



WILDLIFE VIEWING IN THE GREAT SWAMP

by Chris Raithel

The Great Swamp, located within the towns of Charlestown and South Kingstown, Washington County, Rhode Island, is one of the state's largest wetland systems and most significant historical and biological preserves. Like most of Rhode Island's geographical surface features, the Great Swamp owes its origin to glacial processes. After the peak of the recent Wisconsin glaciation, the receding ice sheet periodically stalled, dumping till to create a series of recessional moraines. The most obvious of these is the Charlestown Moraine, an east/west ridge located just north of Route 1 in southern Washington County. As the ice sheet melted and continued its northward retreat, huge quantities of meltwater flowed seaward. The Charlestown Moraine blocked this flow and diverted the water to the west, where it eventually broke through to the ocean at Watch Hill, creating the Pawcatuck River estuary. On its westward route to the sea, the meltwater impounded behind the moraine to form a series of basin wetlands: the Great Swamp, Indian Cedar Swamp in Charlestown, and Aguntaug Swamp in Westerly. Several other landforms near the Great Swamp bear the mark of the past glaciation. Great Neck, the major terrestrial portion in the Great Swamp, is a large drumlin, and to the east Larkin Pond is an ice block kettle surrounded by a dramatic alluvial fan. These features can be clearly seen on the Kingston 7.5' U.S.G.S. quadrangle map.

The Pawcatuck River is the main postglacial route by which plants and animals recolonized Rhode Island from the exposed coastal plain. The valley contains a flora typical of more southern regions and hosts numerous rare and unusual species. The floodplain of the river is largely dominated by red maple (*Acer rubrum*) and black gum (*Nyssa sylvatica*), interspersed with pin oak (*Quercus palustris*) and green ash (*Fraxinus pennsylvanica*). In the central basin of the Great Swamp lies one of the largest stands of Atlantic white cedar (*Chamaecyparis thyoides*) in New England. The swamp also contains many other scarce types of wetlands, including bogs, fens, and coastal plain pond shores. The Great Swamp abuts the north shore of Worden Pond, Rhode Island's largest natural lake and itself a very interesting biological site.

The Great Swamp has a long history of Native American and colonial occupation. The Narragansett tribe arrived in this area sometime after glaciation and occupied the area for millenia. The Narragansetts eventually developed into a stable and robust tribe with well-developed agriculture augmented by the rich resources of the sea. The first permanent colonial settlement in Rhode Island was founded in Providence by Roger Williams, an outcast from Massachusetts. Relations between the Narragansetts and the colonials were cordial for decades,

with Williams translating the Narragansett language into a dictionary still available today.

Eventually, however, native-colonial relations deteriorated, and war broke out. The fighting eventually culminated when a garrison of soldiers marched from the village of Wickford to the Narragansett's secret winter refuge within the Great Swamp. The soldiers took advantage of the winter ice to cross the swamp and reach the sanctuary, and massacred much of the tribe. A monument dedicated to this event stands in a cul-de-sac road off Route 2, but the actual location of the battle was never documented. Apparently, the site was recently discovered by researchers and remains a closely guarded secret. A good history of this time is the publication *A Plantation in Yankeeland*, by Carl R. Woodward (Pequot Press).

With the Narragansett tribe dissipated, a number of colonial enterprises were developed within the Great Swamp. The uplands were cleared, tilled, and walled off for livestock. Large cedar trees were extracted from the swamp. At first, teams of oxen, whose wide, cloven feet were able to negotiate the swampy terrain, were used to drag the logs from the swamp. Eventually oxen were replaced by steam engines that rode temporary railbeds into the heart of the cedar stands. Vestiges of these practices are still visible on the landscape.

The Great Swamp Management Area contains a variety of terrestrial and wetland habitats, from fields to thick forest, wooded swamps to open water, and it offers numerous opportunities for wildlife viewing. The winter and summer (nesting) bird populations are well known and have been the subject of several research projects, but peak avian diversity occurs during the spring (April-May) and fall (September-October) migrations.

In the winter, landbirds such as Winter Wren, Swamp Sparrow, and (rarely) Eastern Phoebe cluster at the small areas of open water which persist at culverts or seeps, and the birding at this season is generally better when most of the main water areas are frozen and snow covers the ground. Large patches of winterberry (*Ilex verticillata*) and American holly (*Ilex opaca*) sustain many frugivores, including vast flocks of American Robins, which often occur with Cedar Waxwings, Eastern Bluebirds, Gray Catbirds, and Hermit Thrushes. Also, the wildlife plantings of millet and corn sustain seed-eaters such as sparrows throughout the winter. Feeding stations are maintained at the headquarters buildings from late November through March.

The Great Swamp is a large area surrounded by wooded habitats and, though within five miles of the coast, it is not a notable migrant trap during the periods of avian transition. Nevertheless, the variety of habitats can produce large species lists if the area is worked carefully at the right times. The best spring migrant fallouts occur after overnight southwest winds, especially if fog has formed. Fall flights occur after cold fronts. The best places to see migrant landbirds are in the thickets along the power lines and in the brushy edges of the

wildlife impoundment. On good days large flocks of roving migrants pass from the coast through interior sections and can be encountered throughout. The open water of the impoundment and Worden Pond provides wide vistas in which to detect migrating raptors such as accipiters, Northern Harriers, and Bald Eagles, while large flocks of waterfowl, including teal, Ring-necked Ducks, and Wood Ducks, gather here.

The nesting avifauna of the Great Swamp is spectacular and includes several species uncommon in southern New England. The wooded swamps contain the most significant aggregations of nesting species, hosting the state's entire populations of Northern Parula and Prothonotary Warbler and high concentrations of several other neotropical birds, including Redstart and Veery, along with Black-and-White, Nashville, Chestnut-sided, Hooded, and Canada warblers.

During the fall migration, which begins in late June and continues into the winter season, many other waterbirds, including egrets, ibis, and (rarely) terns, join the usual flocks of ducks around the impoundment. Swallows and martins swirl over the water, and the thickets can be alive with transient birds. Common shorebirds around the impoundment at this season include Spotted, Least, Pectoral, and Solitary sandpipers and Lesser and Greater yellowlegs; even such saltwater species as Semipalmated Plover and Short-billed Dowitcher can be observed.

The Great Swamp Management Area can be reached from either Route 95 or Route 1 via Route 138. If you are coming from the east, stay on Route 138 until you pass the athletic complex of the University of Rhode Island (on the right). The next traffic light is the junction of Route 110. After going through this light, Taylor's landing is on the left; the next immediate left-hand "Y" is Liberty Lane. Turn here, and bear left again where it parallels the railroad tracks (Great Neck Road) to the field station of the Division of Fish and Wildlife (see map). The road continues and ends at a gate and gravel parking area. If approaching from the west on Route 138, go through the light at Route 2 and continue over the railroad tracks. Immediately after the post office at West Kingston (on the right), take a right onto Watson Road, which connects with Liberty Lane, and follow it to the right as above.

A canoe or kayak is the best way to penetrate the inner reaches of the wetland system. Launching areas are located at the headwaters of the Chipuxet River (which flows into Worden Pond) at Taylor's Landing, near the junction of Route 138 and Ministerial Road (Route 110); at Biscuit City landing, off Route 2; and at the south end of Worden Pond off Worden Pond Road. Only the latter has a firm ramp for launching trailered watercraft. Both the Pawcatuck and Chipuxet Rivers are narrow and winding, unfit for motorized craft. A very scenic one-way, single-day canoe trip can be made from Taylor's Landing downstream into Worden Pond and then out the Pawcatuck River to Biscuit

City. Worden Pond is not deep, only about six feet at its maximum, but strong winds can make the one-mile crossing a laborious adventure. Flotation devices, either seat cushions or vests, are required for each person aboard.

The primary foot access is located at the terminus of Great Neck Road, off Liberty Lane in Kingston. A small parking area leads to a series of trails which form a large loop around the wildlife impoundment. Side trails branch off to such features as Worden Pond, the Chipuxet River, and the wildlife fields. A series of berms and power lines provides additional trailways through the area.

A suggested walking tour starts at the parking area above. Go through the gate and follow the gravel roads into the management area. You will first pass some impounded open wetlands with numerous dead snags. In winter, this is a good area for Winter Wren (culverts), various frugivores, Rusty Blackbirds, and Northern Shrikes (in a flight year). Scan the snags for woodpeckers. At the first fork (0.25 mile), bear to the right and then take the next right (0.4 mile) for the shortest way to reach the wildlife impoundment. The road continues along a berm around the periphery of this large artificial wetland (1.0 mile). Take time to scan the shrubby wetland (with a telescope if possible), including the open water and muddy flats. Waterfowl, rails, egrets, shorebirds, and raptors can be found here. Good birds seen here in the past include Caspian and Least tern, Common Moorhen, Least Bittern, Cliff Swallow, Northern Shoveler, and Red-headed Woodpecker. River otter, beaver, and muskrat are common and frequently seen in the open water, especially during winter. The power line across this wetland supports the largest cluster of active Osprey nests in the state. The Osprey are present from late March through August. Great Horned Owls also commandeer these nests in some years, so look carefully! Four species of Vireos (Yellow-throated, White-eyed, Red-eyed, and Warbling) nest near where the power line crosses the road and berm. The thickets of alder and birch on the back side of the impoundment often contain flocks of finches, which feed on the catkins. During June, snapping turtles lumber out of the wetlands to lay eggs in the sandy roadbed. As you proceed around the impoundment in a counterclockwise direction, the floodplain of the Pawcatuck and Usquepaug Rivers lies to your right. This area is better visited by canoe, but the berm offers the closest foot approach to this habitat. The nesting fauna of this floodplain forest is very interesting, with good numbers of Barred Owls, Blue-gray Gnatcatchers, Veeries, American Redstarts, Northern Waterthrushes, Yellow Warblers, and the elusive Prothonotary Warbler. The best season to find the Prothonotary is late April or early May, before the trees leaf out and most nesting species have arrived.

While walking along the dike, examine all the shrubby thickets and grassy patches. These are especially good for sparrows, including White-crowned, Savannah, Field, Song, and Swamp, during the fall.

Upon leaving the impoundment area, the road continues uphill into the forest and past some large fields on the left. These fields are maintained by burning and planting for wildlife management. They sometimes contain raptors and sparrows during migration. In these dry woods is the state's largest stand of American holly, a tree whose red berries are an important winter wildlife food. At the next road junction bear to the right, and again to the right at the next intersection (0.25 mile), where there is a stone marker. This road ends (0.6 mile) at the shoreline of Worden Pond, the best and easiest view of this lake available from the management area. Scan the water (in the right season) for Pied-billed Grebe, Tundra Swan, Canvasback, gulls, Caspian Tern, and other waterbirds. The old metal hangar formerly harbored a seaplane used for fish and wildlife survey and law enforcement work. Northern Rough-winged Swallows nest in holes just above the waterline. The nearby uplands support a rich hardwood forest featuring thick mountain laurel (*Kalmia latifolia*) understory. Yellow-throated Vireo, Ovenbird, Hooded Warbler, and Worm-eating Warbler (rare, near ledges) nest here. Some tracts in this area have recently been cut over to provide successional vegetation for New England cottontail and other shrubland species.

When nearly back to the main road, watch for a small, unmarked trail on your right. This trail leads into the core of the Great Swamp and eventually becomes very wet in spots; calf-high boots are necessary! The trail is vague and poorly marked, but continues (0.7 mile) to Stony Point, a peninsula jutting into Worden Pond. The most interesting feature of this section of the swamp is the nesting avifauna, particularly the Northern Parula, which builds its nest from the wispy *Usnea trichomanes* found here. In the wetter areas, look up into the tree canopy. The lichen will appear as bluish-green "skirts" on the trunks of the gum and maple trees. This lichen (like the parula) was thought extirpated from Rhode Island after 1933, and was only recently rediscovered. Many other types of lichens festoon the trees in this area. Nesting Hooded and Canada Warblers are common, and Red-shouldered Hawks may be seen at all seasons.

Returning to the main road, continue until you reach the power line again (0.7 mile). The woods here are dry and rather undistinguished but host several species of woodpeckers, including Red-bellied, Hairy, and the occasional Pileated. Wild Turkeys and Eastern Bluebirds are often seen near the power line, and "Lawrence's" Warbler has been a staple in this area in recent springs. To find it, "pish" out all birds that sound remotely like Blue-winged Warblers and you may be surprised. At the power line, turn right and follow it along another dirt berm road through some manipulated wetlands. Marsh Wrens are often found in the stands of cattail in this area, and the wet thickets of inkberry (*Ilex glabra*) host frugivorous transients and wintering birds. Continue along this road (with swamp on both sides), until you come to a "T" in the power line (0.7 mile). Continuing straight will bring you to an access for the best Atlantic white

cedar habitat. Look for a small unmarked trail off to the right (south) opposite a wide sandy spot in the road (0.2 mile from the "T"). This small trail goes only about 200 feet; look for another small trail to the left (off the first trail) which leads into the white cedar fen. This is an unusual open cedar glade which resembles wetlands in the New Jersey pine barrens and hosts several rare plant and invertebrate species. The nesting bird association is likewise interesting and includes Northern Waterthrush, Nashville Warbler, Black-throated Green Warbler (in cedars) and Northern Saw-whet Owl. This area is wet the entire year and is easily disturbed — go easy on it.

On the return trip, taking the remaining arm of the "T" northward will bring you back past a power substation to the office buildings (0.6 mile), from which the parking area is back down the road to the left (0.5 mile). The brushy hedgerows in this area are good for sparrows and towhees in fall and winter. The entire loop as described above is 5-6 miles in length and will take several hours to bird on foot. Bring water and boots if you plan to probe side trails.

The Great Swamp Management Area, PO Box 218, West Kingston, R.I. 02892, is managed by the R.I. Division of Fish and Wildlife primarily to provide recreational opportunities for hunters and fishermen. Other activities such as hiking, biking, canoeing, and horseback riding are allowed sunrise to sunset. Motorized vehicles are prohibited in the management area. There are no designated campsites. The primary hunting season for upland game and deer extends from mid-October to the end of February. Other seasons include Mourning Dove (early September), early waterfowl at the impoundment, and Wild Turkey (May - mornings only). Please do not interfere with legitimate hunting activities. Check at the office (401/789-0281) for current activities and open seasons. A minimum of 200 square inches of fluorescent orange garb (a hat or vest), available at most sporting goods stores, is required from mid-October through February.

Maps of the area are available at the office, which is open weekdays 8:30A.M.-4:00 P.M. Sections of the Great Swamp are remote, and off-trail adventurers become disoriented and lost frequently; a compass and good map or aerial photo are recommended for such activity. Biting insects and ticks abound within the management area. Bring repellent and take precautions to avoid contact with the deer tick, which carries Lyme disease. Black flies and mosquitos occur mostly in May and June; deer flies, which are attracted to light clothing, are present July through September. No plants or animals may be collected from the management area without special permit by the Division of Fish and Wildlife. There is no entrance fee.

The publication *A Plantation in Yankeeland* is available through Smith's Castle, Cocumscussoc Association, Post Road, North Kingstown, RI (401) 294-3521. There are no bird checklists or other wildlife reference materials available

for this area. Sightings of rarities can be reported at the office or by calling the Audubon Society of Rhode Island at (401) 949-5454.

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(Announcement)

HAWK MIGRATION CONFERENCE APRIL 4 & 5

The North-East Hawk Watch (NEHW), which gathers, publishes and stores hawk migration data from eight states in the northeast, is presenting its fifth Hawk Migration Conference on the weekend of April 4-5 at the Southbury Hilton in Southbury, Connecticut. The conference is geared to general birders who may have a interest in hawks, as well as to hawk watchers. The day session on Saturday includes eleven presentations on such subjects as the effects of long-term weather on hawk migration patterns; the nesting ecology of American Kestrels; the breeding status of eagles, Ospreys, and Peregrines; the California Condor; and a presentation on owl migration in Massachusetts. A special live birds of prey program is included. Registration for the entire day's program is \$20. There will also an evening banquet at which Keith Bildstein, Director at Hawk Mountain Sanctuary, will give a presentation on sixty years of hawk migration research at Hawk Mountain. There is a separate charge of \$25 for the banquet. On Sunday several free guided birding trips to local hot spots and the Connecticut coast will be offered.

For more information and a registration form call Paul Roberts at (781) 483-4263 after 6 p.m. or visit www.pipeline.com/~merlin/NEHW/