

Oswego County Coastal Wetlands

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NY Natural Heritage

- Partnership between NYS DEC and The Nature Conservancy
- We have been tracking rare species and significant natural communities since 1985
- Monitor 166 natural communities, 755 rare plants, 417 rare animals at over 10,000 locations

Oswego County

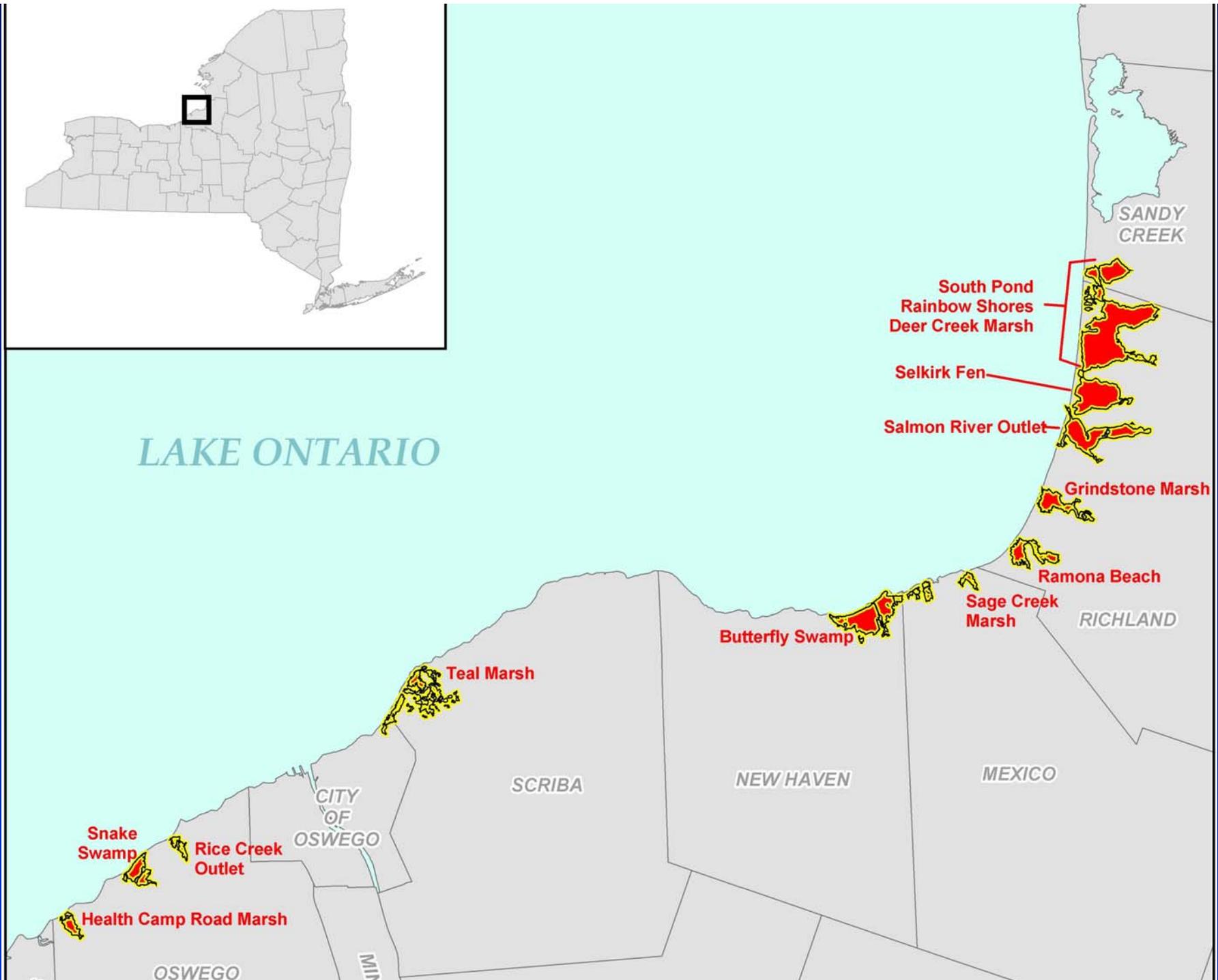
- Approximately 23% of the Oswego County is regulated wetlands
- Towns along the lake shore cover ~25% of the County but have about 41% of the population
- Initiated project in 2000

Wetland Selection

- Bio-Inventory Committee selected 11 wetland complexes
- Sites dispersed along the 33 miles of shoreline
- 11 wetlands cover ~2,850 acres that's 2% of regulated wetlands and 0.5% of the County
- Range in size from 33 to 984 acres and average 250 acres



LAKE ONTARIO



SANDY CREEK

South Pond
Rainbow Shores
Deer Creek Marsh

Selkirk Fen

Salmon River Outlet

Grindstone Marsh

Ramona Beach

Sage Creek
Marsh

RICHLAND

SCRIBA

NEW HAVEN

MEXICO

CITY OF
OSWEGO

OSWEGO

MIN

Goals of the Project

For each Site

- Provide full delineations of all palustrine communities
- Identify all rare plants, rare animals, and significant natural communities located in the wetlands
- Provide an assessment of viability



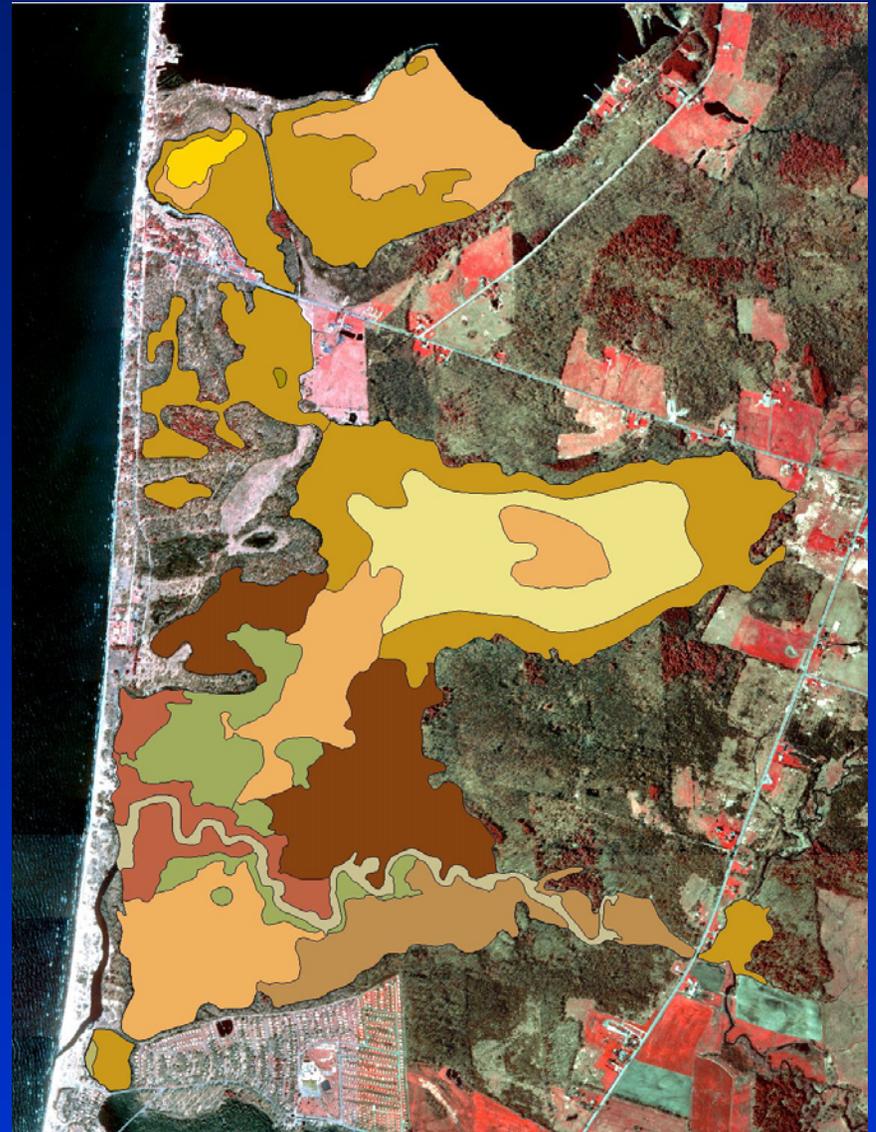
Community Delineation

- Review digital orthophotos
- Regulated wetland boundary as a starting point
- Conducted field surveys in 2001 and 2002 to collect data
- Delineate communities
- Determine significance of mapped communities

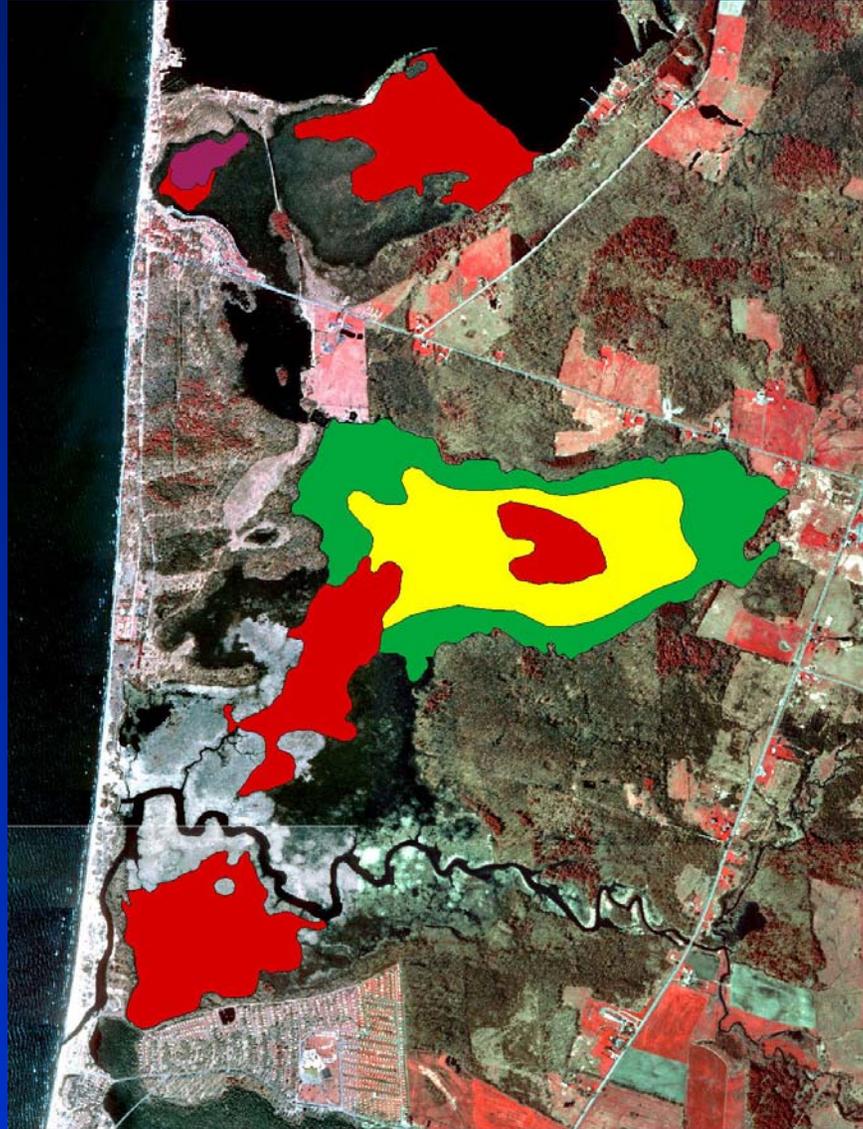


Shrub swamp

Full Community Delineations



Significant Communities





Medium fen

Additional Information

- Threats assessment and management considerations
- Informational fact sheets for each significant community and rare species documented
- Database “dump” containing information on all rare species and significant natural communities within the wetlands

Informational Fact Sheets

Dwarf shrub bog



Adele Olivero

STATUS

Global Rank: G4
Federal Status: Unprotected

State Rank: S3
State Status: Unprotected

DESCRIPTION

An ombrotrophic or weakly minerotrophic peatland dominated by low-growing, evergreen, ericaceous shrubs and peat mosses (*Sphagnum* spp.). The surface of the peatland is typically a mosaic of hummock/hollow microtopography. The hummocks tend to have a higher abundance of shrubs than the hollows; however, these bogs have more than 50% cover of low-growing shrubs. Water is usually nutrient-poor and acidic.

The dominant shrub is often leatherleaf (*Chamaedaphne calyculata*), which may have more than 50% cover. Shrubs are typically taller than the herb layer which is usually graminoid, and generally the shrub heights are 1 m or less. Other prominent shrubs and herbs are sheep laurel (*Kalmia angustifolia*), bog laurel (*K. polifolia*), Labrador tea (*Rhododendron groenlandicum*), cranberry (*Vaccinium oxycoccos*, *V. macrocarpon*), the sedge *Carex trisperma*, and tawny cottongrass (*Eriophorum virginicum*). Other characteristic, but less common plants are round-leaf sundew (*Drosera rotundifolia*), pitcher plant (*Sarracenia purpurea*), bog rosemary (*Andromeda glaucophylla*), huckleberry (*Gaylussacia baccata*), black chokeberry (*Aronia melanocarpa*), highbush blueberry (*Vaccinium corymbosum*), water-willow (*Decodon verticillatus*), meadow sweet (*Spiraea alba* var. *latifolia*, *S. tomentosa*), marsh St. John's-wort (*Triadenum virginicum*), and the sedges *Carex canescens*, *Carex pauciflora*, and *Rhynchospora alba*. Scattered stunted trees may be present, including black spruce (*Picea mariana*), tamarack (*Larix laricina*), and red maple (*Acer rubrum*). Characteristic peat mosses that form a nearly continuous carpet under the shrubs include *Sphagnum magellanicum*, *S. rubellum*, *S. fallax*, *S. fuscum*, *S. papillosum*, and *S. angustifolium*.

Characteristic animals include common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), savannah sparrow (*Passerculus sandwichensis*), masked shrew (*Sorex cinereus*), meadow jumping mouse (*Zapus leukonius*), southern bog lemming (*Synaptomys cooperi*), and wood frog (*Rana sylvatica*).

A dwarf shrub bog may form a floating mat around a bog lake or along the banks of an oligotrophic stream; it may also occur as a large or small mat completely filling a basin. A dwarf shrub bog may grade into a highbush blueberry bog thicket, inland poor fen, or a black spruce-tamarack bog.

DISTRIBUTION

New York State: Occurs throughout upstate New York north of the Coastal Lowlands ecozone. Examples include Bay Pond Bog, Franklin County; Massawepie Mire, St. Lawrence County; Sunday Swamp, Lewis County; Rome Sand Plains, Oneida County; Little Cedar Pond, Orange County.

Oswego County Coastal Wetlands: Rainbow Shores and Butterfly Swamp.



New York Natural Heritage Program

Carex livida var. *radicaulis* LIVID SEDGE



Steve Young

Taxonomy comments: Synonymous with *Carex livida* var. *grayana*. Tony Reznick, sedge taxonomist at the University of Michigan, believes that this North American variety is distinct from the European species, and that the western U.S. form is similar to the one in Europe, gradually becoming more like var. *radicaulis* toward the eastern U.S. He thinks that *Carex livida* var. *radicaulis* (Paine) is the same as *Carex livida* var. *grayana* (Dewey) Fern. as described by Fernald (1970).

STATUS

Global Rank: G5T5
Federal Status: Unprotected

State Rank: S1
State Status: Endangered

IDENTIFICATION

Distinguishing characteristics: extremely glaucous (bluish to whitish), slender sedge; leaves glaucous, 0.5-3.5mm wide, quickly becoming plicate or involute.

Best life stage for ID: in flower.

Characters needed to ID: inflorescence, mature perigynia, stems and leaves.

Similar Species: *Carex aquatilis*: younger shoots are glaucous. *Carex tetanica*: stem sometimes glaucous, but leaves are green and sub-membranaceous, perigynia tapers to outwardly curved tip.

ECOLOGY

Phenology: Flowers June through mid-July, mature fruits persist through August.

Habitat: Open medium fen with *Carex lasiocarpa*, *Carex limosa*, *Eriophorum virginicum*, *Cladium mariscoides*, and *Sphagnum contortum*; opening in northern white cedar swamp with *Sphagnum* spp., *Thuja occidentalis*, *Picea mariana*, and *Vaccinium macrocarpon*; rich graminoid fen with *Muhlenbergia glomerata* (New York Natural Heritage Program 1998). Calcareous meadows, bogs and depressions (Fernald 1970). Wet peaty soil, usually in calcareous regions (Gleason 1952).

Associated Ecological Communities: Medium fen, rich shrub fen, inland poor fen, northern white cedar swamp, undetermined open peatlands, and undetermined forested peatlands.

DISTRIBUTION

Global Range: Circumboreal, south to New Jersey and Minnesota.

State Distribution: Restricted to the northern portion of state, south to the eastern shore of Lake Ontario and the Adirondack Mountains.

Oswego County Coastal Wetlands: Deer Creek Marsh and Selkirk Fen.



New York Natural Heritage Program

Results

- New or updated information for 14 communities, 28 plants, and 32 animals
- Wetlands account for 34% of significant communities and rare species in the county
- 38% of the different types of communities and rare species in the county



Deep emergent marsh

Interesting Community Finds

- Second largest medium fen in the state
~150 acres
- The only red maple-hardwood swamps
and red maple-tamarack peat swamps
along Lake Ontario shoreline



Red maple-tamarack peat swamp

Interesting Plant Finds

- One of the best populations of *Arethusa bulbosa*
- The only population of *Scirpus heterochaetus* the region



Scirpus heterochaetus

Interesting Animal Finds

- Evidence of *Clemmys muhlenbergii*
- The best populations of *Hemileuca* sp. 1 in the state



Hemileuca sp. 1

Additional Work

- Inventory effort bias
- Only 6% of the wetlands are in the towns along Lake Ontario
- In 1950 the towns accounted for 49% of the population. In 2000 it was 41%
- None-the-less this should be a model for other counties

Acknowledgements

- Project funded by NYS DEC Great Lakes Protection Fund
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