

Coastal Grasslands:

Definition:

Grassland: Grasses, forbs, ferns, and other herbaceous plants dominant, generally forming at least 25% cover. Trees, shrubs, and dwarf-shrubs generally less than 25% cover. (See Metzler and Barrett 2006)

This habitat is very well described and illustrated in the Long Island Sound Habitat Restoration Manual (February 2003):

<http://longislandsoundstudy.net/wp-content/uploads/2004/12/grasslands.pdf>

Within New England, coastal grasslands are ecologically significant ecosystems with limited occurrence. They are found on sandy or gravelly soils of glacial origin with their vegetation influenced by a maritime climate. They are maintained by periodic disturbances – both natural and anthropogenic. The largest occurrences are found on Long Island, Cape Cod and associated islands. Land development, natural succession and loss of cultural processes such as grazing, plowing, and burning have led to the loss of these habitats throughout Long Island and New England. The LISS Habitat Restoration Manual for Coastal Grasslands (URL above) describes four types of coastal grasslands: maritime grasslands, sand plains, Hempstead Plains, and old field grasslands. Maritime grasslands are those found within the coastal ecoregions of New York and Connecticut (Figures 1 and 2) and are directly influenced by offshore winds and salt spray. An ecoregion is an area of similar landforms, climate, and biota. Other grasslands include those within the coastal ecoregions but not directly and consistently influenced by winds and salt spray. These include sand plain communities, and the Hempstead Plains. The LISS Habitat Restoration Manual has an excellent chapter (link above) describing each of these. Other information may be found at http://library.fws.gov/pubs5/web_link/text/li_grass.htm.

Figure 1. Ecoregions of New York. The North Atlantic Coast ecoregion is the primary ecoregion of the Long Island Sound Study area and is shown in dark green.

<http://www.dec.ny.gov/animals/9402.html>

New York's Ecoregions

Ecoregional boundaries courtesy of New York Natural Heritage Program

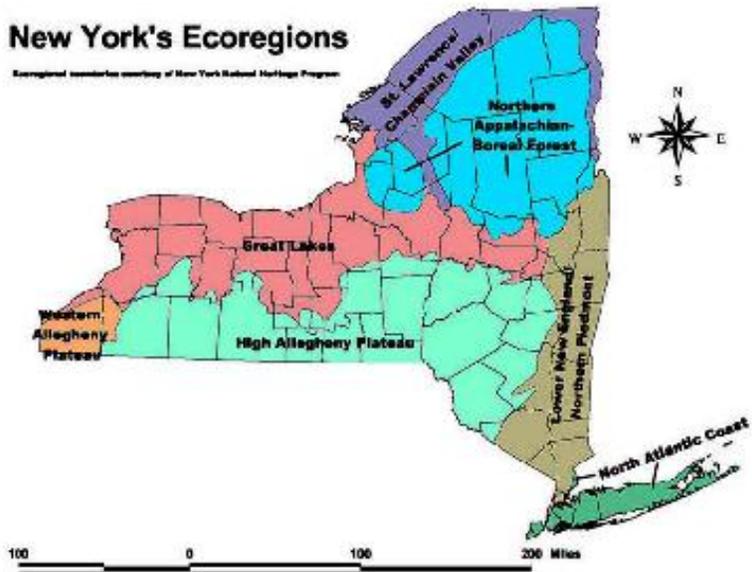


Figure 2. Ecoregions of Connecticut (Dowhan and Craig 1976). The coastal ecoregions of Connecticut are V-A and V-B shown in green.



Bunch-forming grasses are generally dominant with species such as coastal little bluestem (*Schizachyrium littorale*), common hairgrass (*Deschampsia flexuosa*), and poverty grass (*Danthonia spicata*). In post-agricultural fields one often finds asters, goldenrods and other perennials mixing with the grasses. Woody plants may be found here as well – blueberries,

huckleberries, and red cedar (*Juniperus virginiana*), with invasive shrubs rapidly overtaking the area if no control steps are taken.

Coastal grasslands provide very important habitat for vertebrate species, particularly birds, as well as invertebrate species. Many of our coastal grasslands have been lost through development of these highly desirable sites or due to lack of disturbance and subsequent succession by woody and/or invasive species. Given the limited occurrence of these areas, as they disappear, numerous species that are limited to such sites have become endangered or extinct. For example, these areas provide habitat for numerous federal and state listed rare plant and animal species such as sandplain gerardia, bushy rockrose, Northern harrier, and grasshopper and Savannah sparrows.

Management issues with grasslands include establishment of invasive plants and colonization of shrubs and trees. Mowing, burning and grazing are the most common management techniques to manage grasslands. In general, mowing of fields is an important management technique, but the timing of mowing is critical for nesting birds. Mowing of fields should take place outside of the nesting season (April 15 to August 15). Rothbart and Capel (2006) have written a chapter on grassland management providing detailed information on mowing and burning techniques.

http://www.wildlife.state.nh.us/Wildlife/Northeast_Mgt_Guide/Ch03_Maintaining_Grasslands.pdf

Other resources:

http://www.fs.fed.us/psw/publications/documents/psw_gtr191/Asilomar/pdfs/1087-1089.pdf

<http://www.aou.org/committees/docs/ConservationAddn4.pdf>

Common invasive or potentially invasive (*) plants found in coastal grasslands include:
Asiatic bittersweet (*Celastrus orbiculatus*) <http://www.nps.gov/plants/alien/fact/ceor1.htm>
Black swallowwort (*Cynanchum louiseae*) <http://www.nps.gov/plants/alien/fact/cylo1.htm>
Honeysuckles (*Lonicera* spp.) <http://www.nps.gov/plants/alien/fact/loni1.htm>
Japanese honeysuckle (*Lonicera japonica*) <http://www.nps.gov/plants/alien/fact/loja1.htm>
Multiflora rose (*Rosa multiflora*) <http://www.nps.gov/plants/alien/fact/romu1.htm>
Canada bluegrass (*Poa compressa*)*
Reed canary grass (*Phalaris arundinacea*)
Canada thistle (*Cirsium arvense*)* <http://www.nps.gov/plants/alien/fact/ciar1.htm>
Jimson weed (*Datura stramonium*)* <http://nbiin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=109>
Cypress spurge (*Euphorbia cyparissias*)
Mile a minute vine (*Persicaria perfoliata*) <http://www.nps.gov/plants/alien/fact/pepe1.htm>

Poison Ivy (*Toxicodendron radicans*) is not considered an invasive plant but care should be taken to note its presence if a controlled burn is the desired management option. Airborne particles and resins may get into eyes or respiratory systems causing serious reactions.

<http://www.hort.uconn.edu/ipm/homegrnd/htms/poivy2.htm>

References and Resources:

Metzler, K. J. and J.P. Barrett. 2006. The Vegetation of Connecticut: A Preliminary Classification. State Geological and Natural History Survey of Connecticut. Report of Investigations No. 12. Hartford, CT. pp 110.

CT DEEP, NYSDEC, Audubon Connecticut, and Audubon New York have long recognized the significance of coastal grasslands and have a great deal of information on conservation and management:

http://ct.audubon.org/IssuesAction_Priorities-IssueFactSheets_Grasslands.html

http://www.audubonct.org/PDFs/CT_GrasslandHeritage.pdf

<http://ny.audubon.org/PDFs/ConservationPlan-GrasslandBirds-NY.pdf>

http://www.massaudubon.org/Birds_and_Birding/grassland/

Glenn Motzkin and David Foster wrote an interesting and informative article on coastal grassland occurrence and conservation in New England:

http://filebox.vt.edu/users/jaherman/Motzkin_JBiogeography_2002_Grasslands.pdf

Long Island Native Grass Initiative:

http://www.nycgovparks.org/sub_about/parks_divisions/gnpc/lingi.html

Connecticut Dept of Energy and Environmental Protection Grassland Habitat Conservation Initiative:

http://www.ct.gov/dep/lib/dep/wildlife/pdf_files/nongame/grasshaboct06.pdf

Grassland (and shrubland) management:

http://www.wildlife.state.nh.us/Wildlife/Northeast_Hab_Mgt_Guide.htm

See Chapters 3 and 4.

Link to Connecticut Critical Habitat mapper (CTEco):

<http://ctecoapp1.uconn.edu/advancedviewer/>

Link to New York Environmental Resource mapper:

<http://www.dec.ny.gov/animals/38801.html>