New York Natural Heritage Program

5. Maritime shrubland: a shrubland community thatoccurs on dry seaside bluffs and headlands that are
exposed to offshore winds and salt spray. This community typically occurs as a tall shrubland (2-3 m), but may include areas under 1m shrub height, to areas with shrubs up to 4 m tall forming a shrub canopy in shallow depressions. These low areas may imperceptibly grade into shrub swamp if soils are sufficiently wet. Trees are usually sparse or absent (ideally less than 25% cover).
Characteristic shrubs and sapling trees include shadbush (Amelanchier canadensis), bayberry (Myrica pensylvanica), black cherry (Prunus serotina), arrowwood (Viburnum dentatum), and shining sumac (Rhus copallinum). Other shrubs and stunted trees include beach-plum (Prunus maritima), sand-rose (Rosa rugosa), wild rose (R. virginiana), eastern red cedar (Juniperus virginiana), American holly (Ilex opaca), black oak (Quercus velutina), and sassafras (Sassafras albidum). Small amounts of highbush blueberry (Vaccinium corymbosum), sweet pepperbush (Clethra alnifolia), red maple (Acer rubrum), and black chokeberry (Aronia melanocarpa) are found in moister low areas, often grading to small patches of shrub swamp.
Characteristic vines include poison ivy (Toxicodendron radicans), Virginia creeper (Parthenocissus quiquefolius), greenbrier (Smilax rotundifolia), oriental bittersweet (Celastrus orbiculatus), and Japanese honeysuckle (Lonicera japonica).
The herb layer is very sparse and may contain a few scatttered flat-topped goldenrod (Euthamia graminifolia), wild indigo (Baptisia tinctoria), whitetopped aster (Aster paternus), and little bluestem (Schizachyrium scoparium).
Maritime shublands may form a patchy mosaic and grade into other maritime communities. For example, if trees become more prevalent it may grade into one of the maritime forest communities, such as successional maritime forest. If a severe storm reduces shrub cover and deposits sand into the community it may be converted to a maritime dune. This community shares many shrub species with maritime dunes, but typically

lacks the maritime dune herb species. More data on possible landscape variants are needed (e.g., maritime shrublands on morainal headland vs. outwash barrier dune).
Birds that may be found in maritime shrublands include black-crowned night-heron (Nycticorax nycticorax), fish crow (Corvus ossifragus), yellowbreasted chat (Icteria virens), and migratory songbirds (especially in fall) (Levine 1998).
Distribution: along the seacoast of the Coastal Lowlands ecozone.
Rank: G4 S4 Revised: 2001
Example: Montauk Point, Suffolk County; Fire Island, Suffolk County.
Sources: Clark 1986b; Levine 1998; Robichaud and Buell 1983; Taylor 1923, Thompson 1997; NYNHP field surveys.

6. Maritime heathland: a dwarf shrubland community that occurs on rolling outwash plains and moraine of the glaciated portion of the Atlantic coastal plain, near the ocean and within the influence of offshore winds and salt spray. This community is dominated by low heath or heath-like shrubs that collectively have greater than 50% cover.
Characteristic shrubs include bearberry (Arctostaphylos uva-ursi), beach heather (Hudsonia tomentosa), blueberry (Vaccinium angustifolium), black huckle-berry (Gaylussacia baccata), bayberry (Myrica pensylvanica), and beach-plum (Prunus maritima).
Grasses and forbs are present, but they do not form a turf; characteristic species include common hairgrass (Deschampsia flexuosa), little bluestem (Schizachyrium scoparium), Pennsylvania sedge (Carex pensylvancica), rush (Juncus greenei), asters (Aster dumosum, A. linariifolius, A. solidagineus), bushy rockrose (Helianthemum dumosum), and New England blazing star (Liatris scariosa var. novae-angliae).
A characteristic bird in winter is yellow-rumped warbler (Dendroica coronata). This community intergrades with maritime grassland, and the two communities may occur together in a mosaic.
Distribution: along the seacoast of the Coastal Lowlands ecozone, in eastern Long Island.
Rank: G3 S1 Revised: 1990

Example: Napeague Dunes, Suffolk County; Montauk Mountain, Suffolk County.
Sources: Dunwiddie et al. 1996; Thompson 1997; NYNHP field surveys

5. Pitch pine-scrub oak barrens: a shrub-savanna community that occurs on well-drained, sandy soils that have developed on sand dunes, glacial till, and outwash plains.
Pitch pine (Pinus rigida) is the dominant tree; the percent cover of pitch pine is variable, ranging from 20 to 60%. The shrublayer dominants are scrub oaks (Quercus ilicifolia and Q. prinoides), which often form dense thickets. Beneath this tall shrub canopy is a low shrublayer primarily composed of sweet-fern (Comptonia peregrina), blueberries (Vaccinium angustifolium and V. pallidum), and black huckleberry (Gaylussacia baccata). These scrub oak thickets cover 60 to 80 percent of the community; pitch pines are scattered through the shrub thicket, occurring as emergent trees within an extensive shrubland.
Within the shrub thickets are small patches of grassland dominated by the following prairie grasses: big bluestem (Andropogon gerardii), little bluestem (Schizachyrium scoparium), and Indian grass (Sorghastrum nutans). These grassy areas are usually found near ant mounds, along trails, and in some of the low areas between dunes where the water table may be very close to the soil surface. This community can be rich in species. Characteristic forbs include bushclovers (Lespedeza capitata, L. hirta, L. procumbens, and L. stuevii), pinweed (Lechea villosa), milkwort (Polygala nuttallii), goat's-rue (Tephrosia virginiana), and wild lupine (Lupinus perennis).
Rare butterflies of some northern Hudson Valley pitch pine-scrub oak barrens include Karner blue butterfly (Lycaeides melissa samuelis) and frosted elfin (Incisalia irus). Buck moth (Hemileuca maia) is a characteristic species throughout the range of the community, but the density of buck moths is usually low.
Birds that may be found in pitch pine-scrub oak barrens include eastern towhee (Pipilo erythrophthalmus), brown thrasher (Toxostoma rufum), pine warbler (Dendroica pinus), prairie warbler (D. discolor), ovenbird (Seiurus aurocapillus), common

yellowthroat (Geothlypis trichas), field sparrow (Spizella pusilla), chipping sparrow (S. passerina), and gray catbird (Dumetella caroliniensis) (Levine 1998, Drennan 1981). This community is adapted to, and maintained by, periodic fires; frequency of fires ranges from 6 to 15 years.

Distribution: mainly known from the Coastal Lowlands ecozone and the Central Hudson subzone of the Hudson Valley ecozone; small examples are reported from the Appalachian Plateau ecozone.

Rank: G2 S1 Revised: 2001

Examples: Albany Pine Bush, Albany County; Edgewood Oak Brush Plains, Suffolk County.

Sources: Cryan and Turner 1981; Drennan 1981; Forman 1979; Kerlinger and Doremus 1981; Levine 1998; Olsvig 1980; NYNHP field surveys.

6. Pitch pine-oak-heath woodland: a pine barrens community that occurs on well-drained, infertile, sandy soils in eastern Long Island (and possibly on sandy or rocky soils in upstate New York). The structure of this community is intermediate between a shrub-savanna and a woodland.

Pitch pine (Pinus rigida) and white oak (Quercus alba) are the most abundant trees, and these form an open canopy with 30 to 60% cover. Scarlet oak (Quercus coccinea) and black oak (Q. velutina) may also occur in the canopy.

The shrublayer is dominated by scrub oaks (Quercus ilicifolia, Q. prinoides), and includes a few heath shrubs such as huckleberry (Gaylussacia baccata) and blueberry (Vaccinium pallidum). The density of the shrublayer is inversely related to the tree canopy cover; where the trees are sparse, the shrubs form a dense thicket, and where the trees form a more closed canopy, the shrublayer may be relatively sparse. Stunted, multiple-stemmed white oaks may be present in the shrublayer if the site has burned regularly.

Characteristic species of the groundcover include bearberry (Arctostaphylos uva-ursi), Pennsylvania sedge (Carex pensylvanica), golden heather (Hudsonia ericoides), beach heather (Hudsonia tomentosa), and pinweed (Lechea villosa). Like other closely related pine barrens communities, the woodland provides habitat for buck moth (Hemileuca maia) and prairie warbler (Dendroica discolor).

This community is adapted to periodic fires; the fire frequency has not been documented, but it probably burns less frequently than pitch pine-scrub oak barrens (i.e., more than 15 years between fires). This community may have a fairly low species richness: it is more diverse than dwarf pine plains, but less diverse than pitch pine-scrub oak barrens.
Distribution: currently known only from the Coastal Lowlands ecozone.
Rank: G3G4 S2S3 Revised: 1990
Examples: Rocky Point Pine Barrens, Suffolk County; Dwarf Pine Barrens, Suffolk County.
Source: NYNHP field surveys.

5. Coastal oak-heath forest: a large patch to matrix low diversity hardwood forest that typically occurs on dry, well-drained, sandy soils of glacial outwash plains or moraines of the Atlantic Coastal Plain.
The forest is usually codominated by two or more species of oaks: scarlet oak (Quercus coccinea), white oak (Q. alba) and black oak (Q. velutina). Chestnut oak codominant that occurs in dry well-drained, loamy sand of morainal coves of the Atlantic Coastal Plain. Some occurrences are associated with maritime beech forest. Beech can range from nearly pure stands to as little as about 25% cover. The forest is usually codominated by two or more species of oaks usually black oak (Quercus velutina) and white oak (Q. alba). Scarlet oak (Quercus coccinea) and chestnut oak (Q. montana) are common associates. Red oak (Quercus rubra) may be present at low density and is a key indicator species along with sugar maple (Acer saccharum) and paper birch (Betula papyrifera).
There are relatively few shrubs and herbs. Characteristic groundlayer species are Swan's sedge (Carex swanii), Canada mayflower (Maianthemum canadense), white wood aster (Aster divaricatus), beech-drops (Epifagus virginiana), and false Solomon's seal (Smilacina racemosa). Typically there is also an abundance of tree seedlings, especially of beech; beech and oak saplings are often the most abundant 'shrubs' and small trees.
Characteristic fauna include white-tailed deer (Odocoileus virginianus).
Distribution: restricted to interior portions of Coastal Lowlands Ecozone, concentrated on north-facing

slopes on the moraines. Known examples range from Montauk Point (Brodo 1968) west to the Big Woods along the south shore of Long Island and from Route 48 Southold to Camp Baiting Hollow along the north shore of Long Island. Numerous examples occur in the Riverhead portion of the north shore. The community is also reported from necks of Long Island Sound (Greller 1977). It may occur in small patches farther west on Long Island to western Suffolk, Nassau and eastern Queens Counties (cf. Greller 1977). The community was also apparently reported from New York City by Harper (1917) (cf Brodo 1968).
Rank: G4 S3 Revised: 2001
Examples: Mashomack, Friars Head, Wildwood State Park, Suffolk County.
Sources: Brodo 1968; Greller 1977; Rosza and Metzler 1982; Sneddon et al. 1998; Taylor 1923; NYNHP field surveys.

10. Pitch pine-oak forest: a mixed forest that typically occurs on well-drained, sandy soils of glacial outwash plains or moraines; it also occurs on thin, rocky soils of ridgetops.
The dominant trees are pitch pine (Pinus rigida) mixed with one or more of the following oaks: scarlet oak (Quercus coccinea), white oak (Q. alba), red oak (Q. rubra), or black oak (Q. velutina). The relative proportions of pines and oaks are quite variable within this community type. At one extreme are stands in which the pines are widely spaced amidst the oaks, in which case the pines are often emergent above the canopy of oak trees. At the other extreme are stands in which the pines form a nearly pure stand with only a few widely spaced oak trees.
The shrublayer is well-developed with scattered clumps of scrub oak (Quercus ilicifolia) and a nearly continuous cover of low heath shrubs such as blueberries (Vaccinium pallidum, V. angustifolium) and black huckleberry (Gaylussacia baccata).
The herbaceous layer is relatively sparse; characteristic species are bracken fern (Pteridium aquilinum), wintergreen (Gaultheria procumbens), and Pennsylvania sedge (Carex pensylvanica).
Characteristic birds include rufous-sided towhee (Pipilo erythrophthalmus), common yellowthroat (Geothlypis trichas), field sparrow (Spizella pusilla),

prairie warbler (Dendroica discolor), pine warbler (Dendroica pinus), blue jay (Cyanocitta cristata), and whip-poor-will (Caprimulgus vociferus).
At least two potential regional variants are known or suspected. The typical coastal variant on Long Island and the inland variant of upstate New York. More data on these regional variants are needed. This community combined with several types of barrens and woodland communities make up the broadly defined ecosystem known as the Pine Barrens.
Distribution: known from the Coastal Lowlands and Hudson Valley ecozones.
Rank: G4G5 S4 Revised: 2001
Example: Long Island Pine Barrens, Suffolk County.
Sources: Bernard and Seischab 1995; Greller 1977; Kerlinger and Doremus 1981; Olsvig 1979; Reiners 1967; Seischab and Bernard 1996; NYNHP field surveys.

28. Successional maritime forest: a successional hardwood forest that occurs in low areas near the seacoast. This forest is a variable type that develops after vegetation has burned or land cleared (such as pastureland or farm fields). The trees may be somewhat stunted and flat-topped because the canopies are pruned by salt spray. The forest may be dominated by a single species, or there may be two or three codominants.
Characteristic canopy trees include black oak (Quercus velutina), post oak (Quercus stellata), shadbush (Amelanchier canadensis), white oak (Quercus alba), black cherry (Prunus serotina), black gum (Nyssa sylvatica), sassafras (Sassafras albidum), and red maple (Acer rubrum). A small number of eastern red cedar (Juniperus virginiana) may be present.
Vines that are common in the understory and subcanopy include riverbank grape (Vitis riparia), poison ivy (Toxicodendron radicans), Virginia creeper (Parthenocissus quinquefolia), and greenbrier (Smilax spp.).
Shrublayer and groundlayer dominants are variable. Bayberry (Myrica pensylvanica) is a common shrub. Certain introduced species are commonly found in this forest, including black locust (Robinia pseudoacacia), privet (Ligustrum spp.), Asiatic

bittersweet (Celastrus orbiculatus), Japanese honey suckle (Lonicera japonica), multiflora rose (Rosa multiflora), and wineberry (Rubus phoenicolasius). Any of these may be dominant or codominant in a successional maritime forest.
Characteristic animals include gray gatbird (Dumetella carolinensis), eastern towhee (Pipilo erythrophthalamus) and white-tailed deer (Odocoileus virginianus). This forest represents an earlier seral stage of other maritime forests, such as maritime post oak forest, maritime holly forest, maritime red cedar forest, and probably others. Soil and moisture regime will usually determine which forest type succeeds from this community. A few disturbance-climax examples occur, maintained by severe and constant salt spray.
Distribution: in the Coastal Lowlands ecozone, in low areas near the coast of Long Island.
Rank: G4 S3S4 Revised: 2001
Example: Montauk Point, Suffolk County; William Floyd Estate (Fire Island National Seashore), Suffolk County.
Sources: Clark 1986b; Greller 1977; NYNHP field surveys.