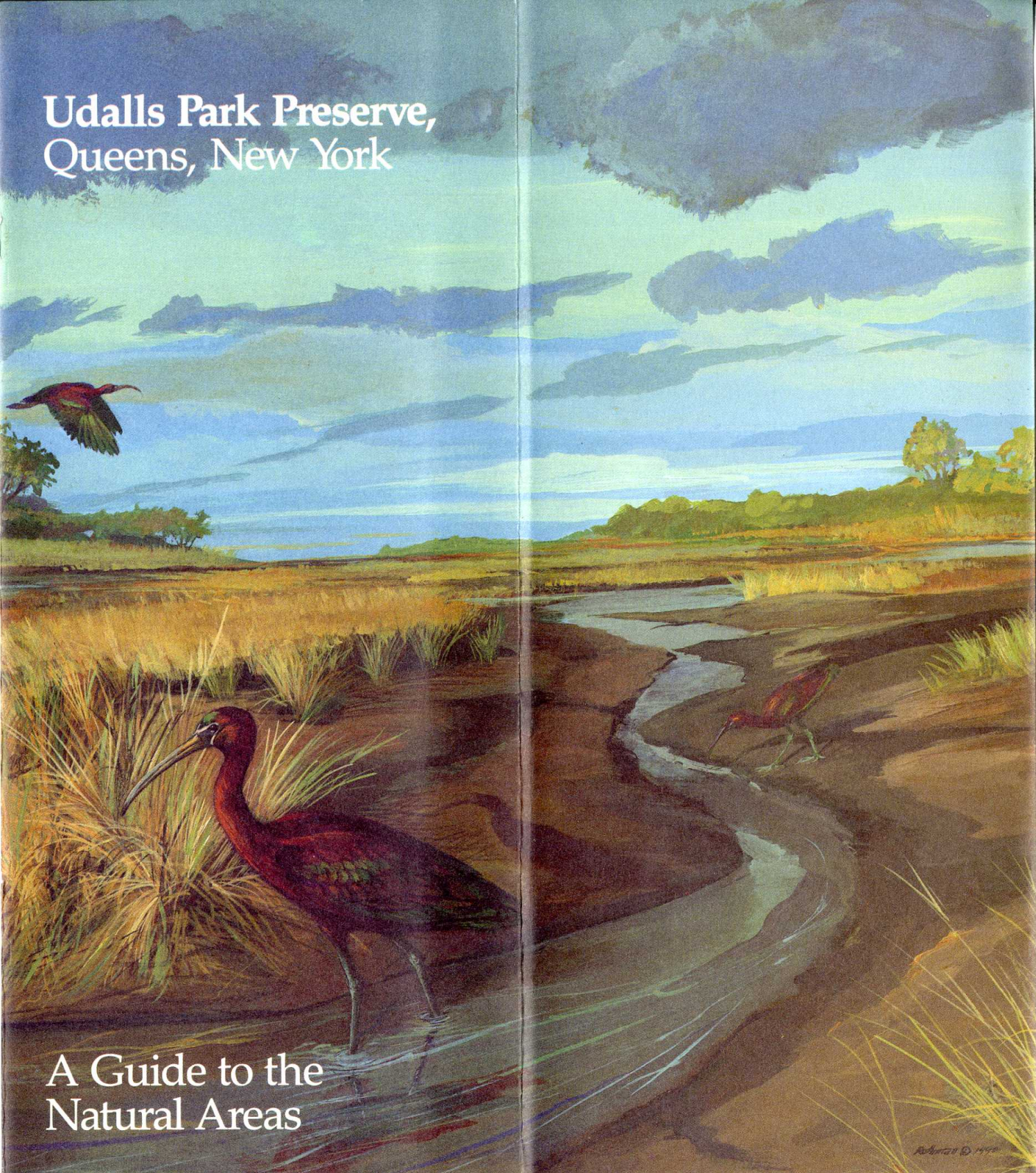


Udalls Park Preserve, Queens, New York



A Guide to the
Natural Areas

Udalls Cove

Marinette Street

Crosvenor Street

Beverly Road

East Drive

34th Ave

37th Ave

NASSAU COUNTY
QUEENS COUNTY

Little Neck Station

Sandhill Road

Little Neck Parkway

Depew Avenue

Depew Avenue

43rd Avenue

42nd Avenue

243rd Street

247th Street

240th Street

44th Avenue

244th Street


Duane Street










Aurora Pond


Gabblers Creek

THE RAVINE

0 1/8 mile



-  Woodlands/Forest
-  Herbaceous
-  Open Water
-  Salt Marsh
-  Phragmites
-  Non-Park Natural Areas
-  Railroad
-  Parking
-  Restrooms

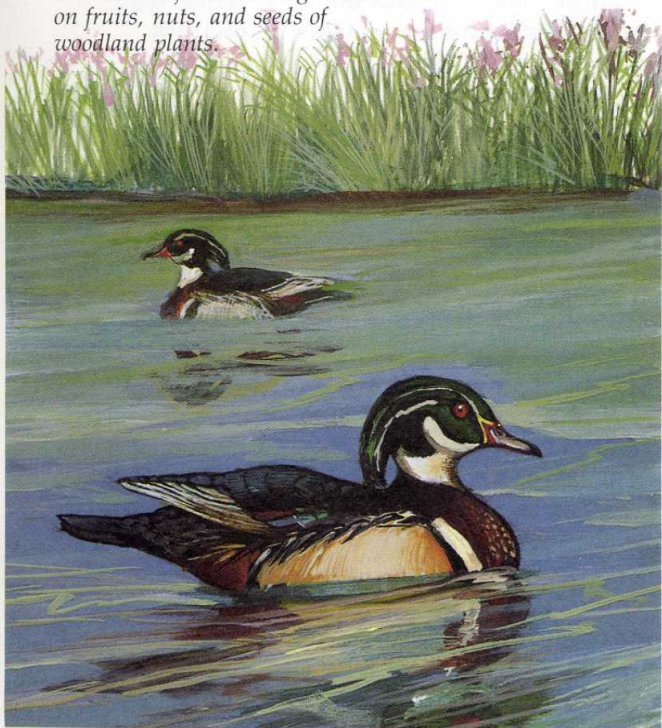


Udalls Cove Park Preserve
QUEENS

Udalls Park Preserve, Queens, New York

Before you stretches one of the most spectacular vistas New York City has to offer: a verdant sea of grasses. Saltwater cordgrass edges meandering tidal creeks; behind, saltmeadow cordgrass swirls in patterns like emerald waves. From the dense mat of grasses, you can hear the loud cackle of a clapper rail and smell the scent of saltwater. Beyond are the gently lapping waters of Little Neck Bay. Egrets wade in the creek, their beaks poised to dart for killifish and fiddler crabs. A pair of glossy ibises glides down from overhead to join them.

As its name implies, the wood duck is a forest denizen. It nests in tree cavities and feeds to a large extent on fruits, nuts, and seeds of woodland plants.



The scene is Udalls Cove, a small inlet off Little Neck Bay in the northeastern corner of Queens straddling the border between Queens and Nassau Counties. Approximately 30 acres of the cove are part of the Udalls Park Preserve, managed by the Parks Department. The remainder of the cove is owned by the town of Great Neck Estates in Nassau. The focal point of the preserve is an extensive salt marsh, but also present are a freshwater pond and a forested ravine.

This brochure will acquaint you with the treasure trove of wild and secluded habitats of Udalls Park Preserve and some of the historical forces that helped shape it.

Natural History

According to local Native American lore, there once lived along both shores of the Long Island Sound two tribes of giants. When they were at war with each other, the Connecticut tribe would break off pieces of their mountains and hurl them at the giants on Long Island, who, since they had no mountains, would hurl boulders back. The Long Island tribe proved to be the stronger of the two, and that is why, the legend says, Connecticut is strewn with boulders for many miles inland, and Long Island only on the North Shore.

Geologists have developed another explanation for this difference in terrain. Four times during the last million years, global cooling caused colossal masses of ice, called glaciers, to form over much of the northern United States. These ice sheets surged southward from Hudson Bay in Canada, collecting boulders, cobbles, gravel, and soil as they traversed the landscape. The last of the glaciers that covered our area reached Long Island about 15,000 years ago, when the climate became warmer. As the ice melted, the debris was deposited over the

land. At the glacier's southern limit the debris formed a range of low hills that stretches east to west across Long Island, called the Harbor Hill Terminal Moraine. The landscape north of the terminal moraine was mantled with low, flat-topped hills. Some of these hills now project into Long Island Sound, forming the peninsulas of Great Neck, Bayside and Douglaston that flank the pre-glacial river valley of Little Neck Bay and Udalls Cove.

Currents of waters melted from the glacier in streams, and cut several ravines into the land through which great quantities of water flowed into Udalls Cove. This process occurred world-wide, causing sea levels to rise at a fairly rapid rate until about 5,000 years ago, when the rate of sea-level rise became fairly stable.

The streams that coursed into Udalls Cove carried with them sands and silts, which formed shallow intertidal flats. One of these streams—Watermill Stream, adjacent to Great Neck in Nassau County—collects its drainage through culverts from various sources in Nassau County including Lake Success, several miles southeast of the cove. Gabblers Creek, on the New York side adjacent to the Douglaston peninsula, is an intermittent stream that begins at the foot of a steep hill just north of Northern Boulevard.

Birth of the Marsh

The first plants to colonize the flats were a single species of salt-tolerant grass. Where dense stands of this grass took hold, the current slowed down, causing more sediments to accumulate. Over time, as the surface of the cove bottom continued to rise, the way was paved for colonization by a variety of plants with varying tolerances for salt and water depth. The result of this process is today's salt marsh.

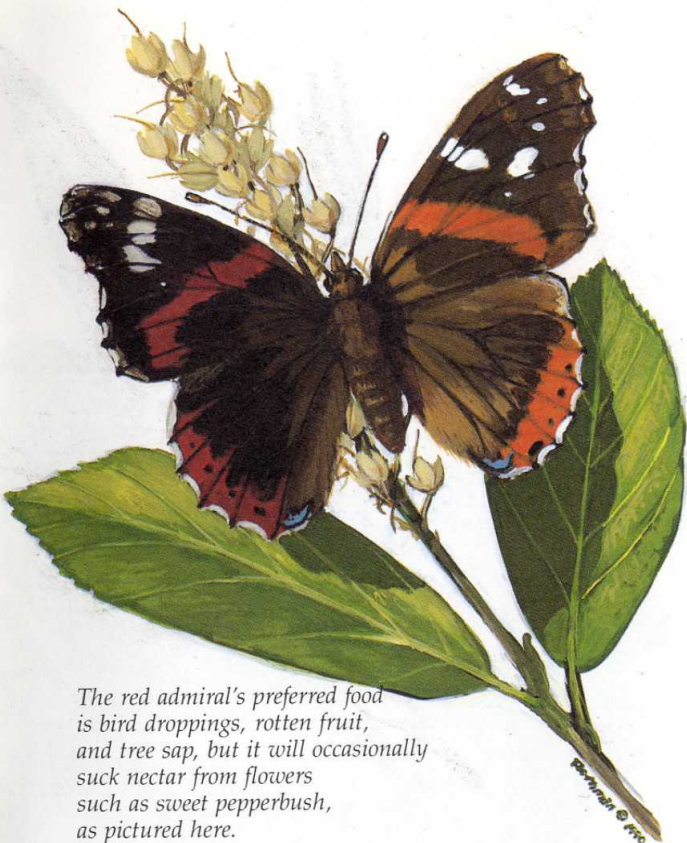
History

While we do not know the names or tribal affiliations of the prehistoric peoples who settled the environs of Little Neck, archaeological evidence suggests various characteristics of their cultures. The earliest inhabitants probably arrived sometime around 4,000 years ago when the deciduous forest made its appearance in the area. These small groups were nomads who visited the area during the warmer months of the year to hunt whitetail deer and upland game birds such as wild turkey. Later groups, however, shifted their focus to estuarine resources such as clams and oysters, probably in a response to the growth of salt marshes that followed the stabilization of sea levels.

European contact with native Long Islanders was made by Giuseppe Verazanno in 1524. Over the next century and a half, as trade developed between the two groups, Native Americans established more permanent settlements on Long Island, and Europeans acquired more land.

After the Dutch established the town of Flushing in 1645, land in Little Neck was granted to settlers. Among the first were Thomas Hicks and Richard Cornell. Some of these land grants were disputed by Mattinecock Indians who resided in Little Neck. Chief Tackapousha brought the issue before Governor Thomas Dongan and succeeded in delaying white settlement on the disputed land. Within several years, however, Thomas Hicks, supported by a company of men from the mainland, raided the Indian settlement and forcibly took possession of the land, hastening the decline of the Native American population in Queens.

In 1833, Richard Udall, for whom the cove is named, bought a mill formerly owned by the Allen family on the eastern side of the cove. The mill, now called the Saddle Rock Mill, remained in the Udall family until 1950, when it



The red admiral's preferred food is bird droppings, rotten fruit, and tree sap, but it will occasionally suck nectar from flowers such as sweet pepperbush, as pictured here.

was donated to the Nassau County Historical Society.

During the 1830s, a small shellfishing community developed around the docks at Oldhouse Landing Road (now Little Neck Parkway), and Sand Hill Road. This industry continued successfully through the 1860s as the demand grew for oysters and the famous Little Neck Clams. A second group of houses developed adjacent to the dock sites, and their tenants harvested the delicacies for delivery to restaurants in New York City. By 1893, however, shellfishing as an industry was finished because of overharvesting, poaching, and pollution. The old stanchions and bulkheads at the end of Little Neck Parkway—traces of Peterson's and Whitlow's boatyards, established where the Wooley and Fowler families operated their docks in the mid 19th century—are reminders of this bygone era.



The acquisition of Udalls Park Preserve was initiated by the formation of the Udalls Cove Preservation Committee, in 1969. This group, composed of local residents, successfully prevented development of the land, and promoted public ownership. The preserve was then created by a unique cooperative agreement between the New York State Department of Environmental Conservation and the New York City Department of Parks & Recreation. While the State owns most of the land, the Parks Department manages the property.

The Salt Marsh: Nursery of Marine Life

In the quiet recesses of Udalls Cove, meandering tidal creeks flood the edge of the marsh twice daily with each rising tide. What causes



The lower bill of the black skimmer projects beyond its upper bill, enabling the bird to skim small fish, shrimp, and other crustaceans as it flies over the water.

the tides to engulf the land's edge, and then once more ebb to sea? The tides are the ocean's response to the gravitational pull of celestial bodies. The moon exerts the strongest force on the sea. Even though the sun is larger than the moon, it is so much farther from the earth that it exerts a minor gravitational pull.

Twice each month, when the moon is new, and when it is full, the flood tides are highest, and the ebb tides lowest. These tides, called spring tides, occur when the sun and moon are aligned and are exerting their gravitational pull together in the same direction. And twice each month, at the quarters of the moon, the sun and moon are at right angles to each other and, as a result pull, in different directions. At these times the difference between high and low water is smaller than at any other time of the month. These tides are called neap tides.

The only plant in northeastern North America that can withstand the daily flooding of its roots by the ocean is saltwater cordgrass, *Spartina alterniflora*. A coarse grass often growing up to five feet, *S. alterniflora* is the cornerstone of the saltmarsh ecosystem. Myriads of saltmarsh creatures derive nourishment directly or indirectly from the cordgrass. During the winter, the leaves and stems of saltwater cordgrass fall into the water, where micro-organisms break them down into minute, nutrient-rich fragments called detritus. Detritus is consumed by a host of marine animals that spawn in the salt marsh, including fiddler crabs, ribbed mussels, soft-



shell clams, and common mummichaugs.

The relationship between detritus and detritus-eaters forms the basis of complex relationships in the marsh, whereby each organism becomes a meal for another. Crustaceans, mollusks, and bait fish, for example, are consumed by larger finfish, such as bluefish and

The diet of the red fox is among the most varied of any wild mammal on Long Island, and includes mice, rabbits, birds, cold-blooded vertebrates, grasshoppers, and fresh carrion. A red fox was sighted at Udalls Cove in November 1987.



striped bass, which come into the marsh to feed. These finfish then may fall prey to an occasional osprey, or be hooked by a fisherman. Even fish that escape predators become part of the food web after they die; they are eaten by scavengers, or are decomposed into detritus by micro-organisms, starting the cycle anew.

Small marsh creatures are also prey to the many shore, wading, and sea birds that reside in the salt marsh or visit seasonally. Among the marshes' permanent residents are black-crowned night herons, which nest in nearby trees. These birds slowly walk the creek after nightfall, stalking fish and crabs. Belted kingfishers dive into the water for similar tidbits. Killdeers and clapper rails probe the creek banks at low tide for crabs and insects.

Other birds enliven the marsh scene in different seasons. In summer, great and snowy egrets and great blue and green-backed herons wade the creek in search of small fish and invertebrates. Common terns dive head first into the creek after small fish and black skimmers fly low over the water scooping up fish with their lower bills.

Higher and Drier: Uplands and Salt Meadow

Behind the taller saltwater cordgrass and above the high-tide level lies a vast expanse of salt meadow. Inundated less frequently, usually not more than twice a month, the high marsh is dominated by saltmeadow cordgrass, *Spartina patens*, a fine, wiry grass that grows no taller than two feet. Also called salt hay, *S. patens* was harvested in colonial times as fodder for cattle. Spikegrass, *Distichlis spicata*, often grows among the saltmeadow cordgrass.

The distribution of plants on the high marsh is governed by the amount of saltwater that reaches plant roots, and how salty, or saline, the water is. These factors are determined by the elevation of the ground above average high

tide, the duration of tidal flooding, and the amount of fresh water entering the marsh. Most plants cannot tolerate constant exposure to saltwater, so as the elevation increases and the effect of saltwater decreases, a greater variety of plants grow, from grasses to wildflowers, and ultimately shrubs, which mark the upland limit of the salt marsh. Barely detectable differences in ground contour—as little as an inch—can mean the difference between a pure patch of saltmeadow cordgrass and another patch adorned with saltmarsh aster, sea lavender, and seaside goldenrod.

Evidence of raccoons in the form of scat (droppings) is abundant on the high marsh. These ring-tailed, black-masked animals come from the uplands into the marsh to dig for clams, crabs, and mussels. Sightings of red fox at the cove have also been reported. In one instance, one was seen on a sand bar lunging after a snowy egret which managed to escape. Red foxes are fairly common in parts of Nassau and Suffolk Counties, and probably reach the preserve by traveling the planted shoulders of parkways.

On the higher elevations of the saltmeadow, at the level of the highest yearly tides, there is a community of plants that marks a transition zone between the salt marsh and the uplands. Marsh elder, a thick-leaved shrub with inconspicuous green flowers, is the most characteristic plant of this community. Other shrubs including groundsel bush and marsh mallow grow here, making this area attractive to wildlife that use shrubs for protective cover, notably song sparrows, common yellowthroats, and cottontails.

Fresh and Brackish Water Environments

Where Watermill Stream flows into the salt marsh, the water is brackish—neither as fresh as the creek nor as saline as Little Neck Bay.



Blackburnian and chestnut-sided warblers are two of the 29 or so species of warblers that migrate through our area during the spring. Their arrival coincides with the flowering of the red maple tree. Both birds feed on insects attracted to the red maple blossoms, which open shortly before their arrival.

Cattail, a freshwater marsh plant, grows where the water is freshest. Further downstream, cattails are joined by wool grass, a bullrush that tolerates low salt concentrations. Still further downstream, *Phragmites* begin to outnumber cattails. *Phragmites* soon replace all the other plants, until the water becomes so saline that saltmarsh cordgrass predominates.

Cattails are important for wildlife. Ducks line their nests with the soft fluff attached to cattail seeds. In the summer redwing blackbirds and marsh wrens build their nests among the cattail, and muskrats build their conical lodges out of cattail stems. Where disturbance has

taken place in brackish water, *Phragmites* and cattails often compete for space. Since the root system of *Phragmites* spreads extensively—sometimes up to 10 feet—it can have a decisive advantage.

When the Long Island Rail Road was extended from Flushing to Great Neck in 1867, a 20-foot-high embankment was erected, which separated the cove from the upland ravine. *Phragmites* may have been favored at the expense of cattails, as a result of the construction, probably due to changes in water flow and the deposit of silt.

The Uplands

The uplands surrounding Udalls Cove consist of several strips of wet forest alternating with vine covered fields. Most of the groundcover throughout the area is characteristic of disturbed habitats, reflecting that the area was built up from a wetland with landfill. In some places, poison ivy, Virginia creeper, Japanese honeysuckle, Asiatic bittersweet, and porcelainberry, enshroud the trees. Under the trees, and in clearings, Japanese knotweed, mugwort, purple loosestrife, and garlic mustard are common. The forest consists of box elder, silver maple, and black locust trees, and a patch of American basswood toward the cove's northwestern edge. Interspersed throughout are black willow, American elm, eastern cottonwood, and black walnut. This mix of tree species is unusual in New York City; except for black locust, all are wet-site trees, typical of river bottomlands.

The Ravine

In the portion of the preserve south of the Long Island Rail Road tracks is a ravine where on a summer day, one can hear downy woodpeckers beat their territorial tattoos on trees, as silver-spotted skippers and eastern black swallowtails flutter from flower to flower. The habitats of the

ravine, most of which is privately owned, are an integral part of the park's ecosystem. For example, Gabblers Creek, an intermittent stream which flows north through the ravine, is an important source of fresh water for the cove. In addition, soil which washes down the slopes of the ravine is carried by the creek into the salt marsh. A fourth link connecting the park's habitats is the wildlife who feed and find shelter in both the public and private properties. American eels, for example, enter the creek as elvers—young eels—where they live until maturity, and then return to saltwater to spawn. Though wildlife does not recognize property lines, we must; please limit your visit to publicly owned areas. The rest of the ravine may be viewed from 243rd Street.

The ravine is very steep where it begins close to the firehouse on 44th Avenue and 244th Street, then levels off where there is landfill, and resumes its steep grade again just north of Depew Avenue. Overall, the landscape has the characteristics of a disturbed area, but it also consists of many features typical of freshwater wetlands. For example, the diversion of water, especially during storms, from local streets in Douglaston into the ravine has caused severe erosion of the ravine walls and valley bottom. But at the same time, the added moisture in the soil has created suitable conditions for freshwater wetland plants. Lesser celandine, jewelweed, and box elder grow where the meandering stream, following paths of least resistance, deposits sediments in a fanlike shape.

The forest is composed primarily of box elder, which grows alone and with black willow, silver maple, hickory, and *Ailanthus*. The box elder prefers moist soils along stream margins and the roots of those on the banks of Gabbler's Creek are flooded during rainy periods when the creek widens. Vines are abundant because of the sparse tree canopy: wild grape, porcelain berry, Japanese hops, and kudzu twine up the

tree trunks and throughout the tree crowns. Various non-native species of plants, such as mugwort and Japanese knotweed, thrive here along with native plants adapted to poor soils, including thin-leaved sunflower and great ragweed.

Raccoon tracks are common in the ravine, which offers good den sites in the open woodlands, and places to feed along the stream margins. Partial to frogs, salamanders, and grasshoppers, the raccoon is highly omnivorous and eats virtually all large insects and wild fruits. During the fall and winter, it depends on the acorn crops of oak trees and to a lesser extent feeds on pokeweed berries and wild grapes.

Aurora Pond

Aurora Pond, located at the foot of the ravine just south of Sand Hill Road, is not a natural body of water. The pond was created when Sand Hill Road was paved and Gabbler's Creek channelized. Until the 1940s the present site of the pond was swampy, because of groundwater seeping to the surface. The construction of the road created a dam on the northern edge, and debris from the construction of the channel was placed along the east side, isolating the wet area that became Aurora Pond.

The pond's water level is maintained by rainfall, groundwater, and stormwater runoff from the local streets on higher ground. During summer and fall, when precipitation is low and evaporation high, groundwater decreases, resulting in a lower water level and surface area of the pond.

The plant communities in and around Aurora Pond are characteristic of freshwater wetlands, and include cattails, barnyard grass, purple loosestrife, rice cutgrass, hairy willow-herb, American sycamore, box elder, and red maple trees. The adjacent slope, however, is eroding, and bringing sandy sediment into the

pond and adjacent lowland. These deposits have already reduced the depth and surface area of the pond and created a suitable environment for *Phragmites* and other plants, which are encroaching on the pond.

Although the forested tracts surrounding the pond have been severely disturbed, a great deal of wildlife frequent the pond and its environs. Wood ducks nest nearby. Water-loving migrant songbirds, such as blue-winged warblers and Louisiana water thrushes, visit in the spring. During the night, a trilling chorus of Fowlers toads fills the air.

Transportation

There are two overlooks from which to view the cove; they can be reached by car or a combination of public transportation and walking.

Car: Long Island Expressway or Grand Central Parkway to Little Neck Parkway exit; drive north about two miles to Virginia Point. A nice vista of the salt marsh can be enjoyed from the creek bank here. *Subway:* IRT #7 train to Main Street, the #12 bus to Northern Boulevard and Little Neck Parkway; walk north six blocks to Virginia Point. *Rail:* Long Island Rail Road (Port Washington Line) to Little Neck Station; walk three blocks north to end.

Aurora Pond and other marsh vistas can be reached by car or foot from Little Neck Parkway; turn west on Sand Hill Road (just north of the LIRR) and continue about three blocks to pond; continue six blocks west to Shore Road, between Beverly Road and Grosvenor Street to the views of the cove.

To the Ravine:

Car: Long Island Expressway or Grand Central Parkway to Little Neck Parkway exit; go north to Northern Boulevard, then west to 245th Street. *Bus:* #12 bus to Northern Boulevard and 245th Street. Enter park, walk north, then west, exit park at 244th St. and 44th Avenue, walk west to 243rd Street and north to Depew Avenue, re-enter park, walk north, and exit park at 40th Avenue. To continue to the cove, walk east on 40th Avenue to Little Neck Parkway and continue north to end.

For maximum enjoyment and safety when visiting natural areas, wear comfortable and sturdy walking shoes or boots. Stay on trails and use the buddy system. In summer, protect against mosquitoes and ticks: use insect repellent, wear light-colored clothing, and tuck long pants into socks.

Visitor Services & Information

Udalls Cove Preservation Committee, Inc.

Douglas S. McKay, President (718) 423-6800

Urban Park Rangers

Rangers conduct a variety of year-round walks and programs for nature lovers of all ages. For a schedule of events, call (718) 699-4204.

Queens Parks Headquarters (The Overlook)	(718) 520-5900
Parks Enforcement Patrol	(718) 699-4289
Permits (tennis)	(718) 263-4121
Permits (softball)	(718) 520-5932
Recreation	(718) 520-5920
Special Events Permits	(718) 520-5933
Special Events Hotline	(718) 520-5911

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Parks & Recreation
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Oliver B. Spellman Jr., Queens Parks Commissioner

Marc A. Matsil, Director, Natural Resources Group

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Cover: Although the glossy ibis was known to breed only in southern Florida up until the 1940s, it has since then expanded its range, and has been observed breeding locally on Long Island since 1961.

