wild flowers.

Trees such as red maple, swamp white oak, black tupelo and sweetgum, all wet tolerant species, are dominant in swamp forests. Shrub swamps have fewer trees. They are dominated by a variety of shrubs including male-berry, smooth alder, button bush, and swamp azalea. They are often transition zones between ponds and surrounding forest and provide nesting habitat for yellow warblers and swamp sparrows, and cover for wood ducks. Wet meadows have no trees or shrubs, instead they are dominated by herbaceous plants such as tussock sedge, wool grass, spike rush, and water plantain.

One of the most common herbaceous wetland plants on Staten Island is *Phragmites*, a tall reed which grows in disturbed areas. *Phragmites* is an aggressive species which out-competes many native wetland plants. *Phragmites* does have some benefits. It provides habitat for red-winged blackbirds and muskrat and is effective in filtering some toxics from polluted water.



Coastal

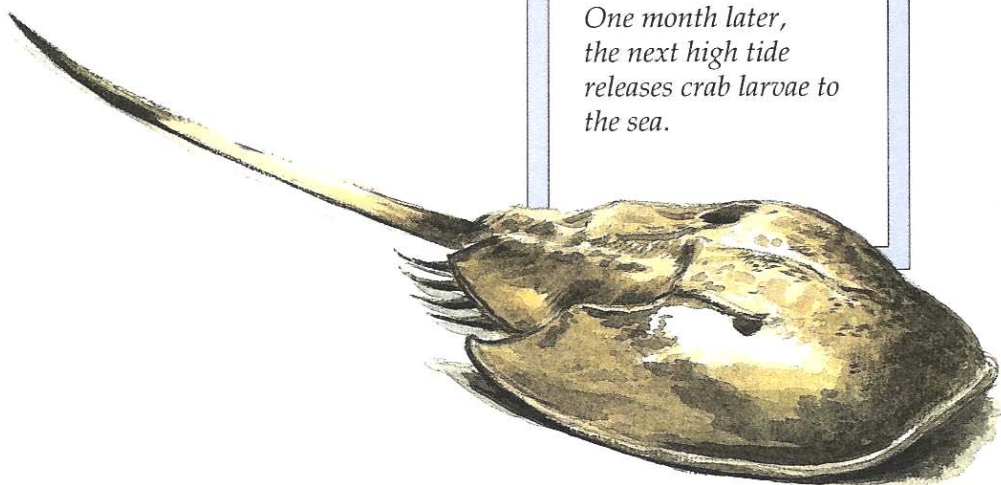
Staten Island salt water wetlands and other coastal ecological communities have been severely reduced by the creation of the New York City municipal landfills and coastal development. Salt marsh communities depend on proximity to salt water. Intertidal communities tolerate the shifting tides which leave them alternately dry or covered in seawater. They are some of the most productive ecological communities, and are extremely important as nurseries for marine

fishes and as feeding grounds for thousands of birds. Saltmarsh cordgrass is the dominant plant in the intertidal community. In a healthy saltmarsh, dense stems provide anchors for numerous ribbed mussels and habitat for fiddler crabs.

Further inland saltmeadow cordgrass is dominant. This plant is salt tolerant, but is only occasionally flooded during

Horseshoe crabs

are rarely seen, for they thrive in deep offshore waters. But in spring they migrate to the coast. When the moon is full and the tide is high, thousands emerge to mate. Fertilized eggs are buried in the sand. One month later, the next high tide releases crab larvae to the sea.



monthly high tides. This area is referred to as high marsh. Some areas of high marsh on Staten Island have become overgrown with *Phragmites*, especially in areas where the ground has been disturbed and the waters polluted. Even further inland are communities dominated by beach grass, seaside goldenrod, and sea rockets. All these plants have adapted to life in the dry, salt sprayed dune environment. These adaptations include waxy leaves that conserve water, and among some, low profiles which spare them battering and dehydration from winds.

Many species of birds can be found along the Staten Island coast. Gulls are always present. They appreciate both the shoreline and the large pile of garbage in the center of the island. Bufflehead, brant, and horned grebe winter off the south shore. In spring and fall, sandpipers and plovers stop to rest and feed during their long migrations between the arctic north and South America.



Serpentine

Staten Island is one of the few places in the northeast where serpentine rock is exposed. Serpentine is composed mainly of magnesium and iron compounds. The rock weathers quickly producing soils that are generally too high in magnesium for most plants. A few rare plants have adapted to live on "serpentine barrens". Green milkweed can be found on Staten Island. Other plants which survive on Staten Island serpentine are also found in non-serpentine areas. They include

little bluestem, Indian grass, broom-sedge, gray goldenrod, and small white snakeroot. Trees and shrubs which occur in this habitat are scattered and often stunted. Gray birch, black oak, Sassafras, bayberry, and shining sumac are some common species.



Natural Areas



William T. Davis Wildlife Refuge

This 260-acre refuge includes the first wildlife sanctuary established in New York City. In 1928, the Audubon Society joined forces with local natura-list William T. Davis to protect 52 acres as a bird sanctuary. In 1955, the park was enlarged to protect marshes that were in danger of being filled.

Old maps of the area indicate a town called Springville, named after the crystal clear mineral waters that bubbled to the surface. This "Perrier" of Staten Island was sold by the Crystal Water Company, both for drinking and medicinal purposes. Now the spring water is unsafe to drink; most of the wells are capped. But fresh springs and small streams are still conspicuous features of the park.

Watercress grows in the clear brook that winds through the refuge, rich in a variety of plants. Tidal marshland, freshwater wetland and woodland communities provide habitats for migrating birds and local waders. Birds commonly seen include great blue

heron, red-winged blackbirds, and woodcock. Woodland flowers include Jack-in-the-pulpit, trout lily, Canada mayflower, Solomon's seal, spring beauty, and swamp loosestrife.

Directions: A well-marked trail begins near Travis Avenue, off Richmond Avenue. Guides and field trips can be arranged through the Staten Island Urban Park Rangers by calling (718) 667-6042. You can reach the Refuge on the X10 bus from St. George, or by car on Travis Avenue between Victory Boulevard and Richmond Avenue.



Conference House Park

This 225-acre park on the southwestern shore is named after the only surviving pre-Revolutionary manor in New York City. The stone house was the scene of an unsuccessful peace conference on September 11, 1776. Benjamin Franklin, John Adams, and Edward Rutledge met with British Admiral Lord Howe, who demanded that the Colonies return to British rule. Although they had recently lost a string of battles, the colonists stood fast and the conference was over in three hours.

The high bluffs of Ward's Point, the southernmost tip of Staten Island, were once rich in artifacts left by Native Americans who occupied the area as long as 6,000 years ago; Lenape Indians frequented the bluffs until as recently as 1670. Flint arrowheads and handaxes are today preserved at the Staten Island Museum. Collecting in the park is forbidden to preserve the remaining artifacts for archaeological study, and out of respect for the Native American burial grounds.

The park contains other clues to Native American activities. Hackberry trees for example, grow on the edges of the cliffs which is unusual, since hackberry favor calcium, normally found in river bottomland. Oyster shells, however are rich in calcium. Hackberry indicates the presence of middens, heaps of oyster shells left by the native people who harvested the shellfish.

A small, spring-fed stream enters the park between Findlay and Aspinwall Streets and ends in the large marsh before the beach. At the northern end of the park, sandy uplands are forested with black locust, black cherry, hackberry, black and red oaks, and princess trees. Dune grasses along the shore are extremely fragile; please restrict your walk to the firm sand at the water's edge.

Directions: Take the S-78 bus from the Staten Island Ferry terminal at St. George, or drive via Richmond Avenue to Hylan Boulevard, turning right toward the shore. The park entrance is near the intersection of Satterlee and Hylan. Look for the break in the wooden fence. The Conference House is open to the public Tuesday through Saturday, April through September.



Prall's Island

Prall's Island is a vital bird sanctuary in the Arthur Kill, below the Goethal's Bridge. The 81-acre island was acquired by the Parks Department in 1984 as a wildlife refuge, in cooperation with the Audubon Society. The birds on the island include common and snowy egrets which were once slaughtered for their beautiful plumes. By 1900 they were nearly extinct. Their demise was one of the reasons the

Audubon Society was created. It wasn't until the 1960s that egrets began to return to the New York area.

The Audubon Society coordinates studies of the nesting birds here, including glossy ibis, black-crowned night heron, little blue heron, and three types of egret — snowy, cattle, and great. Prall's Island is the largest nesting area in the New York City/Long Island region.

Public access to the island is limited. All the species of wading birds that breed on Prall's Island, disperse to feed in other parks on Staten Island, including Blue Heron Park, Wolfe's Pond Park, and the William T. Davis Refuge. Today the nesting habitat and survival of the birds on Prall's Island is especially critical because of major oil spills in the Arthur Kill that killed several hundred birds, and fouled the habitat of thousands more.



Bloomington Park

The 138 acres of this park in the Woodrow area include a small stream and floodplain. Maple and oak grow in its forest; lowland woods are dominated by sweetgum. Undergrowth includes spicebush, Virginia creeper, arrowwood, and bayberry, as well as non-native plants such as Japanese honeysuckle and Japanese knotweed. Raccoon and snapping turtle frequent the pond, and two threatened species — the northern harrier and the red-shouldered hawk, which frequent nearby Clay Pit Ponds State Park, can sometimes be seen overhead.

Directions: Bloomington Park is best reached by car. From the West Shore Expressway, take the Huguenot Avenue exit, and follow Huguenot Ave. until Woodrow Road; turn right. Then turn left on Bloomington Road. The park begins at the intersection of Bloomington & Drumgoole Roads.



Blue Heron Park

This 147-acre park, divided by Barclay Avenue in the Annadale area, is popular for hiking and bird-watching. The park features a large, shady picnic area, hiking trails, plus wooden platforms near the boggy edge of a pond.

Representative communities include a stream, swamps, open ponds, dry and wet meadows, and mature woodlands. A variety of reptiles: box, painted and wood turtles, and black snakes reside in the park. Birdlife includes great blue herons, wood ducks, American redstarts, and screech owls.

Directions: Take the Staten Island Rapid Transit trains to Annadale Station. Walk southeast to Poillon Avenue.



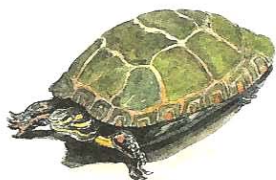
Evergreen Park

Nine different species of fern can be found in this 23-acre park, including royal fern, with round, lobed leaves. These ferns mingle with oak forest wildflowers. Here acid soils support highbush blueberries, pinxter azalea, and pink lady's slipper orchid. Purple loosestrife and indian cucumber grow in the swamp. Birds that frequent the area include red-winged blackbirds, mallards, and great blue herons.

Continued on page 12

Flora and Fauna Highlights

There are thousands of plant and animal species in Staten Island natural areas. Here is a small sample of some common and rare ones.



Reptiles/ Amphibians

Black snake
Fowler's toad
Snapping turtle
Box turtle
Painted turtle
Spotted salamander



Birds

Great blue heron
Black-crowned night heron
Snowy egret
Glossy ibis
Peregrine falcon
Red-shouldered hawk
Purple martin
Belted kingfisher
Wood thrush
Great horned owl
Screech owl
White-eyed vireo
American redstart
Sharp-tailed sparrow



Invertebrates

Blue crab
Green crab
Horseshoe crab
Fiddler crab
Bay barnacle
Ribbed mussel
Hackberry butterfly
Salt-marsh skipper
To moth
Mourning cloak butterfly





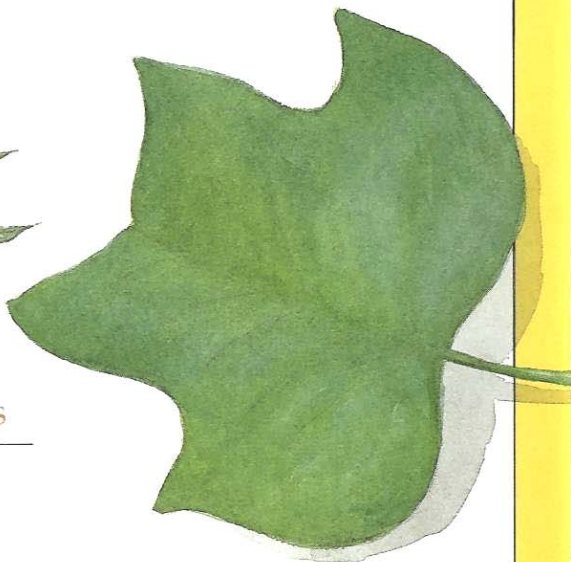
Mammals

Eastern chipmunk
Eastern cottontail
Little brown bat
Muskrat
Oppossum
Raccoon
Meadow vole



Wildflowers

Canada mayflower
Solomon's seal
Jack-in-the-pulpit
Pink lady's slipper
White wood aster
Purple milkweed
Green milkweed
Yellow giant hyssop
White violet
Bloodroot
Blue cohosh



Grasses & Sedges

Bluestem grass
Broomsedge
Indian grass
Purple love grass
Tussock sedge
Lurid sedge
Cattail sedge



Trees

American beech
White oak
Black oak
Willow oak
Swamp white oak
Sweetgum
Persimmon
Red maple
Black tupelo



Ferns

Protruse fragile fern
Ebony spleenwort
Cinnamon fern
New York fern

Shrubs

Arrowwood
Highbush blueberry
Pinxter azalea
Marsh elder
Grounseel bush
Bayberry

A well-marked, half-mile long trail leads to a large, 80-year-old pin oak, and nearby, a cluster of sassafras.

Directions: Take the Staten Island Rapid Transit train from St. George to Bay Terrace Station. Walk north to Evergreen Street. The park is located just off Greaves Street in Great Kill between Dewey Avenue and Evergreen Street.



Eibs Pond

Visitors to this 16-acre park can enjoy a sweeping view of the Verrazano Bridge and New York Harbor. Bluegill sunfish and large-mouth bass live in the pond which is surrounded by rolling, serpentine influenced meadows of bluestem grass and white birch. The park was donated to the City by the Trust for Public Land.

Directions: Eibs Pond is a short bus ride from St. George; take the S-72 to Vanderbilt Avenue and Palma Drive.



Clove Lakes Park

The name of this 200 acre park comes from the Dutch *kloven* for the valley fault that cuts through local hills. The Park's four lakes were created in the 1930's. A brook that flowed from Clove Swamp to the Kill Van Kull was dammed, and 30,000 cubic yards of earth was used to fill the swamps between Clove Lake and Clove Road.

Clove Lakes is one of the most popular parks on Staten Island, with myriad recreational facilities. Migratory birds, such as Canada geese, frequent the lakes in spring, and mallards with

ducklings can be seen in summer. Some of the trees are over a hundred years old, including one of New York City's largest tulip trees, 69 inches in diameter, near Forest Avenue.

Clove Lakes Park has a superb woodland trail, beginning south of the ice skating rink near Marx Street at Victory Boulevard. It winds through red and black oak and American beech forest. Herbaceous plants include Joe-Pye weed, hayscented fern, Turk's Cap lily, and white wood aster. A rare fern, ebony spleenwort, can be found growing from rock crevices.

Directions: Clove Lakes Park and Silver Lake Park are easily reached by bus from St. George, traveling down Victory Boulevard on the S-61, 62, or 66.



Lemon Creek Park

This 80-acre park near Prince's Bay includes a marina on the edge of a salt marsh, the Seguine Mansion, built in 1840, and the only colony of purple martins in New York City.

The Greek revival-style mansion belonged to Joseph Seguine, one of many of the entrepreneurs that thrived on the south shore in the mid-1800s. The Seguine family fortune was made harvesting Raritan Bay oysters.

The head of Lemon Creek is north of Hylan Boulevard in a state-protected wetlands. A tidal creek, Lemon Creek receives fresh water from the stream which courses through Bloomingdale Park. At the mouth of Lemon Creek you can see salt marsh plants such as seaside goldenrod and saltmarsh cordgrass. The beautiful purple

martins are attracted by birdhouses, built high on stilts south of the Lemon Creek Marina. The male is dark blue with iridescent flashes of purple, and both genders feature the distinctive forked tail.

The beach area beyond Lemon Creek is an ideal stretch to see the monarch butterfly migrations in early October.

Directions: Lemon Creek Park and Wolfe's Pond Park (below) are both located on the south shore along Hylan Boulevard and are best reached by car. From Hylan Boulevard, take Seguine Avenue south for Lemon Creek. Beaches at Wolfe's Pond and Lemon Creek Parks have been "restricted" or "not recommended" for swimming by the NYC Health Department since 1983 because of water pollution.



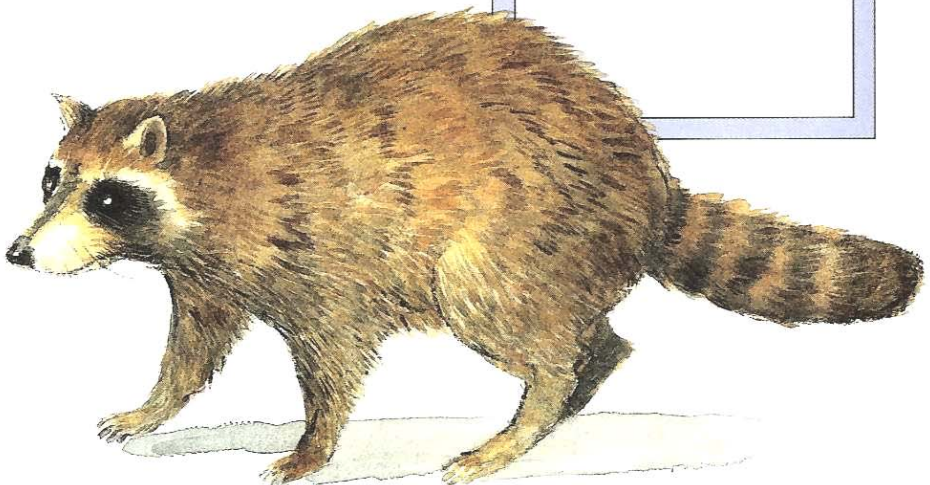
Wolfe's Pond Park

Overlooking Raritan Bay, this 317-acre park is named for Joel Wolfe, who owned a large farm in the area until 1857. A popular beach area, Wolfe's Pond features good bird watching and wide trails for joggers and hikers.

Wolfe's Pond was once a brackish inlet. Today it is a freshwater pond with abundant aquatic plants and animals. Belted kingfishers, black-crowned night herons, black ducks and wood ducks frequent the pond, which is home to carp and large mouth bass. Several species of mammals, including

Racoons

are among the generalists of the animal world. They forage in almost any habitat from saltmarsh to upland forest. They are also successful living close to humans, but they are rarely seen because they are usually active at night and early mornings.



raccoon, muskrat, and eastern chipmunk reside in the park.

There are several walking trails in the forested area north of the park field office. You can reach the trails by following the path along the pond; the wide trail is visible from the front of the park office. Sweetgum trees favor the lower, wetter areas, and American beeches grow tall along the slopes.

Rocks form a stepping stone bridge across a small stream where the Red and Green trails intersect. The stream drains Acme Pond, north of Hylan Boulevard, an area popular with bird watchers and hikers. A good walking trail begins near the high school north of Hylan Boulevard, at Luten Street.

Directions: As above, for Lemon Creek, taking Cornelia Street off Hylan Boulevard. Wolfe's Pond Park is near the Prince's Bay Station of the Staten Island Rapid Transit System.



The Greenbelt

The Staten Island Greenbelt links 2,500 acres in the center of the island, traversed by 35 miles of walking trails known as the Olmsted Trailway. The habitat is varied, including tidal and freshwater wetlands, upland and lowland forests, as well as open fields. The northern section of the Greenbelt contains one of the last virgin mixed-oak forests in New York City, with some of Staten Island's oldest trees. Much of this natural area would have been destroyed by the construction of the proposed Richmond Parkway, but in 1964 a group of citizens organized to preserve this important aggregate of diverse ecosystems.

In 1984, a special office in the Department of Parks & Recreation was created to maintain and protect the Greenbelt, which includes, in addition to the William T. Davis Refuge, eight distinct natural areas.



Latourette Park is the largest of Staten Island's Greenbelt parks. Its 550 acres contain some of the most valuable, uninterrupted wetlands. Bucks Hollow, in the northeastern section of Latourette Park, has a rare stand of endangered persimmon trees. Next to Bucks Hollow is the open serpentine barren on Heyerdahl Hill, supporting rare plant communities.

High Rock Conservation Park includes several ponds, swamps, and a hardwood forest, with six well-marked trails. Three gardens feature plant identification and information, and there is a visitor's center with nature photography exhibits.

Willowbrook Park features a freshwater pond frequented by waterfowl. The White trail begins near the baseball field, runs along the edge of the pond, and then passes the boat-house at the northern end before entering a red maple swamp. This section of the White Trail, a pleasant circular path that can be walked in less than an hour, takes you beneath towering tulip trees. Near the pond sweetgum, red maple, and willow indicate seasonal flooding.

Reed's Basket Willow Swamp has three ponds where the Reed family raised purple willow trees for basket weaving. A steep ravine on the eastern slope of Todt Hill Road divides the young oak forest from the lower swamp, with a rich understory of button bush, sweet pepperbush, swamp azalea, and cardinal flower. Two trails traverse the park: the blue trail extends from the end of Merrick Ave. to Forest Road at Kewin Court.

The Great Swamp at Farm Colony features a rare tussock sedge swamp in

the southwestern corner of the colony; there are no defined trails. **Bloodroot Valley** is named after the rare spring wildflower that grows here. An open field of bluestem grasses near Brielle Avenue indicates recent fires; young poplar and beech colonize the edge of the field. The Blue Trail leads up a steep slope and into a mature oak forest. It passes through a section of small, lifeless trees, choked by Asiatic bittersweet vine. In **Egbertville Ravine**, the walking trails through oak woodland are marked by the underground paths of moles. **Deere Park** offers a good example of oak barrens, with pockets of highbush blueberry and pinxter azaleas typical of the pine barrens of New Jersey. The dominant tree here is white oak, rather than pine, because of infrequent fires. There are spectacular views of lower Manhattan and New York Harbor from Deere Park, which rises toward Todt Hill.

Directions: All parks in the Greenbelt may be reached by car. The S-74 and S-64 buses depart from St. George to Latourette Park. High Rock Conservation Center is off Rockland Avenue, via Nevada Avenue. The entrance to Willowbrook Park is at Victory Boulevard, near Richmond Avenue.



An Island for Naturalists

Staten Island has been home to a number of inspired naturalists and conservationists. William T. Davis conducted innovative entomological studies of cicadas. Davis also delighted in flowers and trees, and was the

first to describe Turk's cap lily and the Bartram oak.

Nathaniel Lord Britton, one of the preeminent botanists of the late 19th century, wrote *The Flora of Staten Island*, published in 1897. Much of Britton's collection is housed at the Staten Island and the New York Botanical Gardens, which Britton founded in 1896. A rare Staten Island violet, *Viola brittonia*, is named for him.

Local ornithologist James Chapin honed his skills on Staten Island, and late in the 1920's participated in the American Museum of Natural History's most extensive expedition to Zaire (then the Belgian Congo).

The creation of parks on Staten Island was first proposed by landscape architect Frederick Law Olmsted over a hundred years ago. At the time, Olmsted, who designed Central and Prospect Parks, was a farmer on Staten Island. In 1848, he bought 130 acres overlooking Prince's Bay. Olmsted proposed parks with manicured landscapes inspired by the design of English parks.

Parks planning of the 1930s emphasized recreation, with the construction of playgrounds, tennis courts, and ballfields. Now the challenges of park

planning have moved beyond recreation to conservation.

Today three plans seek to link together the remaining natural areas on the island. All favor long-term vision over the short-term economic benefits of development. One plan is to protect relatively undisturbed natural areas from development by proclaiming them Designated Open Space.

A second project, known as *Harbor Herons*, proposes to preserve feeding sites critical for the wading birds that nest at places like Prall's Island. A third plan, seeks to protect a "Bluebelt" of ponds, wetlands, and swamp forest, that might otherwise be spoiled by development. These wetlands absorb floodwater, and act as "kidneys" filtering toxic heavy metals, salts, and

The Fowler's Toad

mating call — a high pitched trill — is a common sound on spring nights along Staten Island's south shore.



hydrocarbons, which prevents them from entering the water column and our bathing beaches.



The Natural Resources Group

A division of the New York City Parks Department established in 1984, the Natural Resources Group (NRG) is dedicated to the preservation and restoration of natural areas throughout the City. NRG staff inventory flora and fauna, and develop management plans identifying fragile areas in parklands and areas that should be acquired for preservation. NRG works closely with other City and State agencies, as well as several conservation groups.

Conservation organizations, including many led by local citizens on Staten Island, are an essential part of this effort.

Protectors of Pine Oak Woods (POPOW)
80 Mann Avenue
Staten Island, N.Y. 10314

Trust for Public Land
666 Broadway
New York, N.Y. 10012-2317

Friends of Blue Heron Park
80 Poullion Avenue
Staten Island, N.Y. 10312
(718) 317-1732

New York City Audubon Society
71 West 23rd Street, Suite 1430
New York, N.Y. 10010
(212) 691-7483

Staten Island Botanical Garden
1000 Richmond Terrace
Staten Island, N.Y. 10301

A Note of Caution: When visiting unfamiliar areas it's best to hike and explore with a friend, rather than traveling alone. Several of the parks on Staten Island are adjacent to private property; please do not trespass. Take special precautions against ticks by tucking your pants into your socks and wearing long sleeves. For further information, see the NRG brochure "Tick Talk."



This project was funded by the Zoos, Botanical Gardens and Aquariums Grant Program administered by the New York State Office of Parks, Recreation and Historic Preservation for the National Heritage Trust.

Written by Delta Willis, NRG and
Michael J. Feller, NRG
Illustrated by Tom Lulevitch
Photograph by Michael J. Feller, NRG
Produced by Josephine A. Scalia and
Margaret Atkinson, NRG
Designed by Mentyka/Schlott Design



City of New York
Parks and Recreation
Natural Resources Group

David N. Dinkins, Mayor
Guy V. Molinari, Staten Island Borough President
Betsy Gotbaum, Commissioner,
Parks & Recreation
William F. Dalton, Deputy Commissioner
Joseph M. Curran, Staten Island Parks
Commissioner
Marc. A. Matsil, Director, Natural
Resources Group

First Edition, April 1991

Front cover:
Hourglass Pond, Highrock in the Greenbelt,
Staten Island

