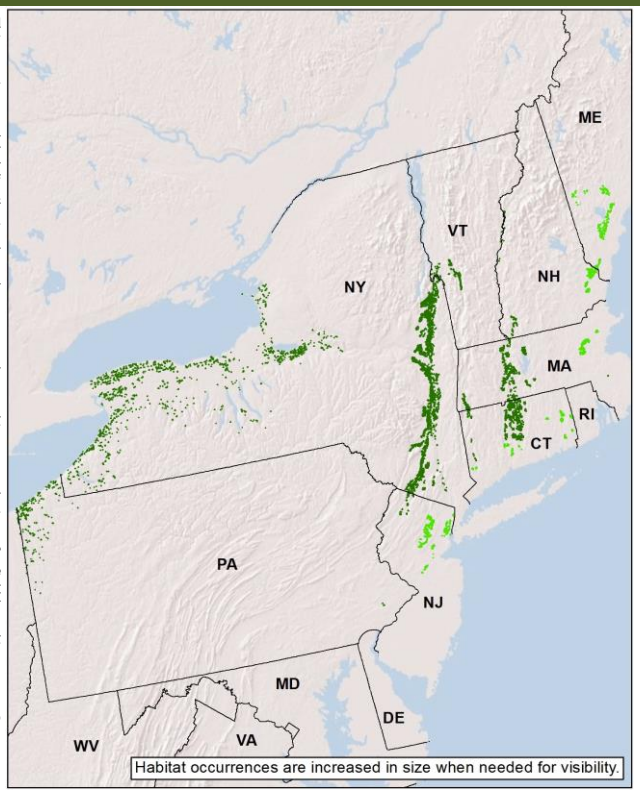
North-Central Interior Wet Flatwoods

Macrogroup: Central Hardwood Swamp



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

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State Distribution: CT, MA, ME, NH, NJ, NY, PA, RI, VT

Total Habitat Acreage: 81,802

Percent Conserved: 7.5%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	60%	49,028	868	825	47,335
MA	12%	9,632	454	1,410	7,769
CT	11%	9,283	310	1,141	7,832
NJ	8%	6,289	337	232	5,719
ME	3%	2,790	30	10	2,751
NH	2%	1,964	70	332	1,562
VT	2%	1,766	47	36	1,683
PA	1%	1,049	1	11	1,037
RI	0%	0	0	0	0

Crosswalk to State Name Examples:

Forested Inland Wetland - Unspecified (CT), Black Gum-Pin Oak-Swamp White Oak "Perched" Swamp (MA), Wetlands - Forested Wetlands And Bogs (PA), Oak-Pine-Northern Hardwood Forest - Valley Clayplain Forest (VT), Red Maple - Elm - Lady Fern Silt Forest (NH)

Description:

A hardwood forest of upland and wetland species occurring in depressions or poorly drained lowlands throughout the northern glaciated Midwest and Lower New England. Pin oak dominates in many areas; other common (sometimes dominant) trees include swamp white oak, bur oak, black gum, sweet gum, and red maple. Areas with more dense tree cover have less shrub and herbaceous cover then the dense understory associated with more open canopies. Buttonbush, winterberry, and alder are typical shrubs; various sedges and cinnamon fern are common in the herb layer. Composition changes with fluctuating moisture levels. It is not known how modeled examples in coastal areas from New Jersey to southern Maine (light green) may differ from those in interior valleys and depressions (dark green).

Ecological Setting and Natural Processes:

Occurs on poorly drained uplands or in depressions associated with glacial features such as tillplains, lakeplains or outwash plains. Soils often have an impermeable clay layer that can create a shallow, perched water table. Saturation periods vary, and seasonal drought is possible. Flooding, drought and fire can influence system dynamics.

Similar Habitat Types:

Vegetation and topographic setting of this small patch wetland system, which has its core distribution in the glaciated Midwest, is similar to that of the Glacial Marine & Lake Wet Clayplain Forest, which was the dominant pre-settlement forest of the Champlain Valley and northwestern NY.

Crosswalk to State Wildlife Action Plans:

Forested Inland Wetland - unspecified (CT), Forested Swamps (MA), Hardwood Swamp (NY), Wetlands - Forested Wetlands and Bogs (PA), Oak-Pine-Northern Hardwood Forest - Valley Clayplain Forest (VT)

Places to Visit this Habitat:

Saratoga National Historical Park | NY
Overpeck County Park | NJ
Great Meadows National Wildlife Refuge | MA
Rogers Island Wildlife Management Area | NY

Associated Species: *Appendix lists scientific names*

BIRDS: barred owl, great crested flycatcher, northern waterthrush, veery, wood duck

HERPTILES: eastern hog-nosed snake, northern leopard frog, black racer

PLANTS: black maple (Acer nigrum), canada moonseed (Menispermum canadense), climbing fern (Lygodium palmatum), common hackberry (Celtis occidentalis), common sneezeweed (Helenium autumnale), cut-leaved evening-primrose (Oenothera laciniata), foxtail sedge (Carex alopecoidea), frank's sedge (Carex frankii), georgia bulrush (Scirpus georgianus), hairy wild rye (Elymus villosus), narrowleaf springbeauty (Claytonia virginica), purple cress (Cardamine douglassii), swamp agrimony (Agrimonia parviflora)

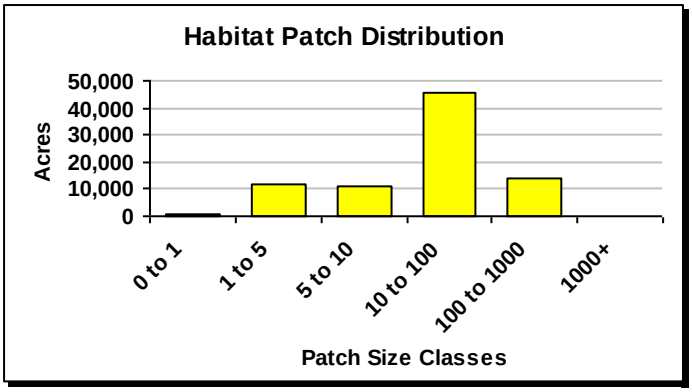
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: American bittern, bald eagle, black rail, cerulean warbler

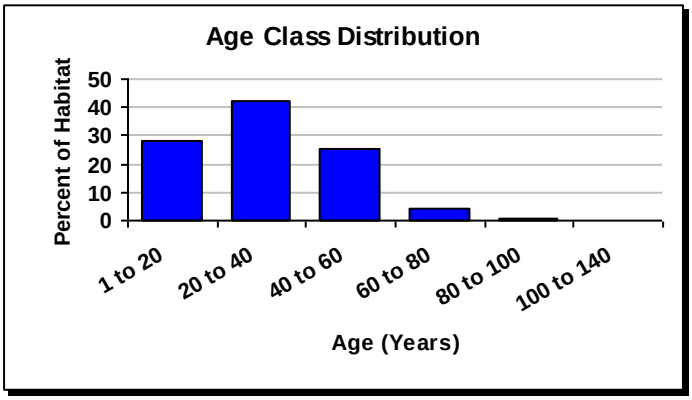
INSECTS: Brook Snaketail

PLANTS: Culver's-root (Veronicastrum virginicum), many-fruit false-loosestrife (Ludwigia polycarpa)

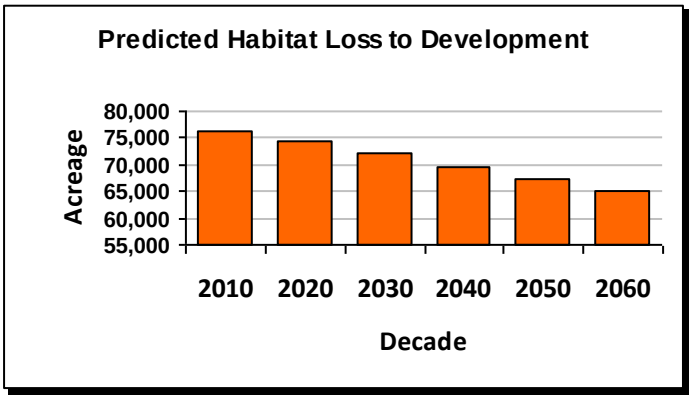
© D.J. Evans (New York Natural Heritage Program)



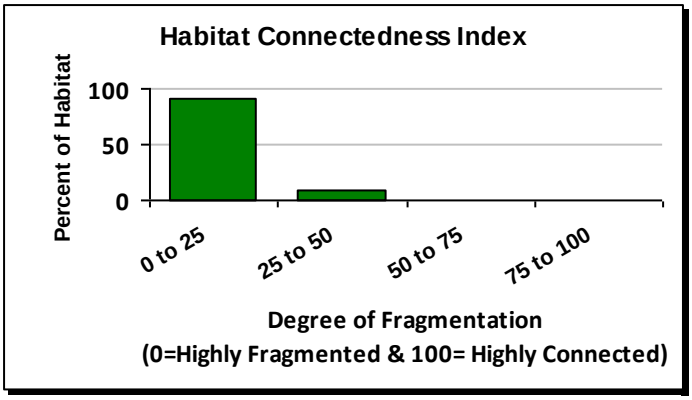
The average patch size for this habitat is 8 acres and the largest single patch is 219 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



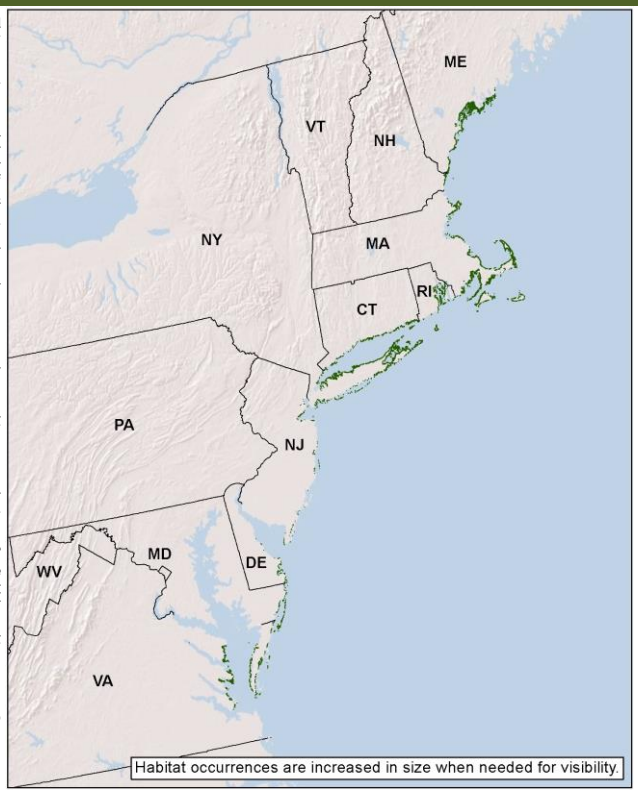
This chart shows the predicted loss of habitat over the next five decades (11,076 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 222 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Maritime Forest

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Robert Coxe (Delaware Species Conservation & Research Program)

State Distribution: CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA

Total Habitat Acreage: 127,121

Percent Conserved: 20.3%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
MA	26%	32,935	5,273	4,733	22,930
ME	25%	32,256	1,977	1,198	29,081
NY	24%	29,958	2,755	2,259	24,944
VA	11%	14,061	1,532	663	11,867
RI	6%	7,968	602	1,453	5,913
CT	4%	5,511	990	394	4,127
NJ	1%	1,266	479	85	703
DE	1%	1,233	18	495	721
MD	1%	1,157	593	116	447
NH	1%	774	5	161	608

Crosswalk to State Name Examples:

Upland Woodland And Shrub - Coastal Shrublands (CT), Maritime Red Cedar Woodland (DE), Maritime Oak-Holly Forest/Woodland (MA), Maritime Forest (MD), Maritime Wooded Dune (NH), Coastal Dune Woodland (NJ), Maritime Holly Forest (NY), Maritime Woodland (RI), Maritime Loblolly Pine Forest (VA)

Description:

A forest-shrubland mosaic encompassing a range of woody vegetation on barrier islands, near-coastal strands, and bluffs at the outer edge of the coastal plain. Defined by its proximity to maritime environments, and usually species-poor, the vegetation includes narrow bands of forests or woodlands, often featuring stunted trees with contorted branches and dense vine layers. A range of trees may be present depending upon location and degree of protection from most extreme maritime influences. They may include some combination of pines (like pitch, Virginia, loblolly, and shortleaf pine) and oaks (scarlet, black, scrub, post) as well as eastern red cedar, black cherry, American holly, sassafras, and red maple. The shrub layer may be dense; the herb layer is often sparse.

Ecological Setting and Natural Processes:

Soils are generally fine to coarse sand with some organic material mixed into the top layers; there is sometimes a thick duff layer. Groundwater levels vary, and have a strong influence on vegetation composition and structure. This habitat type encompasses both upland and embedded wetland environments. Maritime forest vegetation is subject to stresses like salt spray, high winds, dune deposition, sand shifting and blasting, and occasional overwash.

Similar Habitat Types:

Maritime forests very often border and interfinger with dune, swale and sandy beach habitats. A similar system with more southern tree, shrub, and herb species has been described for the Central Atlantic Coastal Plain; it ranges south from southeast Virginia.

Crosswalk to State Wildlife Action Plans:

Upland Woodland and Shrub - Coastal Shrublands (CT), Beach and Dune Habitats (DE), Upland Forest (MA), Maritime Forests and Shrublands (MD), Coastal Hardwoods (NY), Forest Habitat - Mixed Forest (VA)

Places to Visit this Habitat:

Bluff Point State Park | CT
Cape Cod National Seashore | MA
Assateague Island National Seashore | MD
Mashomack Preserve | NY
Chincoteague National Wildlife Refuge | VA

Associated Species: *Appendix lists scientific names*

BIRDS: black-and-white warbler, blue-winged warbler, carolina wren, common yellowthroat, eastern towhee, gray catbird, ovenbird, prairie warbler, white-eyed vireo (south), yellow-breasted chat (south)

MAMMALS: eastern mole, gray squirrel, long-tailed weasel, meadow vole, white-footed mice

HERPTILES: eastern hognose snake

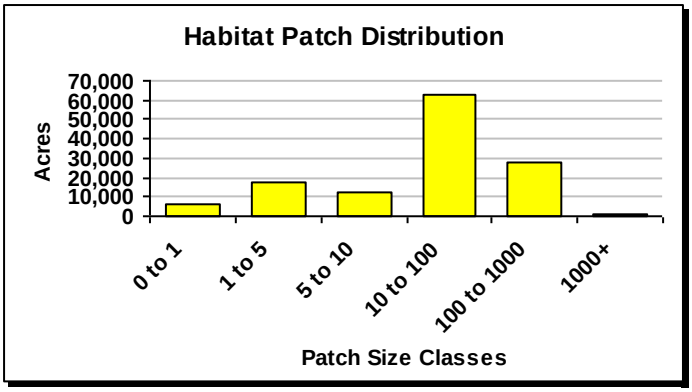
PLANTS: Northern Blazingstar (Liatris scariosa var. novae-angliae), Lion's-foot (Prenanthes serpentaria), Sundial Lupine (Lupinus perennis), Butterfly Milkweed (Asclepias tuberosa), Eggleaf Rosette Grass (Dichanthelium ovale var. ovale), Eastern Silvery Aster (Symphyotrichum concolor), Small White Leek (Allium tricoccum), Coastal Plain Blue-eyed-grass (Sisyrinchium fuscatum), Yellow Thistle (Cirsium horridulum var. horridulum)

Species of Concern (G1-G4): *Appendix lists scientific names*

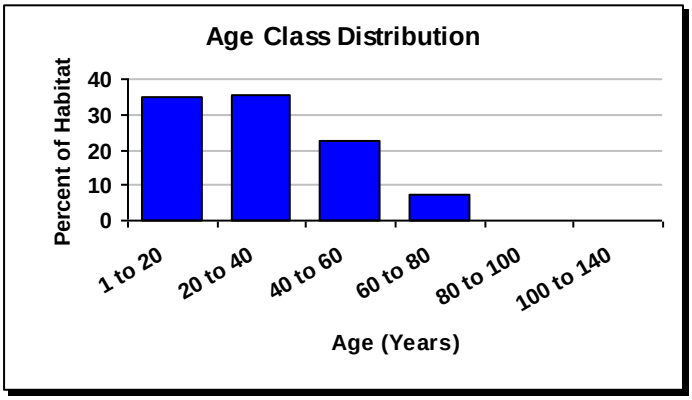
HERPTILES: copperhead, eastern box turtle

INSECTS: coastal heathland cutworm, Delaware skipper, graphic moth, little glassywing, southern broken dash, the pink streak

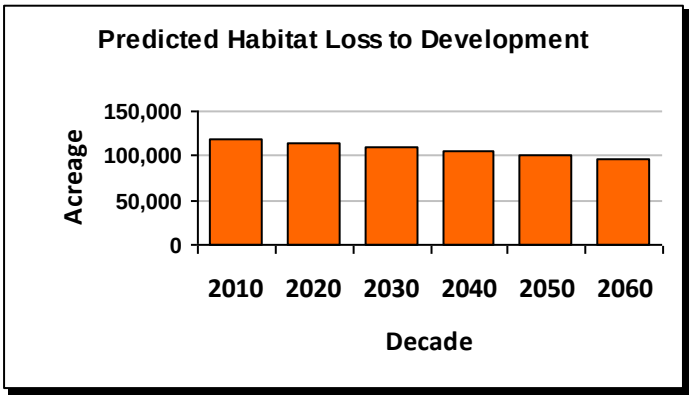
PLANTS: Bushy Rockrose (Helianthemum dumosum), Broom Crowberry (Corema conradii), Nantucket Shadbush (Amelanchier nantucketensis), Slender Blue Flag (Iris prismatica)



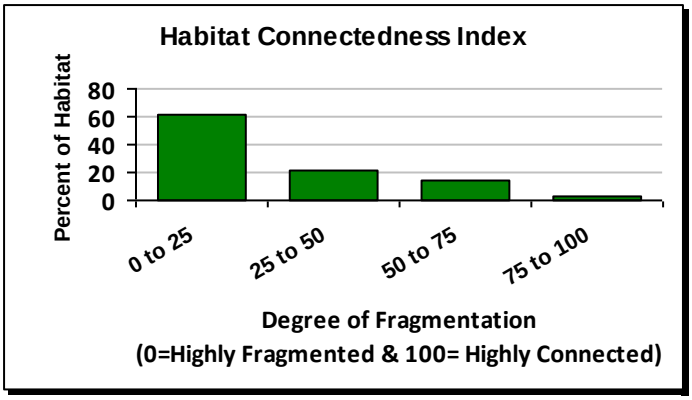
The average patch size for this habitat is 4 acres and the largest single patch is 385 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



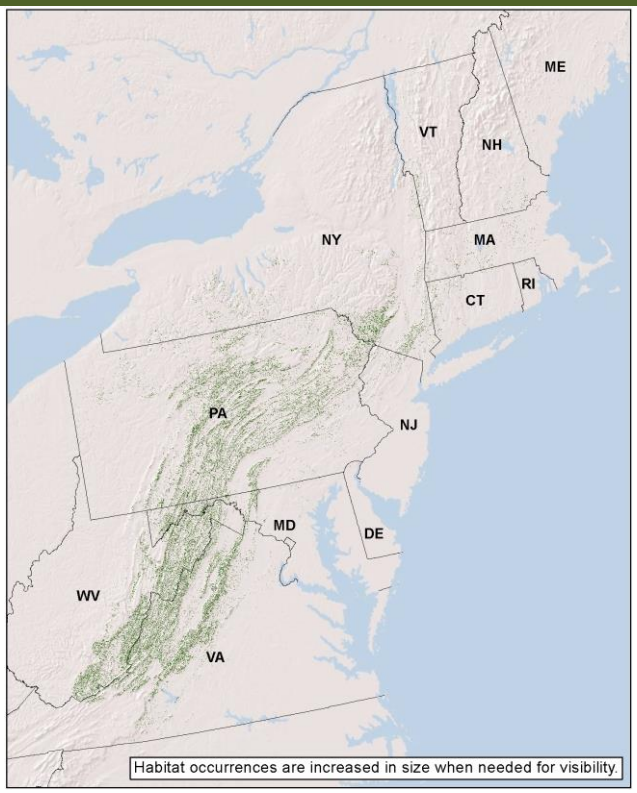
This chart shows the predicted loss of habitat over the next five decades (23,614 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 472 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Central Appalachian Dry Oak-Pine Forest

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Elizabeth Thompson (Vermont Land Trust)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 3,845,317

Percent Conserved: 34.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
PA	39%	1,496,364	72,782	473,996	949,587
VA	26%	982,148	193,537	237,912	550,699
WV	20%	777,259	19,512	163,916	593,831
NY	8%	316,571	14,301	42,043	260,226
MD	3%	127,564	18,158	29,060	80,346
MA	1%	48,100	2,590	14,475	31,035
CT	1%	27,933	3,177	5,067	19,688
VT	1%	25,031	874	1,934	22,223
NJ	1%	23,303	9,633	3,516	10,154
NH	0%	15,155	270	2,413	12,472
ME	0%	4,783	156	398	4,229
RI	0%	938	16	124	799
DE	0%	164	2	33	129
DC	0%	4	0	0	4

Crosswalk to State Name Examples:

Dry Acidic Oak Forest On Stratified Sand And Gravel (CT), Central Appalachian/Northern Piedmont Chestnut Oak Forest (DE), Mixed Oak Forest (MA), Mixed Oak - Heath Forest (MD), Oak - Pine Forest (ME), Dry Red Oak - White Pine Forest (NH), Upland Forests - Mixed Deciduous-Coniferous Forest (NJ), Allegheny Oak Forest (NY), Dry Oak - Heath Woodland (PA), Deciduous Forests - Deciduous Forest Oak/Heath (RI), Central Appalachian / Piedmont White Pine - Xeric Oak Forest (VA), Dry Oak Forest (VT), Oak/Heath And Oak/White Pine Forests (WV)

Description:

An oak or oak-pine forest of dry sites, characterized by a variable mixture of drought tolerant oaks (chestnut oak, white oak, red oak, black oak, scarlet oak) and pines (pitch, white, Virginia). It occurs broadly in the Central Appalachians and northern Piedmont ecoregions, most commonly as a large (to very large) patch habitat. It has a much more limited range in New England, where hickories may be present. Community structure ranges from open woodlands to closed forest. Heath shrubs are common in the understory; the herb layer is often sparse and lacks diversity. In the absence of fire this system may tend to succeed to hemlock and locally common hardwoods.

Ecological Setting and Natural Processes:

A habitat of dry rolling hills, high sunny slopes and ridgetops, where soils are often thin, well-drained, and nutrient-poor. Bedrock substrates are variable, and can influence herb diversity. Disturbance agents include fire, windthrow, and ice damage, and gypsy moths can wreak havoc in the oak overstory periodically.

Similar Habitat Types:

Drier than, and often found upslope from the Northeast Interior Dry-Mesic Oak Forest system. Drier and more oaky, and again upslope from the Appalachian (Hemlock-)Northern Hardwood system. A more moderate and less exposed habitat than Central Appalachian Pine-Oak Rocky Woodland, which most often occurs as a small patch within it.

Crosswalk to State Wildlife Action Plans:

Upland Forest - Dry Oak Forests (CT), Hardwood Forest - Chestnut oak forests (DC), Upland Forest (MA), Dry Oak-Pine Forests (MD), Deciduous and Mixed Forest (ME), Appalachian Oak Pine Forest (NH), Upland forests - mixed deciduous-coniferous forest (NJ), Oak-Pine Forest (NY), Deciduous/Mixed Forest (upland) (PA), Deciduous Forests - Deciduous Forest Oak/Heath (RI), Forest Habitat - Mixed Forest (VA), Oak-Pine-Northern Hardwood Forest - Dry Oak Forest (VT), Oak/Heath and Oak/White Pine Forests (WV)

Places to Visit this Habitat:

Savage River State Forest | MD
Delaware Water Gap | NJ
Bald Eagle State Forest | PA
George Washington and Jefferson National Forest | VA
Monongahela National Forest | WV

Associated Species: *Appendix lists scientific names*

BIRDS: black-and-white warbler, eastern wood-pewee, ovenbird, pine warbler, prairie warbler, scarlet tanager, summer tanager (south), eastern whip-poor-will, worm-eating warbler

MAMMALS: black bear, red-backed vole, short-tailed shrew, southern flying squirrel, white footed mouse

HERPTILES: black racer, northern redback salamander, redbelly snake, ringneck snake, ring-neck snake, spotted salamander

PLANTS: allegheny crowfoot (Ranunculus allegheniensis), chestnut oak (Quercus prinus), deerberry (Vaccinium stamineum), downy arrowwood (Viburnum rafinesquianum), hound's tongue (Cynoglossum boreale), mountain laurel (Kalmia latifolia), rattlesnake-weed (Hieracium venosum), scarlet oak (Quercus coccinea), spotted wintergreen (Chimaphila maculate)

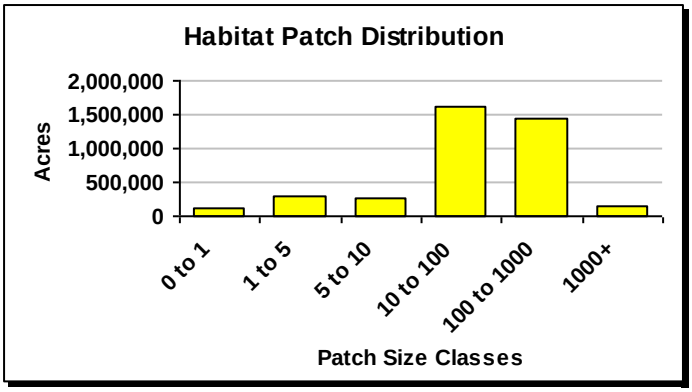
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: cerulean warbler, golden-winged warbler

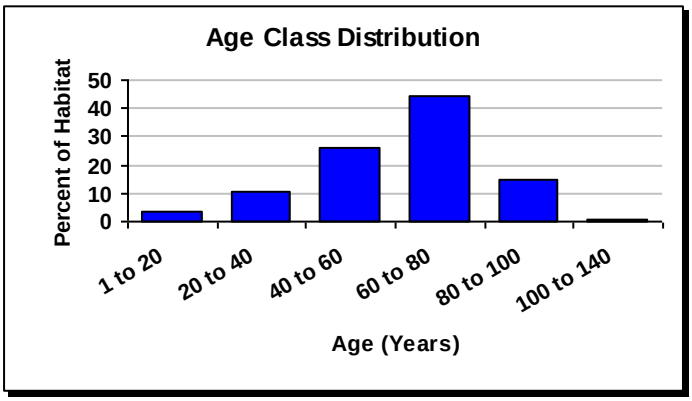
HERPTILES: black rat snake, five-lined skink, timber rattlesnake

INSECTS: New Jersey tea inchworm, orange sallow mothred-winged sallow moth, early hairstreak, red-winged sallow

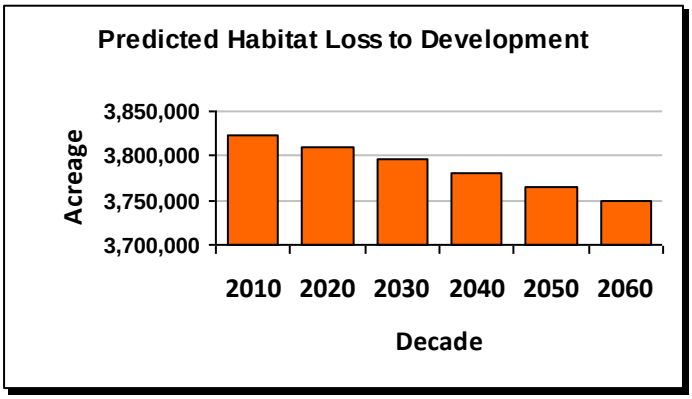
PLANTS: Kate's mountain clover (Trifolium virginicum), white alumroot (Heuchera alba), sword-leaved phlox (Phlox buckleyi), mountain parsley (Taenidia montana), climbing fumitory (Adlumia fungosa)



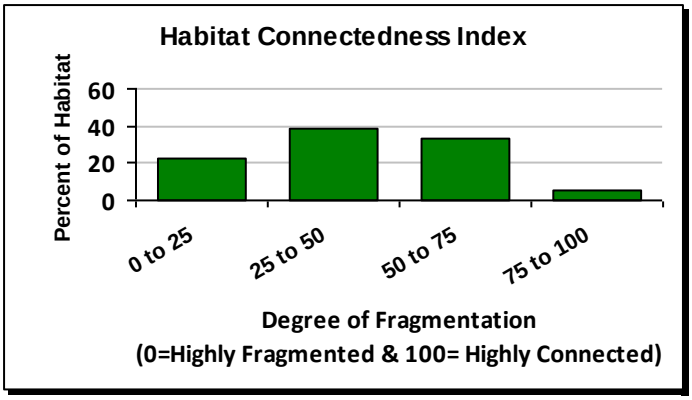
The average patch size for this habitat is 7 acres and the largest single patch is 4,519 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



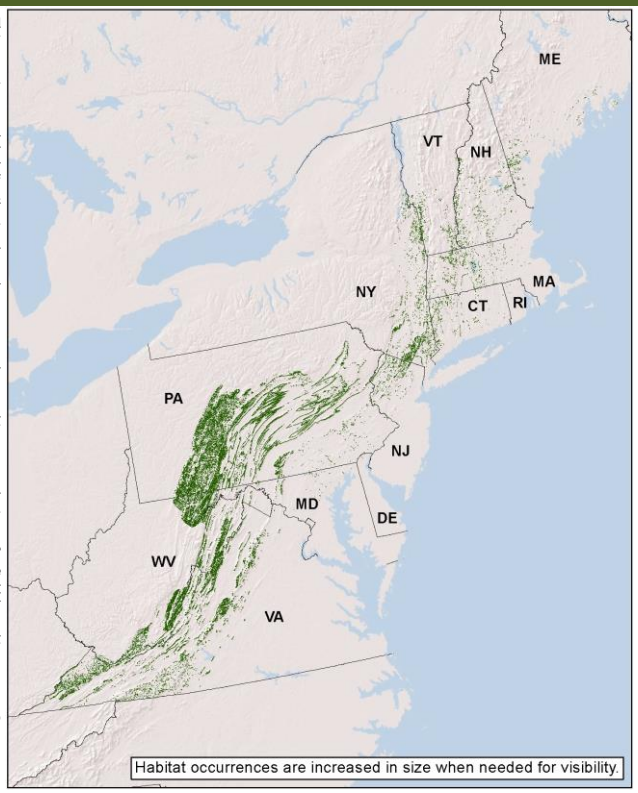
This chart shows the predicted loss of habitat over the next five decades (74,813 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1,496 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Central Appalachian Pine-Oak Rocky Woodland

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Elizabeth Thompson (Vermont Land Trust)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 566,276

Percent Conserved: 38.4%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
PA	55%	310,493	14,587	101,740	194,166
VA	17%	93,666	25,531	25,815	42,321
WV	12%	70,182	3,064	17,481	49,637
MD	5%	28,081	1,416	6,178	20,488
NY	4%	24,145	2,574	6,526	15,045
MA	2%	8,545	463	2,840	5,241
NJ	1%	8,243	3,245	1,440	3,558
NH	1%	7,739	286	1,353	6,099
VT	1%	6,188	192	377	5,619
CT	1%	4,918	653	957	3,309
ME	1%	4,009	321	233	3,455
RI	0%	38	0	5	33
DE	0%	24	1	10	14
DC	0%	4	0	0	4

Crosswalk to State Name Examples:

Subacidic Rocky Summit/Outcrop (CT), Ridgetop Pitch Pine/Scrub Oak (MA), Montane Pine - Oak Woodland (MD), Oak - Pine Woodland (ME), Appalachian Oak - Pine Rocky Ridge (NH), Ridgetop Pitch Pine-Scrub Oak Forest (NJ), Pitch Pine-Oak-Heath Rocky Summit (NY), Pitch Pine - Scrub Oak Woodland (PA), Central Appalachian Xeric Chestnut Oak - Virginia Pine Woodland (VA), Pitch Pine-Oak-Heath Rocky Summit (VT), Dry Rocky Pine/Oak Forests And Woodlands (WV)

Description:

A mixed forest or woodland of pitch pine and/or Virginia pine mixed with dry-site oaks (primarily scrub oak, scarlet oak, and chestnut oak). Red pine and shortleaf pine may also occur. Some areas have a fairly well-developed heath shrub layer; a graminoid herb layer dominated by Pennsylvania sedge, poverty grass, and common hairgrass may be more prominent in others. The vegetation is patchy, with woodland as well as open portions, or even sparse cover on dry rocky hilltops and outcrops.

Ecological Setting and Natural Processes:

This forest occurs as relatively small patches on exposed ridgetops, hilltops and outcrops, at elevations ranging up to about 4000 feet. The substrate rock is granitic or other acidic lithology, including traprock in New England. Conditions are dry, and soils are thin and nutrient-poor. This system experiences moderately intense fires naturally every 5 to 25 years; fire history largely determines the vegetation character of individual occurrences.

Similar Habitat Types:

Patches of this habitat are most often on exposed sites within larger occurrences of Central Appalachian Dry Oak-Pine Forest. Overlaps with Northern Appalachian-Acadian Rocky Heath Outcrop at the northern end of its range, but lacks spruce and some other northern species. Oakier than Southern Appalachian Montane Pine Forest and Woodland, and without table mountain pine.

Crosswalk to State Wildlife Action Plans:

Unique and Man-Made - Traprock Ridges (CT), Rocky Cliffs, Ridgetops, Talus Slopes, and Other Similar Habitats (MA), Early Successional Forests - Shrub-dominated natural communities (MD), Dry Woodlands and Barrens (ME), Talus Slopes and Rocky Ridges - Rocky Ridges (NH), Upland forests - mixed deciduous-coniferous forest (NJ), Oak-Pine Forest (NY), Deciduous/Mixed Forest (upland) (PA), Thicket/Shrub Habitats - Naturally occurring barrens (PA), Forest Habitat - Mixed Forest (VA), Oak-Pine-Northern Hardwood Forest - Pitch Pine-Oak-Heath Rocky Summit (VT), Dry Rocky Pine/Oak Forests and Woodlands (WV)

Places to Visit this Habitat:

Savage River State Forest | MD
Harriman State Park | NY
Bald Eagle State Forest | PA
George Washington and Jefferson National Forest | VA
Monongahela National Forest | WV

Associated Species: *Appendix lists scientific names*

BIRDS: black-and-white warbler, broad-winged hawk, ovenbird, pine warbler, prairie warbler, scarlet tanager, summer tanager (south), wood thrush, worm-eating warbler

MAMMALS: bobcat

HERPTILES: blue-spotted salamander, coal skink, black-bellied salamander, eastern box turtle, eastern hog-nosed snake, eastern rat snake, fence lizard, five-lined skink, four-toed salamander, marbled salamander, northern copperhead

PLANTS: ledge spike-moss (Selaginella rupestris), mountain laurel (Kalmia latifolia), mountain sandwort (Minuartia groenlandica), new jersey tea (Ceanothus americanus), northern blazingstar (Liatris scariosa), purple clematis (Clematis occidentalis), scarlet oak (Quercus coccinea, scrub oak (Quercus ilicifolia), yellow false foxglove (Aureolaria pedicularia)

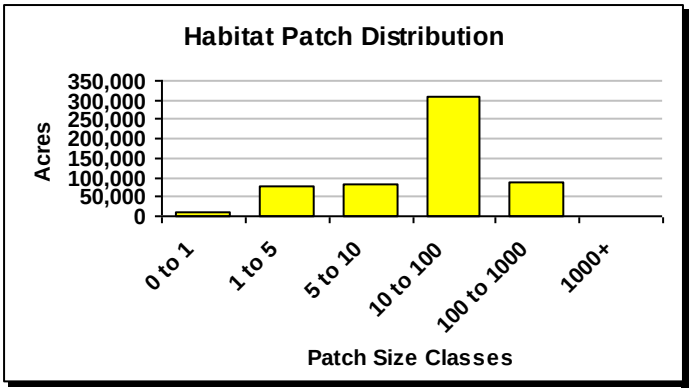
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: cerulean warbler, peregrine falcon, eastern whip-poor-will

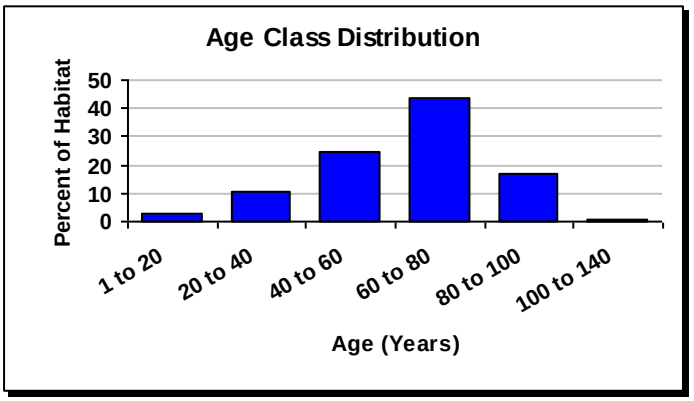
MAMMALS: allegheny woodrat, appalachian cottontail, eastern small-footed myotis, kittatiny red-backed vole, long-tailed shrew, northern myotis, southern flying squirrel

HERPTILES: big levels salamander, green salamander, jefferson salamander, timber rattlesnake, white-spotted salamander

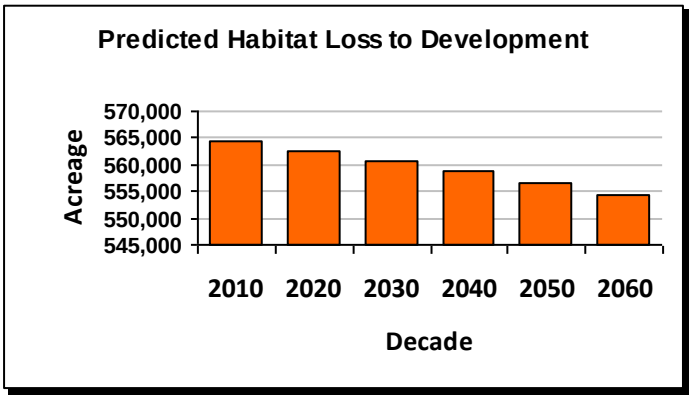
INSECTS: aureolaria seed borer, barrens chaetaglaea, barrens itame, barrens xylotype, blueberry sallow, edward's hairstreak, Gerhard's underwing moth, northern barrens tiger beetle, oblique zale, pine-devil moth, pink sallow, red-winged sallow, similar underwing, sleepy duskywing, southern pine sphinx, the buckmoth



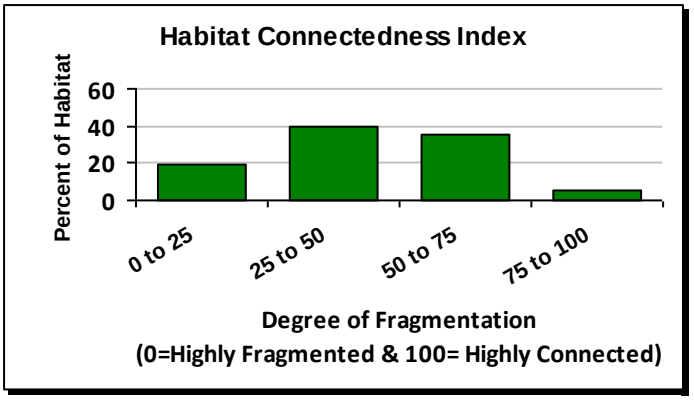
The average patch size for this habitat is 7 acres and the largest single patch is 1,202 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



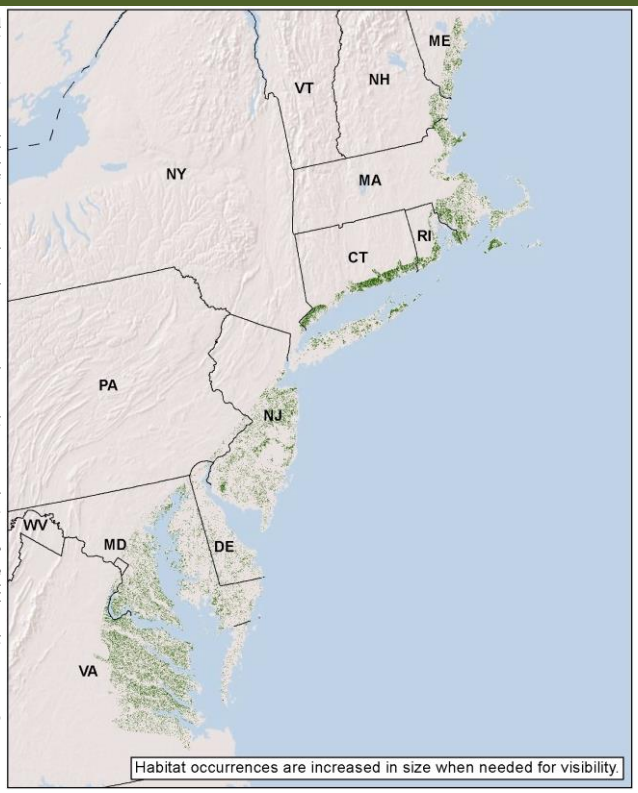
This chart shows the predicted loss of habitat over the next five decades (9,984 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 200 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Hardwood Forest

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Robert Coxe (Delaware Species Conservation & Research Program)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA

Total Habitat Acreage: 2,145,627

Percent Conserved: 16.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
VA	30%	640,887	6,989	58,455	575,442
MD	18%	390,546	15,217	63,378	311,950
NJ	14%	307,871	33,545	21,502	252,824
MA	12%	263,921	7,480	56,949	199,492
CT	9%	193,794	10,721	15,363	167,709
NY	4%	87,825	4,814	9,065	73,946
ME	4%	76,298	1,516	4,818	69,964
DE	3%	72,016	2,951	10,883	58,182
RI	3%	65,305	5,315	6,166	53,825
NH	2%	35,847	2,181	5,113	28,553
PA	0%	10,632	478	1,637	8,517
DC	0%	687	0	2	684

Crosswalk to State Name Examples:

Upland Forest - Dry Oak Forests (CT), North Atlantic Coastal Oak-Holly Forest (DE), Coastal Forest/Woodland (MA), Mesic Mixed Hardwood Forest (MD), Deciduous And Mixed Forest (ME), Appalachian Oak Pine Forest (NH), Mesic Coastal Plain Mixed Oak Forest (NJ), Coastal Oak-Beech Forest (NY), Sweet Gum - Oak Coastal Plain Forest (PA), Mixed Oak – American Holly Forest (RI), Coastal Plain Mixed Oak / Heath Forest (VA)

Description:

A hardwood forest largely dominated by oaks, often mixed with pine. White, red, chestnut, black, and scarlet oaks are typical, and american holly is sometimes present. Sassafras, birch, aspen, and hazelnut are common associates in earlier-successional areas. In the northern half of the range, conditions can grade to dry-mesic, reflected in the local abundance of beech. A heath shrub layer is common; the herbaceous layer is sparse. In southern-more occurrences in Maryland or Virginia, pines (shortleaf, Virginia, and particularly loblolly) may be important, even strongly dominant canopy trees. The pine component is usually an indication of past human disturbance.

Ecological Setting and Natural Processes:

These forests occur on sandy to gravelly glacial deposits and outwash from Long Island north, and on deep, acidic, coarse-textured soils on the flat to rolling landscapes of the coastal plain to the south. A thick duff layer and dry conditions make this system subject to periodic fires, which in turn encourage oak regeneration.

Similar Habitat Types:

In the northern 2/3 of its range, this system shares dry sandy coastal plain landscapes with Pitch Pine Barrens. From southern New Jersey south, it forms a mosaic with Southern Atlantic Coastal Plain Mesic Hardwood Forest, which occupies lower, moister positions in a stream-dissected landscape.

Crosswalk to State Wildlife Action Plans:

Upland Forest - Dry Oak Forests (CT), Hardwood Forest - Chestnut oak forests (DC), Coastal Plain Upland Forests (DE), Upland Forest (MA), Loblolly Pine – Oak Forests (MD), Deciduous and Mixed Forest (ME), Appalachian Oak Pine Forest (NH), Upland forests - deciduous forest (NJ), Coastal Hardwoods (NY), Deciduous/Mixed Forest (upland) (PA), Deciduous Forests - Deciduous Forest Oak/Holly (RI), Forest Habitat - Deciduous Forest (VA)

Places to Visit this Habitat:

Nehantic State Forest | CT
Redden State Forest | DE
Great Bay National Wildlife Refuge | NH
Connetquot River State Park Preserve | NY
James River National Wildlife Refuge | VA

Associated Species: *Appendix lists scientific names*

BIRDS: barred owl, brown-headed nuthatch (south), black-and-white warbler, carolina wren, eastern towhee, great crested flycatcher, ovenbird, pine warbler, prairie warbler, scarlet tanager, veery (north), wood thrush

MAMMALS: masked shrew, meadow vole, red-backed vole, southern flying squirrel, white footed mice, woodland jumping mouse

HERPTILES: mole salamander, spotted turtle

PLANTS: Lion's-foot (Prenanthes serpentaria), Northern Blazingstar (Liatris scariosa), Redtop Panicgrass (Panicum rigidulum), Few-flower Nutrush (Scleria pauciflora), Eastern Silvery Aster (Symphyotrichum concolor), Purple Needlegrass (Aristida purpurascens), Post Oak (Quercus stellata), Pale Green Orchid (Platanthera flava), Large Whorled Pogonia (Isotria verticillata)

Species of Concern (G1-G4): *Appendix lists scientific names*

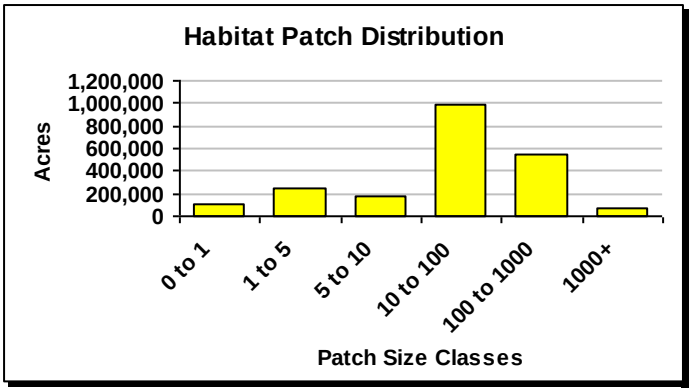
BIRDS: yellow-throated warbler

MAMMALS: delmarva fox squirrel

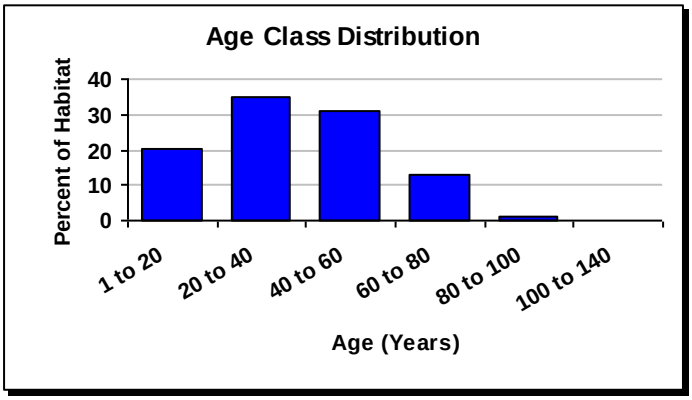
HERPTILES: eastern box turtle, green snake, marbled salamander

INSECTS: frosted elfin

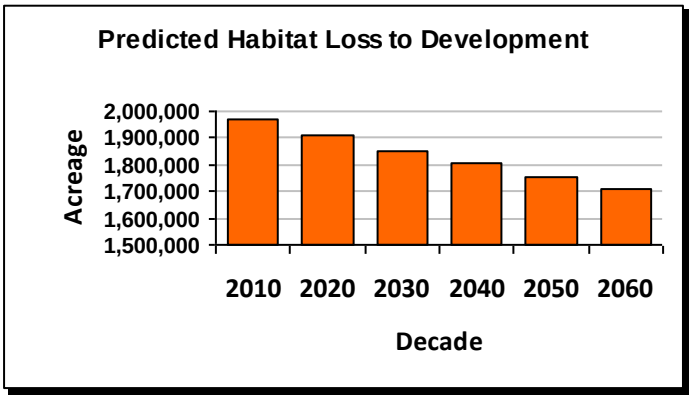
PLANTS: Featherfoil (Hottonia inflata), Sandplain Flax (Linum intercursum), Bushy Rockrose (Helianthemum dumosum), Swamp-pink (Helonias bullata), Rose Coreopsis (Coreopsis rosea), Cranefly Orchid (Tipularia discolor), Allegheny Mountains Crowfoot (Ranunculus allegheniensis), Small Whorled Pogonia (Isotria medeoloides), Creeping St. John's-wort (Hypericum adpressum), Long-beaked Baldrush (Rhynchospora scirpoides), Tall Bushclover (Lespedeza stuevei)



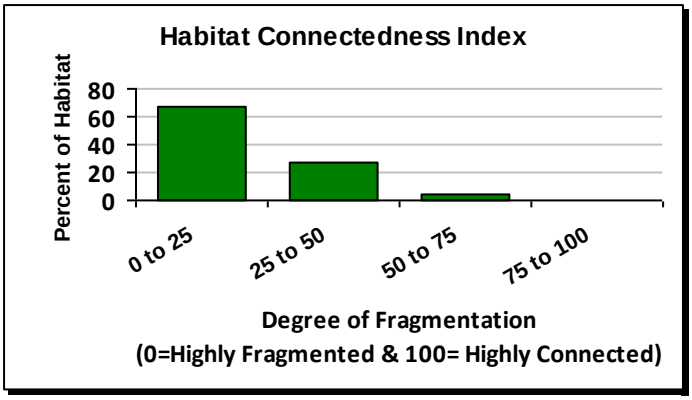
The average patch size for this habitat is 4 acres and the largest single patch is 3,742 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



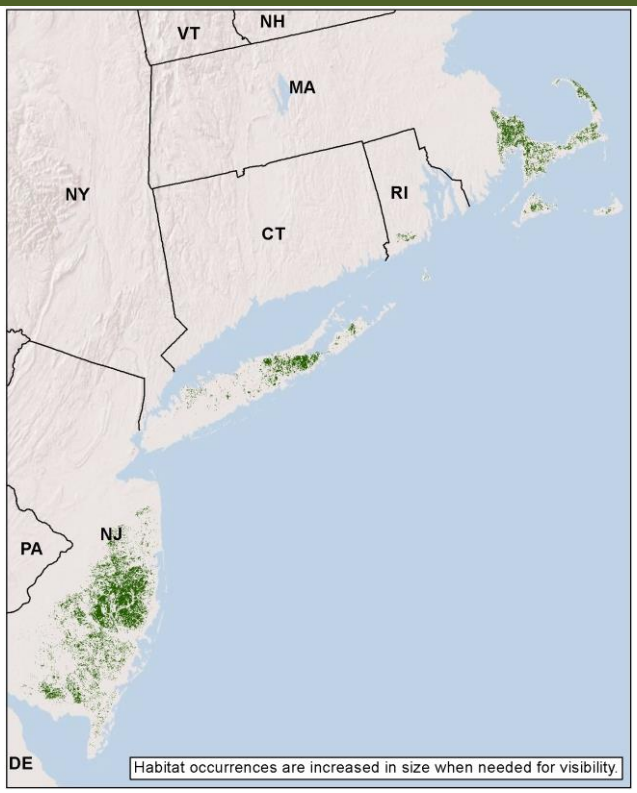
This chart shows the predicted loss of habitat over the next five decades (261,920 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 5,238 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Pitch Pine Barrens

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Kathleen Strakosch Walz (New Jersey Natural Heritage Program)

State Distribution: MA, NJ, NY, RI

Total Habitat Acreage: 491,551

Percent Conserved: 46.8%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NJ	66%	326,469	82,234	86,207	158,029
MA	21%	101,284	8,984	36,076	56,224
NY	12%	60,016	7,303	8,204	44,509
RI	1%	3,782	656	284	2,842

Crosswalk to State Name Examples:

Pitch Pine-Oak Forest/Woodland (MA), Upland Forests - Pitch Pine-Oak Forest (NJ), Pitch Pine-Scrub Oak Barrens (NY), Pitch Pine Woodland/Barrens (RI)

Description:

A dry, fire-adapted forest with a variable canopy of pitch pine, a tall-shrub layer dominated by scrub oak, and a low-shrub layer characterized by blueberry and other heaths. Other oaks (scarlet, black, chestnut, white) are also sometimes present. Composition and structure vary with fire frequency. In general, tree oaks are more prevalent in those stands having a longer fire-return interval, while fire frequencies of eight to ten years foster the growth of "pine plains," dwarf pine stands one meter in height. Dwarf-shrubs such as lowbush blueberry, bearberry and golden-heather typify the field layer of pine plains. Scrub oak stands may occur without pine cover, particularly in low-lying areas where cold-air drainage inhibits pine growth.

Ecological Setting and Natural Processes:

This system favors low-nutrient, deep sandy soils in dry, flat settings on the coastal plain. Historically large occurrences in southeastern Massachusetts and on Long Island have been largely degraded or destroyed, but sizable and relatively intact examples still exist in New Jersey. Occasional small barrens peripheral to the main distribution occur from southern Maine to Maryland.

Similar Habitat Types:

On the coastal plain of New Jersey, the pitch pine lowland system often occurs immediately adjacent to the upland pitch pine barrens system, where the water table is close to the surface. These upland pitch pine barrens are similar in structure and composition to the Northeastern Interior Pine Barrens system, but each system has species not shared by the other.

Crosswalk to State Wildlife Action Plans:

Pitch Pine/Scrub Oak (MA), Upland forests - pitch pine-oak forest (NJ), Coastal Coniferous Barrens (NY), Pitch Pine Communities - Evergreen Forest Pitch Pine/Scrub Oak Barren (RI)

Places to Visit this Habitat:

Cape Cod National Seashore | MA
Myles Standish State Forest | MA
Brendan T. Byrne State Forest | NJ
Wharton State Forest | NJ
Rocky Point Natural Resource Management Area | NY

Associated Species: *Appendix lists scientific names*

BIRDS: brown thrasher, chipping sparrow, common yellowthroat, eastern towhee, field sparrow, ovenbird, pine warbler, prairie warbler, eastern whip-poor-will

HERPTILES: box turtle, eastern kingsnake, tiger salamander, northern pine snake, northern black racer, northern red-bellied cooter, red cornsnake, timber rattlesnake

INSECTS: comet darner, common sanddragon, cow path tiger beetle, pine woods underwing, spiny oakworm moth, The buckmoth

PLANTS: Few-flower Nutrush (Scleria pauciflora), Post Oak (Quercus stellata), Little Ladies'-tresses (Spiranthes tuberosa), Northern Blazingstar (Liatris scariosa var. novae-angliae), Butterfly Milkweed (Asclepias tuberosa), Purple Needlegrass (Aristida purpurascens), Nuttall's Milkwort (Polygala nuttallii)

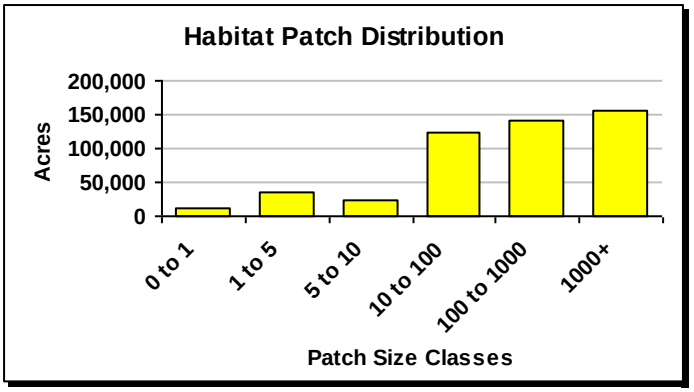
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: long-eared owl (winter)

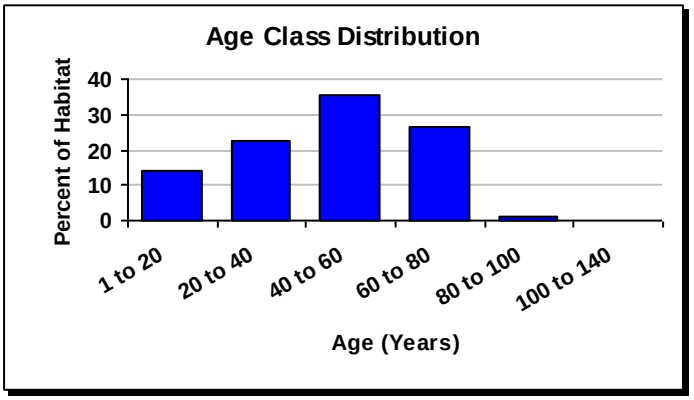
HERPTILES: pine barrens treefrog

INSECTS: barrens dagger moth, Barrens itame, Blueberry gray, Coastal barrens buckmoth, Frosted elfin, Karner blue butterfly, Pine barren bluet, Pine barren lycia, Pine barren underwing, Pine barren zale, Precious underwing

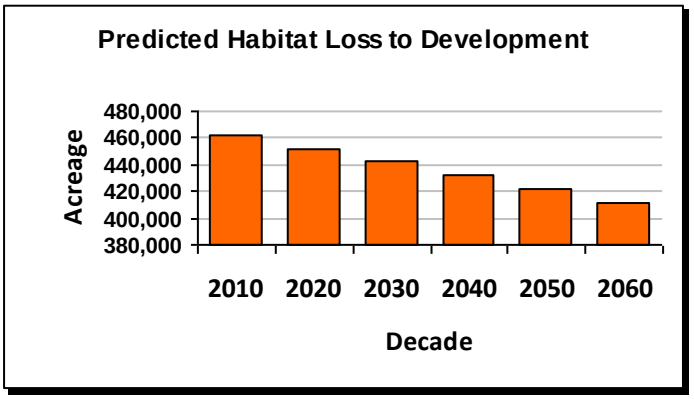
PLANTS: bicknell's hawthorn (Crataegus bicknellii), broom crowberry (Corema conradii), eastern silvery aster (Symphyotrichum concolor), pine barren gentian (Gentiana autumnalis), pine barrens boneset (Eupatorium resinosum), plymouth gentian (Sabatia kennedyana), sandplain flax (Linum intercursum), stiff tick-trefoil (Desmodium obtusum), tall bushclover (Lespedeza stuevei), white-bracted boneset (Eupatorium leucolepis)



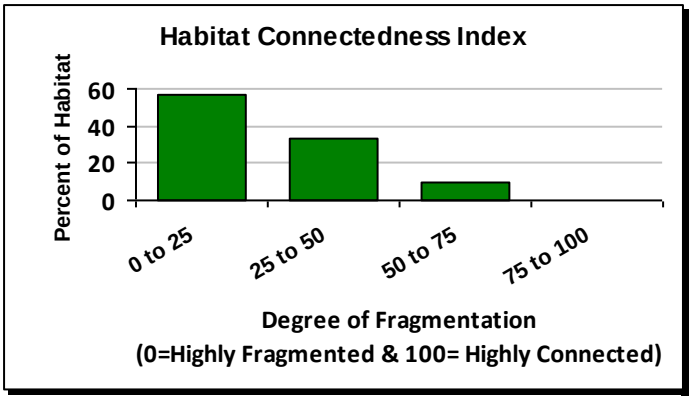
The average patch size for this habitat is 7 acres and the largest single patch is 6,876 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



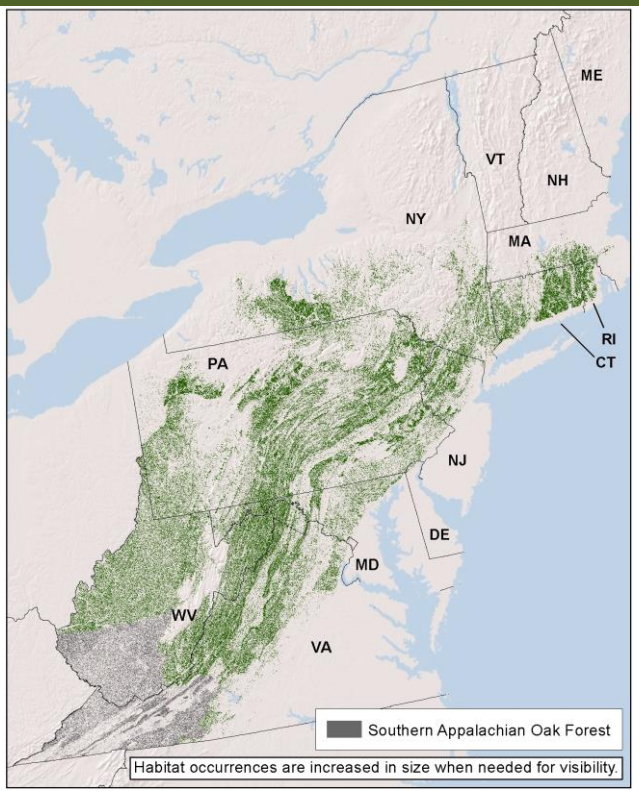
This chart shows the predicted loss of habitat over the next five decades (50,993 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1,020 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Northeastern Interior Dry-Mesic Oak Forest

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Gary P. Fleming (Virginia Department of Conservation & Recreation Natural Heritage Program)

State Distribution: CT, DC, DE, MA, MD, NJ, NY, PA, RI, VA, WV

Total Habitat Acreage: 17,032,701

Percent Conserved: 19.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
PA	37%	6,264,459	220,896	1,188,152	4,855,411
WV	22%	3,732,111	40,981	289,214	3,401,916
VA	15%	2,588,383	299,870	452,215	1,836,298
NY	11%	1,811,589	19,982	155,854	1,635,753
CT	6%	965,419	38,892	123,495	803,032
MD	4%	678,802	60,757	111,810	506,235
NJ	3%	559,819	117,260	47,837	394,722
MA	1%	242,876	5,771	34,365	202,741
RI	1%	179,468	8,231	29,188	142,049
DE	0%	8,229	59	2,573	5,596
DC	0%	1,546	0	0	1,546

Crosswalk to State Name Examples:

Dry Subacidic Forest (CT), Central Appalachian Dry-Mesic Chestnut Oak-Northern Red Oak Forest (DE), Dry, Rich Acidic Oak Forest (MA), Acidic Oak - Hickory Forest (MD), Dry-Mesic Inland Mixed Oak Forest (NJ), Appalachian Oak-Hickory Forest (NY), Dry Oak-Heath Forest (PA), Black Oak-Scarlet Oak/Heath Forest (RI), Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest (VA), Oak/Hickory And Dry/Mesic Oak Forest (WV)

Description:

An oak-dominated, mostly closed canopy forest that occurs as a matrix (dominant) type through the central part of our region. Oak species characteristic of dry to mesic conditions (e.g., red, white, black, and scarlet oak) and hickories are dominant in mature stands. Chestnut oak may be present but is generally less important than other oak species. Red maple, black birch, and yellow birch may be common associates. Heath shrubs are often present but not well developed. Local areas of limy bedrock, or colluvial pockets, may support forests that reflect the richer soils. With a long history of human habitation, many of the forests are mid-successional, in which pines (typically Virginia or white) or tuliptree may be codominant or dominant.

Ecological Setting and Natural Processes:

Moderate moisture and heat loading are characteristic for this oaky system. It occurs at low to mid elevations, where the topography is flat to gently rolling, occasionally steep. Substrate bedrock and soils are commonly but not always acidic. Chestnut was formerly a prominent tree in these forests.

Similar Habitat Types:

Drier oak-pine systems (Central Appalachian Dry Oak-Pine Forest, CA Pine-Oak Rocky Woodland) are often upslope; mesic covey or wetland systems may be embedded in low landscape positions. A split along purely geographic lines separates this system from similar Southern Appalachian Oak Forests in southern WV, in lieu of more natural ecological or floristic distinctions.

Crosswalk to State Wildlife Action Plans:

Hardwood Forest - Mixed oak-beech forests (DC), Mesic Deciduous Forests (MD), Upland forests - deciduous forest (NJ), Oak Forest (NY), Deciduous/Mixed Forest (upland) (PA), Forest Habitat - Deciduous Forest (VA), Oak/Hickory and Dry/Mesic Oak Forest (WV)

Places to Visit this Habitat:

Green Ridge State Forest | MD
Delaware Water Gap | NJ
Sproul State Forest | PA
George Washington and Jefferson National Forest | VA
Monongahela National Forest | WV

Associated Species: *Appendix lists scientific names*

BIRDS: black-and-white warbler, broad-winged hawk, cerulean warbler, eastern wood-pewee, great crested flycatcher, louisiana waterthrush, ovenbird, red-bellied woodpecker, scarlet tanager, summer tanager (south), eastern whip-poor-will, wood thrush, veery, worm-eating warbler

MAMMALS: black bear, red-backed vole, short-tailed shrew, white footed mouse

HERPTILES: northern redback salamander, ringneck snake, redbelly snake, spotted salamander

PLANTS: American wintergreen (Pyrola americana), basil beebalm (Monarda clinopodia), blunt-lobe woodsia (Woodsia obtusa), bottlebrush grass (Elymus hystrix), common alexanders (Zizia aurea), early buttercup (Ranunculus fascicularis), shinleaf (Pyrola elliptica), sicklepod (Arabis canadensis)

Species of Concern (G1-G4): *Appendix lists scientific names*

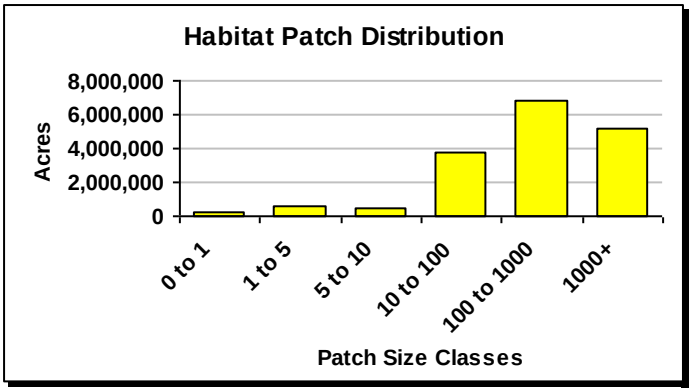
BIRDS: golden-winged warbler

MAMMALS: eastern small-footed myotis, kittatiny red-backed vole, virginia big-eared bat

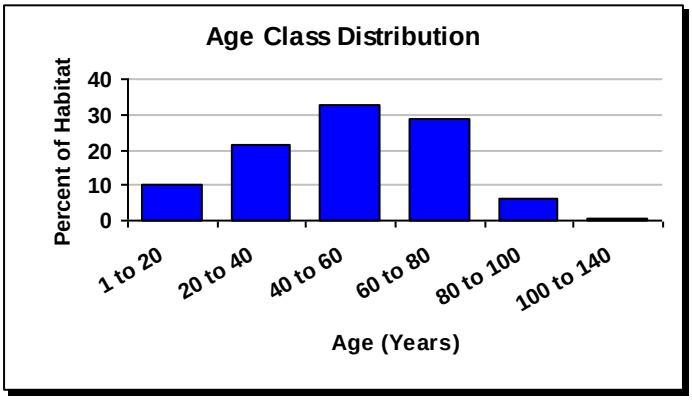
HERPTILES: big levels salamander, milk snake, peaks of otter salamander

INSECTS: American snout, Appalachian grizzled skipper, underwing moth (Catocala retecta), clouded underwing, dark stoneroot borer moth, flypoison borer moth, habilis underwing, northern metalmark, mournful underwing, yellow stoneroot borer moth

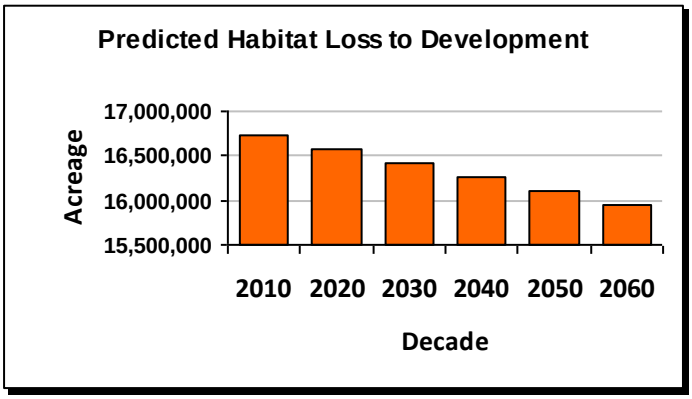
PLANTS: climbing fern (Lygodium palmatum), goldenseal (Hydrastis canadensis),small whorled pogonia (Isotria medeoloides)



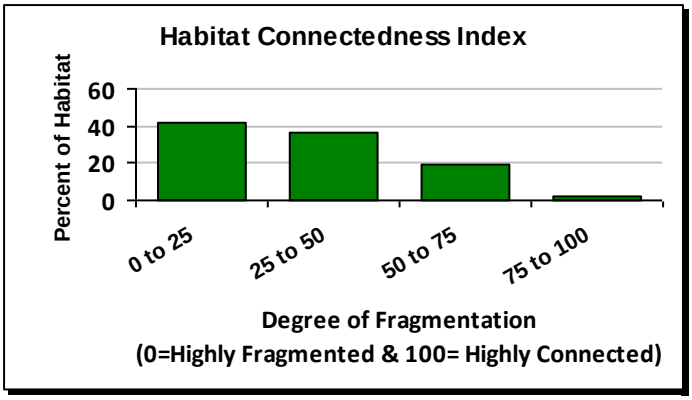
The average patch size for this habitat is 13 acres and the largest single patch is 20,946 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



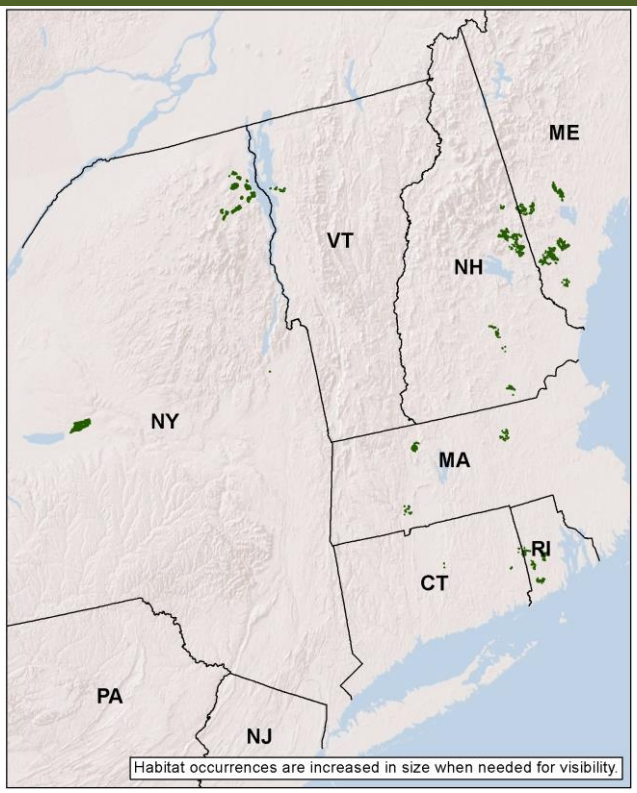
This chart shows the predicted loss of habitat over the next five decades (783,733 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 15,675 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Northeastern Interior Pine Barrens

Macrogroup: Central Oak-Pine



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Jennifer Case (The Nature Conservancy, Pennsylvania)

State Distribution: CT, MA, ME, NH, NY, RI, VT

Total Habitat Acreage: 42,742

Percent Conserved: 28.4%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	54%	22,911	2,732	1,641	18,538
ME	21%	9,151	762	2,573	5,816
NH	13%	5,722	703	1,266	3,753
RI	5%	2,228	9	1,523	696
MA	5%	2,049	0	762	1,287
VT	1%	534	0	79	454
CT	0%	147	43	38	65

Crosswalk to State Name Examples:

Upland Woodland And Shrub - Pitch Pine/Scrub Oak Woodlands (CT), Pitch-Pine Scrub Oak Community (MA), Pitch Pine - Scrub Oak Barren (ME), Pitch Pine - Scrub Oak Woodland (NH), Pitch Pine-Heath Barrens (NY), Pitch Pine Communities - Evergreen Forest Pitch Pine-Oak Barren (RI), Pine-Oak-Heath Sandplain Forest (VT)

Description:

A fire-adapted system of Northeast glacial sandplains, typically an open woodland but sometimes including patches of closed-canopy forest and herbaceous openings. Pitch pine is the usual dominant; red oak, white pine, and gray birch are common associates. A tall-shrub layer of scrub oak or dwarf chinkapin oak is characteristic, as is a low-shrub layer of heath and sweetfern. Small changes in elevation create pockets with saturated soil, where shrubs such as hazelnut, buttonbush, highbush blueberry, and alder form dense cover. Grassy areas dominated by little bluestem, native lupine, and other forbs, provide habitat for rare invertebrates like the frosted elfin. Black racer and eastern ribbon snake are associated with this habitat.

Ecological Setting and Natural Processes:

Occurs on outwash plains, stabilized sand dunes, and glacial till. Soils are coarse-textured, acidic, well-drained to xeric, and low in nutrients. These barrens always have a history of recurrent fires, and fire is required to maintain them. Favorable sites tend to be ideal for development, and because of this and the suppression of fire, high quality remnant patches of any size are rare. Largest remaining patches are a few hundred to about 1000 acres.

Similar Habitat Types:

With similar ecological dynamics, this system could be regarded as an inland version of the North Atlantic Coastal Plain Pitch Pine Barrens.

Crosswalk to State Wildlife Action Plans:

Upland Woodland and Shrub - Pitch Pine/Scrub Oak Woodlands (CT), Pitch Pine/Scrub Oak (MA), Dry Woodlands and Barrens (ME), Pine Barrens (NH), Pine Barrens (NY), Thicket/Shrub Habitats - Naturally occurring barrens (PA), Pitch Pine Communities - Evergreen Forest Pitch Pine-Oak Barren (RI), Oak-Pine-Northern Hardwood Forest - Pine-Oak-Heath Sandplain Forest (VT)

Places to Visit this Habitat:

Waterboro Barrens Preserve | ME
White Lake State Park | NH
Macomb State Forest | NY
Rome Sand Plains Preserve | NY
Arcadia Management Area | RI

Associated Species: *Appendix lists scientific names*

BIRDS: american woodcock, blue jay, common nighthawk, common yellowthroat, eastern towhee, field sparrow, pileated woodpecker, pine warbler, prairie warbler, ruffed grouse, whip-poor-will

HERPTILES: blanding's turtle, eastern box turtle, eastern ribbonsnake, northern black racer

INSECTS: big sand tiger beetle (Cicindela formosa), inland barrens buckmoth (Hemileuca maia), midland clubtail (Gomphus fraternus), pine woods underwing (Catocala sp.), similar underwing (Catocala similis), sleepy duskywing (Erynnis brizo)

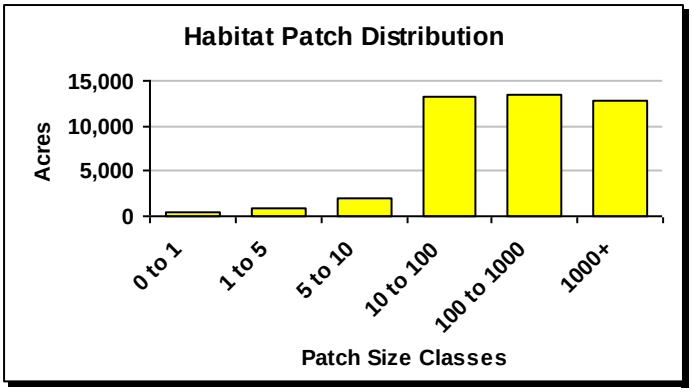
PLANTS: Canada frostweed (Helianthemum canadense), hairy lettuce (Lactuca hirsuta), large whorled pogonia (Isotria verticillata, plains frostweed (Helianthemum bicknellii), racemed milkwort (Polygala polygama), Wild lupine (Lupinus perennis)

Species of Concern (G1-G4): *Appendix lists scientific names*

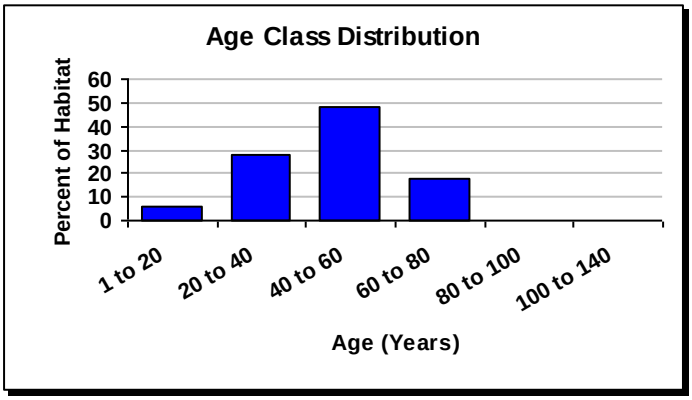
BIRDS: whip-poor-will

INSECTS: barrens daggermoth, barrens metarranthis moth, blueberry sallow, chain dot geometer, coastal barrens buckmoth, coastal heathland cutworm, Edward's hairstreak, Gerhard's underwing, imperial moth, melsheimer's sack bearer, noctuid moth, oblique zale, pine barrens itame, pine barrens lycia, pine barrens zale, pine barrens zanclognatha, pine pinion, pine-devil moth, pink sallow, similar underwing, southern pine sphinx, spiny oakworm, the buckmoth, twilight moth

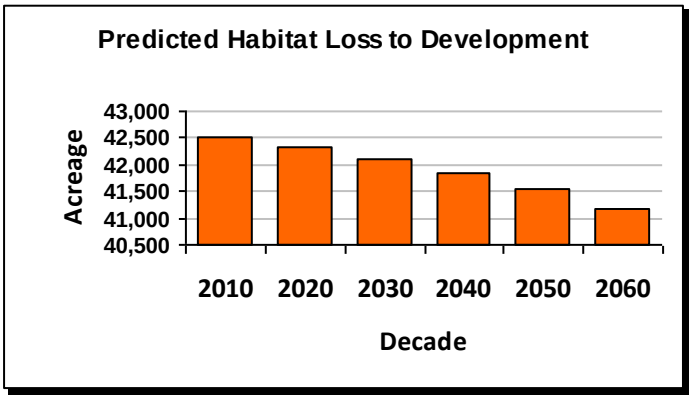
PLANTS: low bindweed (Calystegia spithamaea), broom crowberry (Corema conradii)



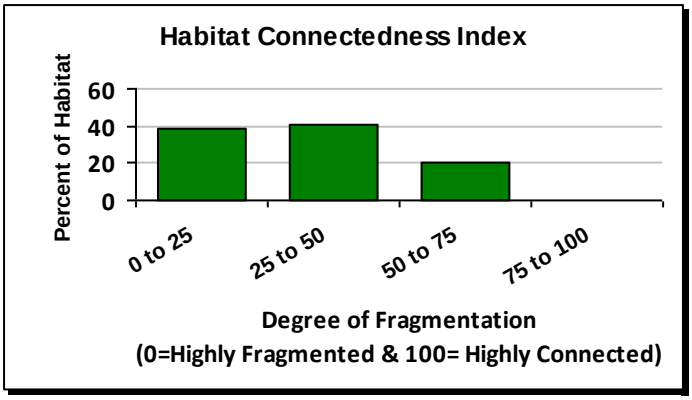
The average patch size for this habitat is 14 acres and the largest single patch is 1,247 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



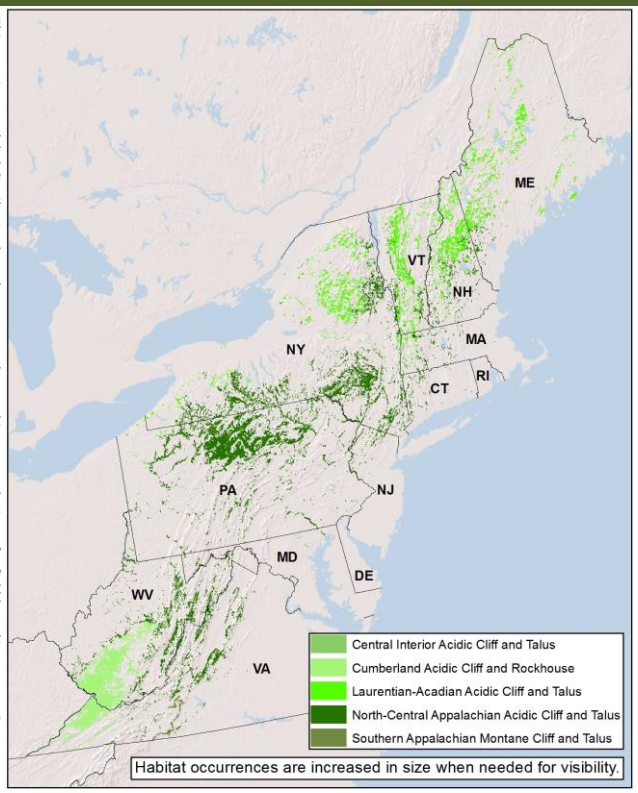
This chart shows the predicted loss of habitat over the next five decades (1,328 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 27 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Acidic Cliff and Talus

Macrogroup: Cliff and Talus



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

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State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 561,802

Percent Conserved: 48.2%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
PA	36%	204,775	28,707	101,430	74,638
NY	19%	107,441	35,533	15,398	56,510
WV	16%	90,419	3,952	8,344	78,122
VA	8%	43,020	6,885	7,542	28,592
NH	6%	35,115	17,793	7,648	9,674
ME	6%	35,028	14,019	4,641	16,368
VT	6%	34,675	6,169	7,047	21,459
MA	1%	6,149	1,715	1,313	3,121
NJ	0%	2,675	1,324	531	820
CT	0%	2,061	300	457	1,303
MD	0%	437	72	180	185
DE	0%	4	0	0	4
RI	0%	3	0	0	3
DC	0%	1	0	0	1

Crosswalk to State Name Examples:

Acidic Cliffs/Talus (CT), Acidic Rock Cliff Community (MA), Acidic Cliff And Bluff (MD), Acidic Cliff - Gorge/Spruce Talus Woodland (ME), Boreal/Temperate Acidic Cliff (NH), Silicaceous Rock Outcrop Community (NJ), Cliff Community/Acidic Talus Woodland (NY), Birch (Black-Gum) Rocky Slope Woodland (PA), Central Appalachian / Piedmont Acidic Cliff (VA), Boreal/Temperate Acidic Cliff (VT), Rock Outcrops/Cliffs/Talus (WV)

Description:

A sparsely vegetated cliff or talus slope formed on granitic, sandstone, or other acidic bedrock. The lack of soil, highly acidic bedrock, and constant erosion, limits the vegetation to mosses, lichens, and herbs growing on bare rock or crevices, and to sparse trees and shrubs rooted in deeper soil pockets. Lichen cover may be extensive. In the Central Appalachians, red-cedar trees, poison ivy vines and rock polypody ferns are characteristic. Birch or spruce replaces red cedar in the north, where a shrubland of heaths and reindeer lichen may develop where cold air accumulates at the sheltered bottom of slopes. Areas of concentrated seepage are sometimes present. In the Cumberland region, a mosaic of cavelike "rockhouses" and associated sandstone box canyons are typical.

Ecological Setting and Natural Processes:

Landforms in this system are associated with steeper mountains and hills, river bluffs, and gorges. In some cases this system may take the form of upper-slope boulderfields without adjacent cliffs, where talus forms from freeze/thaw action on the bedrock. This system is prone to harsh climatic conditions; frequent disturbances include drought stress and wind and storm damage. Mass movement of rocks can also reset the ecological clock.

Similar Habitat Types:

Cliff and talus systems have also been modeled for those steep landforms on other (calcareous and circumneutral) lithologies.

Crosswalk to State Wildlife Action Plans:

Unique and Man-Made - Traprock Ridges (CT), Rocky Cliffs, Ridgetops, Talus Slopes, and Other Similar Habitats (MA), Rock Outcrops and Cliffs (MD), Cliff Face and Rocky Outcrops (ME), Cliffs (NH), Cliff and Talus (NY), Cliff and Talus (NY), Rock Habitats (PA), Barren Habitat - Balds (VA), Cliffs and Talus Slopes - Boreal Acidic Cliff (VT), Cliffs and Talus Slopes - Open Talus (VT), Cliffs and Talus Slopes - Temperate Acidic Cliff (VT), Rock Outcrops/Cliffs/Talus (WV)

Places to Visit this Habitat:

Baxter State Park | ME
White Mountain National Forest | NH
Slide Mountain | NY
Elk State Forest | PA
Monongahela National Forest | WV

Associated Species: *Appendix lists scientific names*

BIRDS: golden eagle, common raven, turkey vulture

MAMMALS: bobcat, eastern pipistrelle, porcupine

HERPTILES: broad-headed skink, eastern wormsnake, fence lizard, five-lined skink

PLANTS: boreal stitchwort (minuartia rubella), Carolina leaf-flower (phyllanthus caroliniensis), common butterwort (pinguicula vulgaris), fragrant cliff woodfern (dryopteris fragrans), Goldie's woodfern (dryopteris goldiana) hoary draba (draba cana), robbins' milkvetch (astragalus robbinsii var. minor), rock sandwort (minuartia stricta), small-flower bittercress (cardamine parviflora), smooth yellow false foxglove (aureolaria flava), summer grape (vitis aestivalis var. bicolor), white mountain saxifrage (saxifraga paniculata)

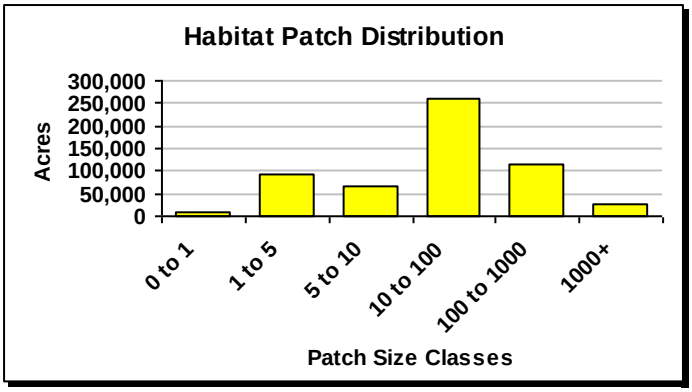
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: peregrine falcon

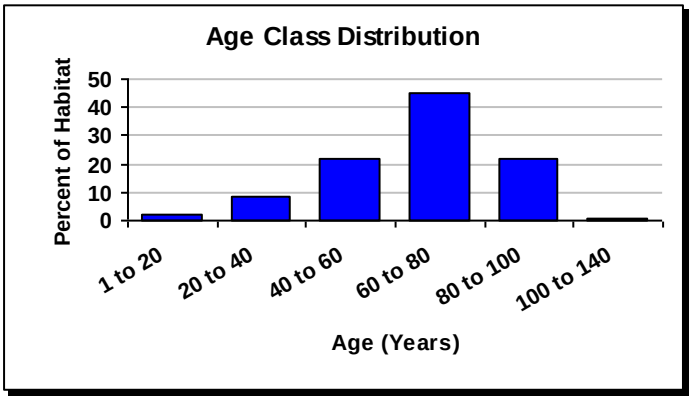
MAMMALS: alleghenny woodrat, rock vole

HERPTILES: northern coppperhead, timber rattlesnake

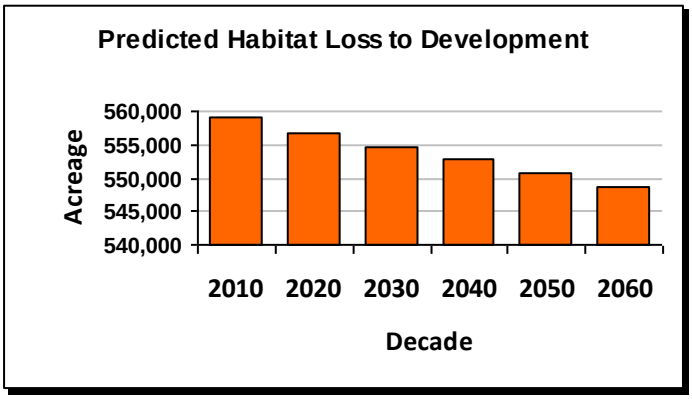
PLANTS: green spleenwort (Asplenium trichomanes-ramosum), Alabama lipfern (Cheilanthes alabamensis), silverling (Paronychia argyrocoma)



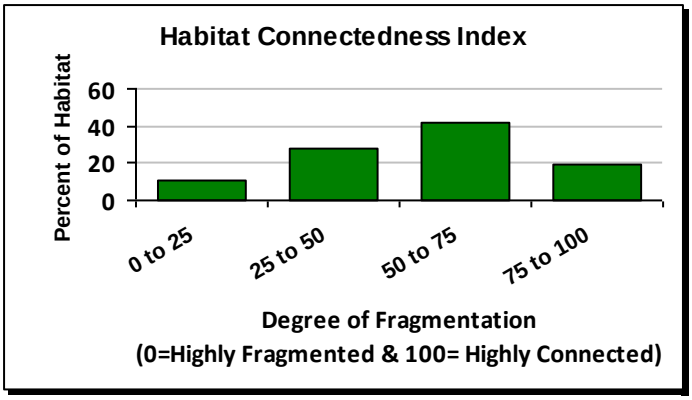
The average patch size for this habitat is 7 acres and the largest single patch is 2,038 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



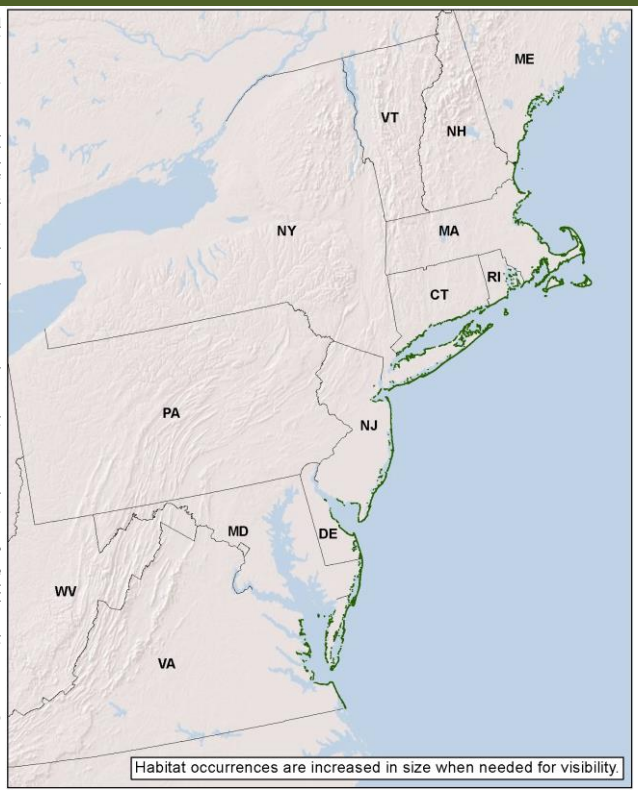
This chart shows the predicted loss of habitat over the next five decades (10,430 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 209 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Atlantic Coastal Plain Beach and Dune

Macrogroup: Coastal Grassland & Shrubland



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Kathleen Strakosch Walz (New Jersey Natural Heritage Program)

State Distribution: CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA

Total Habitat Acreage: 96,690

Percent Conserved: 37.5%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
MA	37%	35,602	9,686	4,776	21,140
NY	22%	20,888	2,172	3,313	15,403
VA	11%	10,964	4,785	1,702	4,477
NJ	10%	9,985	3,128	57	6,800
ME	5%	4,443	355	109	3,979
DE	4%	4,074	170	1,848	2,056
RI	4%	3,762	357	179	3,226
MD	3%	3,183	2,334	282	567
CT	3%	2,905	349	376	2,180
NH	1%	882	8	243	631

Crosswalk to State Name Examples:

Coastal Sand Dunes/Intertidal Beaches And Shores (CT), Beach And Dune Habitats (DE), Maritime Dune Community (MA), Maritime Dune Grassland/Woodland (MD), Dune Grassland (ME), Coastal Interdunal Marsh/Swale (NH), Coastal Dune Shrubland/Grass Community (NJ), Maritime Dunes (NY), Maritime Herbaceous Dune (RI), North Atlantic Mixed Dune Grassland (VA)

Description:

A sparsely vegetated beach, dune, or barrier island on unconsolidated sand and shell sediments on the Atlantic coast. A range of plant communities may be present, but trees and shrubs are restricted to sheltered areas. Constantly shifted by winds and floods, the dynamic disturbance regimes largely limit vegetation to pioneering, salt-tolerant, succulent annuals. Sea-rocket and Russian thistle are usually most numerous and characteristic. Areas that are permanently or semipermanently flooded with freshwater support pond or marsh-like vegetation, and are affected by salt spray or overwash during periodic storm events. Both upland and non-flooded wetland vegetation are included in this system and it is broadly defined in terms of floristic composition.

Ecological Setting and Natural Processes:

Extensive, exposed, sandy coastlines range from North Carolina to southern Maine (rocky coasts replace these). Dominant ecological processes include frequent salt spray, saltwater overwash, and sand movement. Although sand beaches extend landward above mean high tide, they are constantly impacted by waves and may be flooded by high spring tides and storm surges. Constant salt spray and rainwater maintain moist conditions.

Similar Habitat Types:

Difficulties modeling 2 maritime systems separately (Northern Atlantic Coastal Plain Dune and Swale, and Northern Atlantic Coastal Plain Sandy Beach) resulted in combining them into this one for mapping purposes.

Crosswalk to State Wildlife Action Plans:

Upland Herbaceous - Coastal Dune (CT), Tidal Wetland - Intertidal Beaches and Shores (CT), Beach and Dune Habitats (DE), Interdunal Wetlands (DE), Coastal Dunes, Beaches, and Small Islands - Maritime Beach Strand/ Dune Communities (MA), Coastal Beaches, Dunes, and Mudflats (MD), Unconsolidated Shore (Beaches and Mudflats) (ME), Coastal Sand Dunes (NH), Beaches (NJ), Dunes (NJ), Maritime Dunes (NY), Maritime Dunes (NY), Sparsely Vegetated Habitats - Beach Grass Dune (RI), Intertidal - Estuarine Beaches Unspecified (RI), Barren Habitat - Beach (VA)

Places to Visit this Habitat:

Cape Henlopen State Park | DE
Cape Cod National Seashore | MA
Assateague Island National Seashore | MD
Fire Island National Seashore | NY
Chincoteague National Wildlife Refuge | VA

Associated Species: *Appendix lists scientific names*

BIRDS: american oystercatcher, arctic tern, barn owl, black skimmer, caspian tern, chuck-will's-widow, common tern, gadwall, horned lark, ipswich sparrow, laughing gull, least tern, northern harrier, red knot, roseate tern, roseate tern, royal tern, vesper sparrow, willet

MAMMALS: eastern mole, long-tailed weasels, red fox

HERPTILES: american toad, eastern hognose snake, fowler's toad

PLANTS: American beachgrass (Ammophila breviligulata, coast-blite goosefoot (Chenopodium rubrum), oysterleaf (Mertensia maritima), saltmarsh aster (Symphyotrichum subulatum), sea lyme-grass (Leymus mollis ssp mollis), seabeach amaranth (Amaranthus pumilus), seabeach knotweed (Polygonum glaucum), seabeach needlegrass (Aristida tuberculosa), slender sea purslane (Sesuvium maritimum)

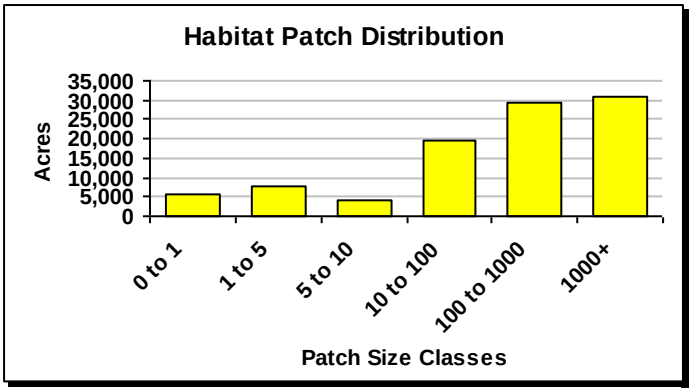
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: least tern, piping plover, red knot, roseate tern

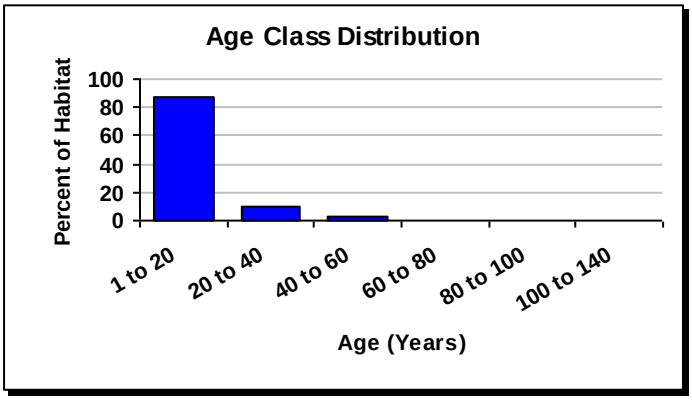
HERPTILES: diamondback terrapin, eastern spadefoot

INSECTS: beach tiger beetle (Cicindela hirticollis), bethany beach firefly (Photuris bethaniensis)

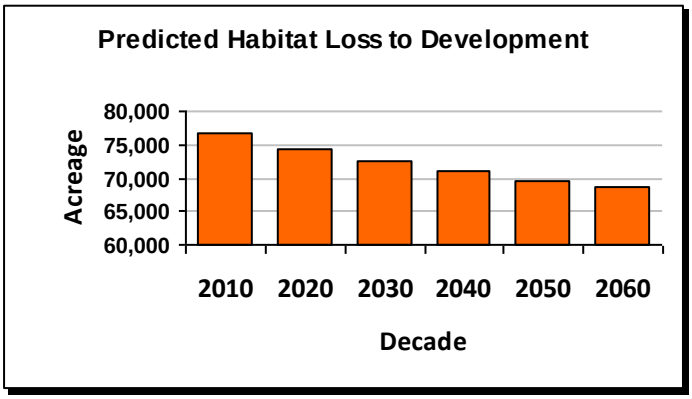
PLANTS: beach plum (Prunus maritima), sand-heather (Hudsonia tomentosa)



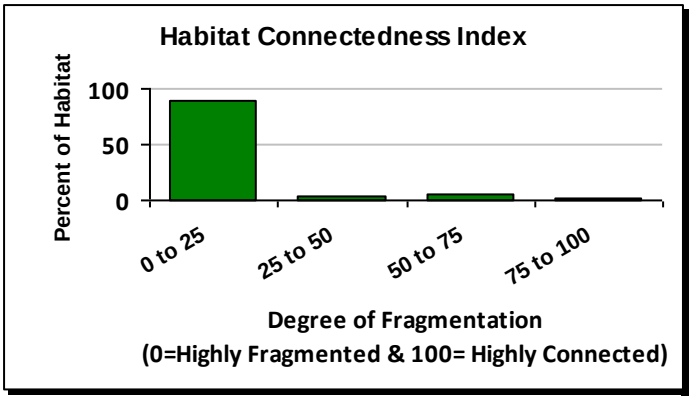
The average patch size for this habitat is 3 acres and the largest single patch is 5,945 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



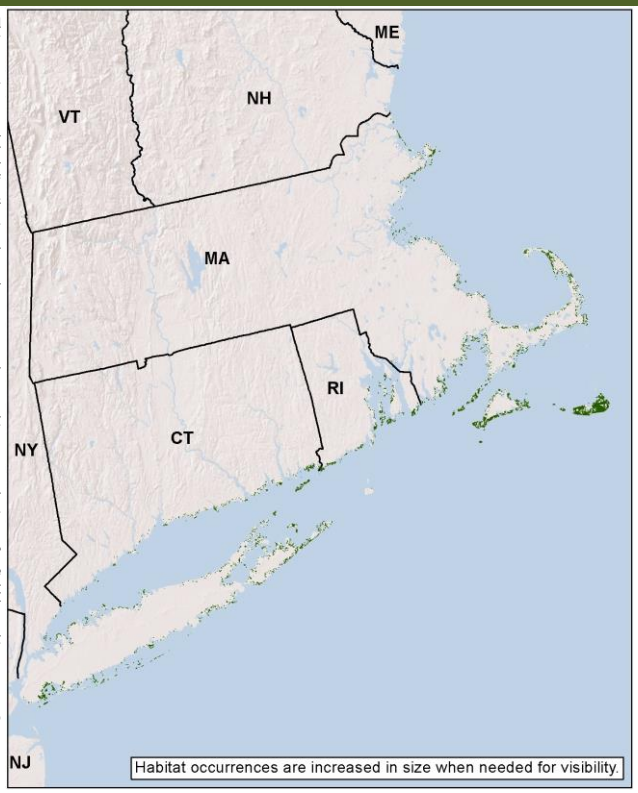
This chart shows the predicted loss of habitat over the next five decades (8,263 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 165 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Heathland and Grassland

Macrogroup: Coastal Grassland & Shrubland



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Stephen M. Young (New York Natural Heritage Program

State Distribution: CT, MA, NH, NY, RI

Total Habitat Acreage: 32,837

Percent Conserved: 28.8%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
MA	63%	20,683	4,666	2,656	13,361
NY	23%	7,579	228	785	6,567
RI	10%	3,166	371	368	2,427
CT	4%	1,371	286	89	997
NH	0%	38	0	17	21

Description:

A heathland/grassland complex of acidic, nutrient-poor and very well drained soils in coastal areas of southern New England and New York. The vegetation is maintained by extreme conditions and periodic fire or other disturbance. The system has a variable structure and may occur as heathlands, grasslands, or support a patchwork of grass and shrub vegetation. Characteristic species include huckleberry, bearberry, broom crowberry, Nantucket shadbush, golden heather, blueberry, little bluestem, and Pennsylvania sedge. They are important habitat for several bird and other animal species including the short-eared owl and regal fritillary, and (along with brushy plains and woodlands) provided habitat for the extinct heath hen.

Ecological Setting and Natural Processes:

This open grassland system of sandy, nutrient-poor, outwash soils has a complex history. The habitat occurs on drought-prone coastal soils with a history of fire, and sustained human management. Persistence is dependent on disturbance. In areas of relatively infrequent disturbance, shrubland or oak woodland may develop, but where fire and other severe disturbances are frequent grasses and herbaceous plants dominate.

Similar Habitat Types:

Often occurs as small to medium-sized patches just inland from the Northern Atlantic Coastal Plain Dune and Swale or Northern Atlantic Coastal Plain Maritime Forest system, and adjacent to Northern Atlantic Coastal Plain Hardwood Forest.

Crosswalk to State Name Examples:

Upland Herbaceous - Sandplain And Other Warm Season Grasslands (CT), Sandplain Grassland (MA), Sandplain Heathland (MA), Maritime Grassland (NY), Maritime Heathland (NY), Maritime Grassland (RI)

Crosswalk to State Wildlife Action Plans:

Upland Herbaceous - Sandplain and Other Warm Season Grasslands (CT), Grasslands - Native upland grasslands (MA), Maritime Dunes (NY), Early Successional Habitats - Coastal Shrubland (RI)

Places to Visit this Habitat:

Harkness Memorial State Park | CT
Cape Cod National Seashore | MA
Middle Moors | MA
Heckscher State Park | NY
Sachuest Point National Wildlife Refuge | RI

Associated Species: *Appendix lists scientific names*

BIRDS: american oyster catcher, barn owl, bobolink, grasshopper sparrow, horned lark, northern harrier, piping plover, short-eared owl, vesper sparrow

MAMMALS: hoary bat, meadow vole, short-tailed shrew

HERPTILES: eastern spadefoot toad, northern red-bellied cooter

INSECTS: imperial moth (Eacles imperialis), spiny oakworm moth (Anisota stigma)

PLANTS: butterfly milkweed (asclepias tuberosa), eastern silvery aster (symphyotrichum concolor), hairy lettuce (lactuca hirsuta), lion's-foot (prenanthes serpentaria), New England blazingstar (liatris scariosa), nuttall's milkwort (polygala nuttallii), purple cudweed (gamochaeta purpurea), purple needlegrass (aristida purpurascens), st. andrew's-cross (hypericum hypericoides), thymeleaf pinweed (lechea minor)

Species of Concern (G1-G4): *Appendix lists scientific names*

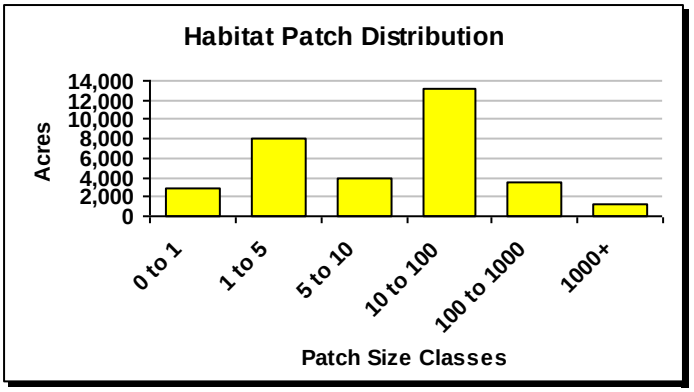
BIRDS: Henslow's sparrow, seaside sparrow

MAMMALS: beach vole

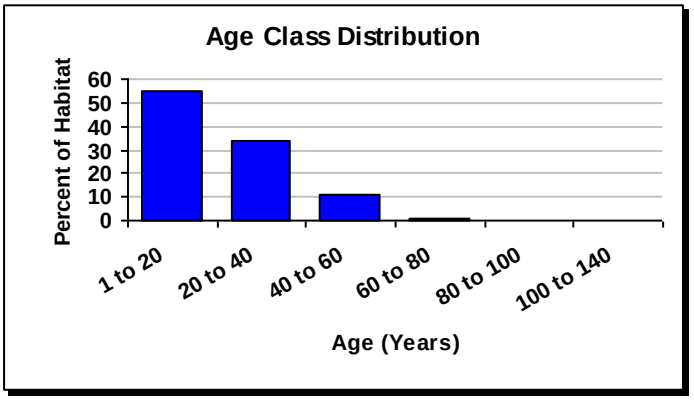
INSECTS: chain dotted geometer (Cingilia catenaria), chain fern borer moth (Papaipema stenocelis), noctuid moths (Abagrotis nefascia, Chaetaglaea cerata), pink sallow (Psectraglaea carnosa), regal fritillary (Speyeria idalia), straight lined mallow moth (Bagisara rectifascia)

PLANTS: broom crowberry (Corema conradii), bushy rockrose (Helianthemum dumosum), hyssopleaf hedge-nettle (Stachys hyssopifolia), nantucket shadbush (Amelanchier nantucketensis), sandplain flax (Linum intercursum)

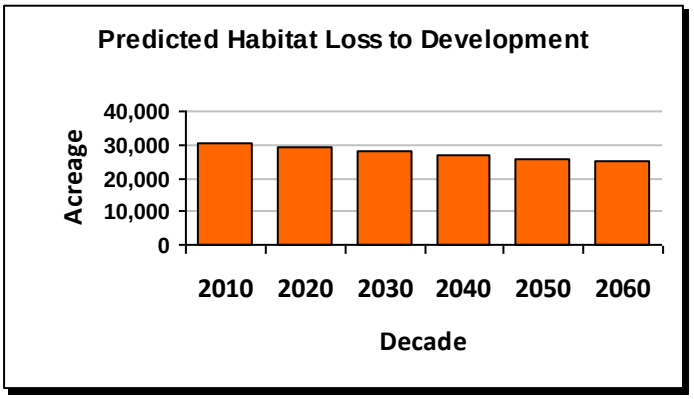
© Ben Kimball (New Hampshire Natural Heritage Bureau)



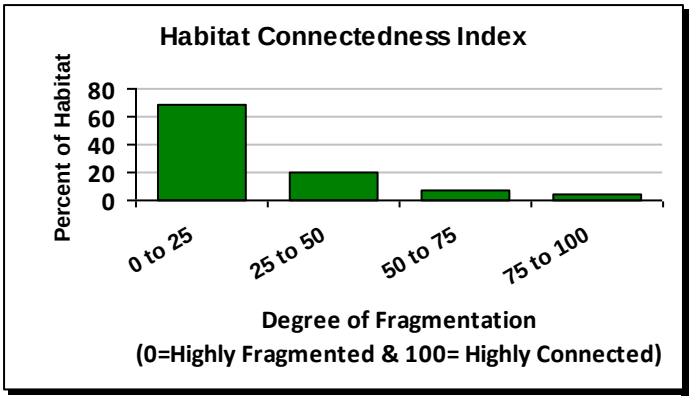
The average patch size for this habitat is 2 acres and the largest single patch is 993 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



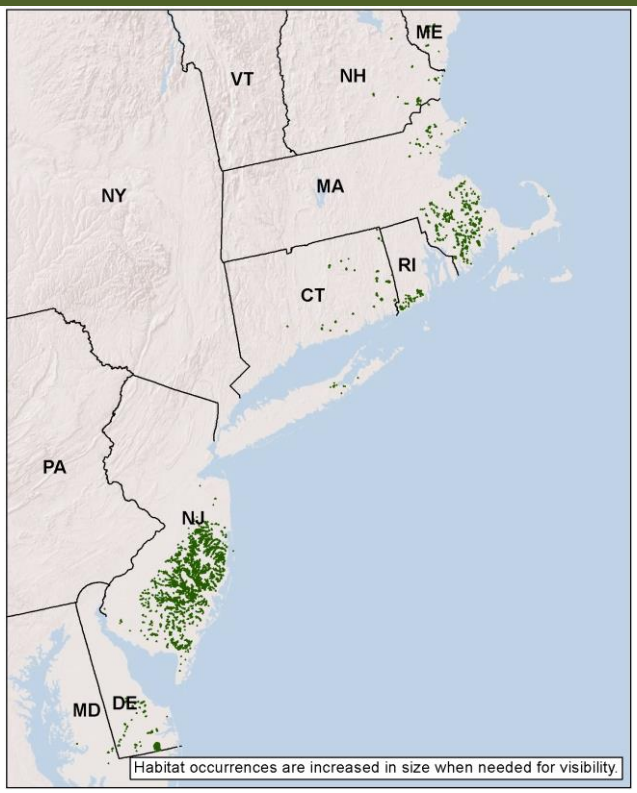
This chart shows the predicted loss of habitat over the next five decades (5,731 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 115 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Basin Peat Swamp

Macrogroup: Coastal Plain Swamp



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Keith Love

State Distribution: CT, DE, MA, MD, ME, NH, NJ, NY, RI

Total Habitat Acreage: 58,301

Percent Conserved: 53.5%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NJ	61%	35,366	9,187	10,781	15,398
MA	20%	11,830	1,820	3,750	6,259
DE	8%	4,845	127	3,191	1,527
CT	4%	2,480	221	596	1,663
RI	3%	1,750	156	444	1,150
NH	2%	1,158	259	434	464
ME	1%	654	0	106	548
MD	0%	121	15	52	54
NY	0%	97	50	14	33

Crosswalk to State Name Examples:

Acidic Atlantic White Cedar Basin Swamp (CT), Coastal Plain Atlantic White Cedar-Red Maple Swamp (DE), Coastal Atlantic White Cedar Swamp (MA), Atlantic White Cedar Swamp (MD), Atlantic White Cedar Swamp (ME), Atlantic white cedar-yellow birc -pepperbush swamp (NH), Forested Wetlands - White Cedar Swamps (NJ), Coastal Plain Atlantic White Cedar Swamp (NY), Atlantic White Cedar Swamp (RI)

Description:

A forested swamp of peat-accumulating basins in the coastal plain from southern Maine down to the Delmarva Peninsula. Atlantic white cedar is characteristic and often dominant; red maple may also be an important species, especially after logging. Black spruce is occasional in examples in the northern part of the region. Herbaceous species are typically more abundant than dwarf shrubs in the understory, which includes alder, great laurel, high-bush blueberry, winterberry, swamp azalea, and sphagnum moss. The saturated hydrology is evidenced by sphagnum-based hummock-and-hollow microtopography.

Ecological Setting and Natural Processes:

Basins are often configured along streams and rivers of the coastal plain. Relatively shallow water-saturated peat overlies mineral sediments in these swamps. Standing water generally occurs for half of the growing season or longer. The acidic soils are poor in nitrogen and phosphorus and often have a high iron content.

Similar Habitat Types:

May be similar compositionally to other acidic swamps in shallow basins in the region (like North-Central Appalachian Acidic Swamp), except for the prominence of Atlantic white cedar. The peat layer is deeper, and the canopy trees shorter and less dense, in the more northerly Boreal-Laurentian-Acadian Acidic Basin Fen.

Crosswalk to State Wildlife Action Plans:

Forested Inland Wetland - Atlantic White Cedar Swamps (CT), Atlantic White Cedar Non-tidal Wetlands (DE), Forested Swamps (MA), Forested wetlands - white cedar swamps (NJ), Atlantic White Cedar Swamp (NY), Forested Wetlands - Forested Coniferous Wetland White Cedar (RI)

Places to Visit this Habitat:

Pachaug State Forest | CT
James Branch Nature Preserve | DE
Freetown-Fall River State Forest | MA
Brendan T. Byrne State Forest | NJ
Wharton State Forest | NJ

Associated Species: *Appendix lists scientific names*

BIRDS: northern waterthrush, veery, wood duck

INSECTS: ebony boghaunter, elfin skimmer, great purple hairstreak, owlet moth, pennsylvania firefly, spatterdock darner, sphagnum sprite

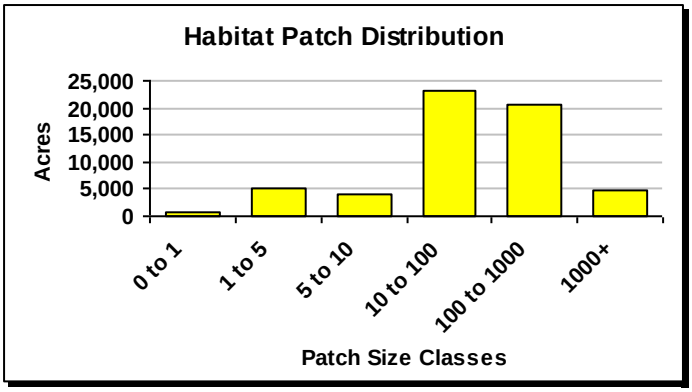
PLANTS: bayonet rush (Juncus militaris), bushy bluestem (Andropogon glomeratus), coast sedge (Carex exilis), fibrous bladderwort (Utricularia fibrosa), heartleaf twayblade (Listera cordata), seaside alder (Alnus maritima), smooth winterberry holly (Ilex laevigata), southern bladderwort (Utricularia juncea), ten-angle pipewort (Eriocaulon decangulare), tickseed sunflower (Bidens coronata), white beakrush (Rhynchospora alba)

Species of Concern (G1-G4): *Appendix lists scientific names*

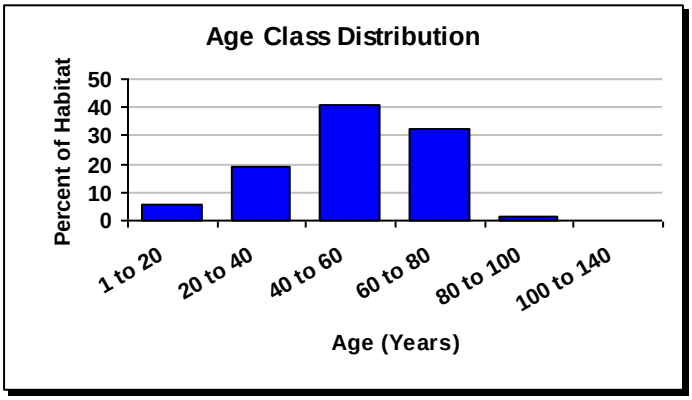
HERPTILES: blue-spotted salamander, carpenter frog, four-toed salamander, spotted turtle

INSECTS: coastal swamp metarranthis moth, Hessel's hairstreak, pitcher plant borer moth, plant hopper, spatterdock darner, sphagnum sprite, a firefly (photuris tremulans), a moth (Exyra fax)

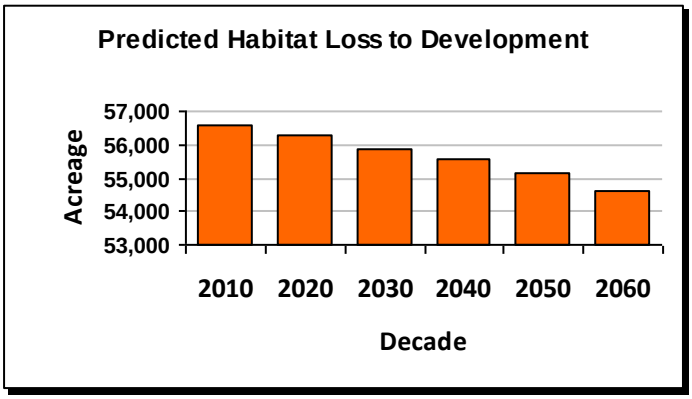
PLANTS: swamp-pink (Arethusa bulbosa), yellow nodding ladies'-tresses (Spiranthes ochroleuca)



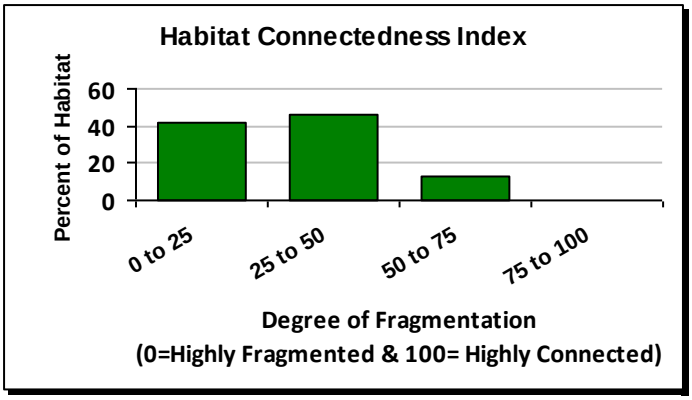
The average patch size for this habitat is 10 acres and the largest single patch is 1,791 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



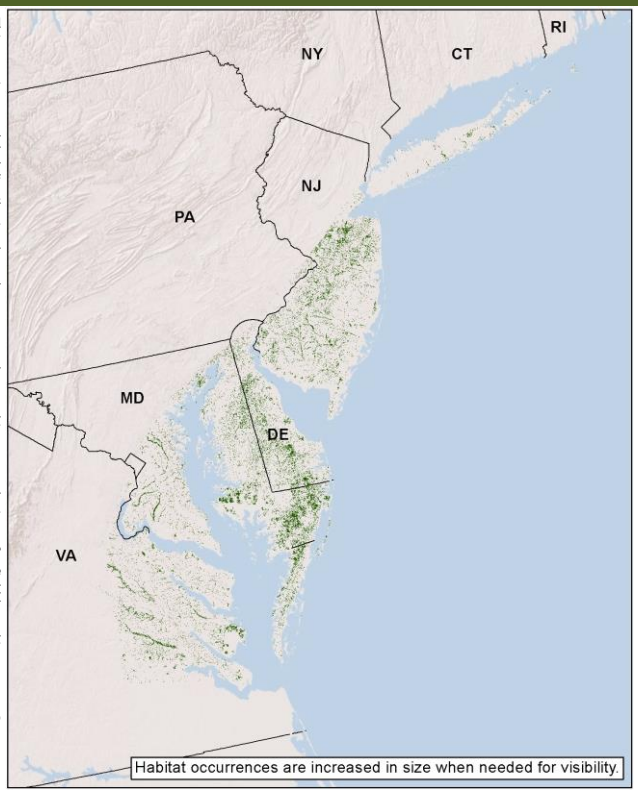
This chart shows the predicted loss of habitat over the next five decades (1,960 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 39 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest

Macrogroup: Coastal Plain Swamp



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Robert Coxe (Delaware Species Conservation & Research Program)

Description:

A basin hardwood swamp of seasonally flooded coastal plain habitats from Long Island south to Virginia. Characteristic tree species include red maple, sweet gum, black gum, willow oak, and green ash. Loblolly pine is not uncommon south of Delaware Bay. Although supporting some seepage indicators, it is also affected by overland flow.

State Distribution: DC, DE, MD, NJ, NY, PA, RI, VA

Total Habitat Acreage: 974,772

Percent Conserved: 18.9%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
MD	33%	322,976	18,978	56,526	247,473
NJ	27%	266,253	37,988	21,214	207,052
VA	22%	210,232	4,141	11,220	194,871
DE	16%	151,221	8,741	19,630	122,850
NY	2%	18,245	1,319	3,284	13,642
PA	1%	5,123	326	510	4,288
RI	0%	640	139	26	476
DC	0%	81	0	0	81

Ecological Setting and Natural Processes:

These swamps of poorly drained, relatively shallow depressions are often groundwater-influenced, but are also often configured in large patches along streams and rivers, especially in headwater settings. They occur on mineral soils overlain by a variable organic but non-peaty layer.

Similar Habitat Types:

Basins that support Northern Atlantic Coastal Plain Basin Peat Swamps are usually more hydrologically isolated than these often active river area-connected swamps, which also lack Atlantic white cedar.

Crosswalk to State Name Examples:

Northeastern Pin Oak-Swamp White Oak Forest (DE), Coastal Plain - Piedmont Acidic Seepage Swamp (MD), Cape May Lowland Swamp (NJ), Red Maple-Sweetgum Swamp (NY), Wetlands - Forested Wetlands And Bogs (PA), Outer Piedmont / Inner Coastal Plain Upland Depression Swamp (VA)

Crosswalk to State Wildlife Action Plans:

Coastal Plain Forested Floodplains and Riparian Swamps (DE), Forested Seepage Wetlands (MD), Forested wetlands - hardwood swamps (NJ), Coastal Red Maple-Black Gum Swamp (NY), Wetlands - Forested Wetlands and Bogs (PA), Wetland Habitat - Forested (VA)

Places to Visit this Habitat:

Bombay Hook National Wildlife Refuge | DE
Pocomoke River State Forest | MD
Wharton State Forest | NJ
Chincoteague National Wildlife Refuge | VA
Presquile National Wildlife Refuge | VA

Associated Species: *Appendix lists scientific names*

BIRDS: american black duck, hooded warbler, prothonotary warbler, red-shouldered hawk, wood duck

MAMMALS: river otter, mink

HERPTILES: barking treefrog, carpenter frog, cope's gray treefrog, new jersey chorus frog, southern leopard frog, tiger salamander

INSECTS: bar-winged skimmer, golden-winged skimmer, mantled baskettail, southern sprite, sparkling jewelwing, sphagnum sprite

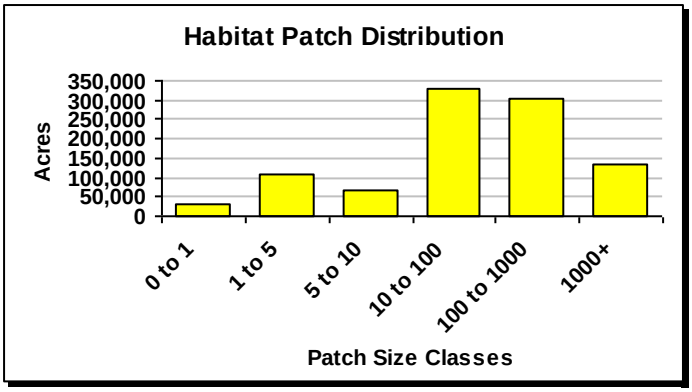
PLANTS: american lotus (Nelumbo lutea), awned meadow-beauty (Rhexia aristosa), awned mountainmint (Pycnanthemum setosum), big-head rush (Juncus megacephalus), blue maiden-cane (Amphicarpum purshii), canby's lobelia (Lobelia canbyi),new jersey rush (Juncus caesariensis), nuttall's lobelia (Lobelia nuttallii), pale false foxglove (Agalinis skinneriana), red turtlehead (Chelone obliqua)

Species of Concern (G1-G4): *Appendix lists scientific names*

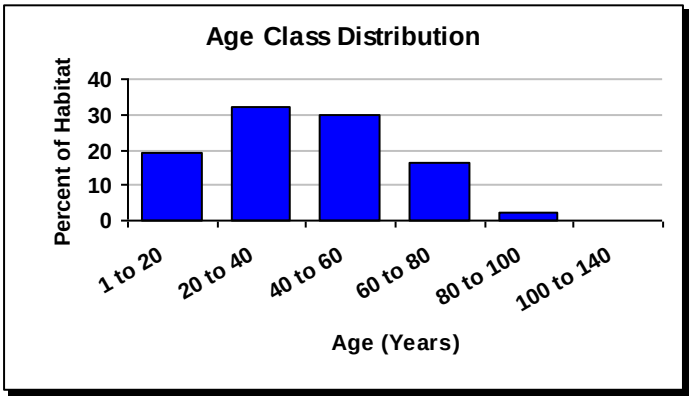
HERPTILES: Mabee's salamander

INSECTS: Bethany beach firefly, A slug moth, banner clubtail, checkered white, eastern pinebarrens tiger beetle, elfin skimmer, Franck's sphinx, golden aster flower moth, great purple hairstreak, Hessel's hairstreak, Laura's clubtail, Martha's pennant, pale bluet, sable clubtail, selys' sundragon, treetop emerald, violet dart, Virginia piedmont water boatman

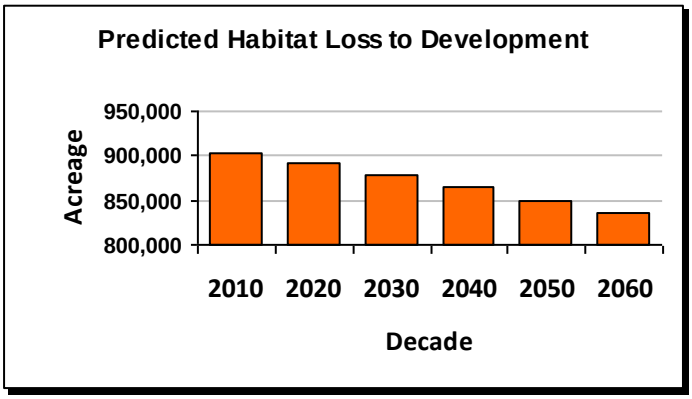
PLANTS: cypress swamp sedge (Carex joorii), rose coreopsis (Coreopsis rosea)



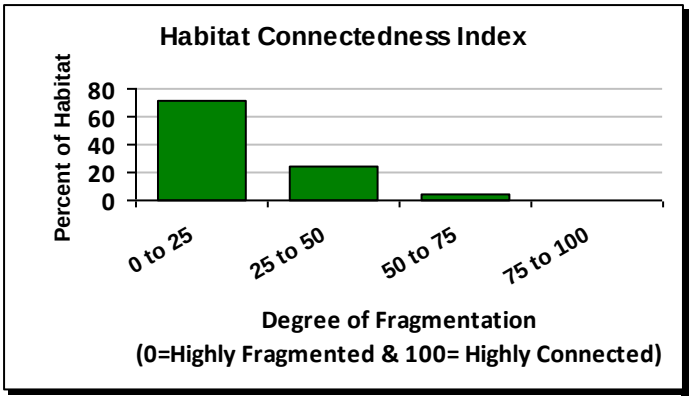
The average patch size for this habitat is 6 acres and the largest single patch is 3,190 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



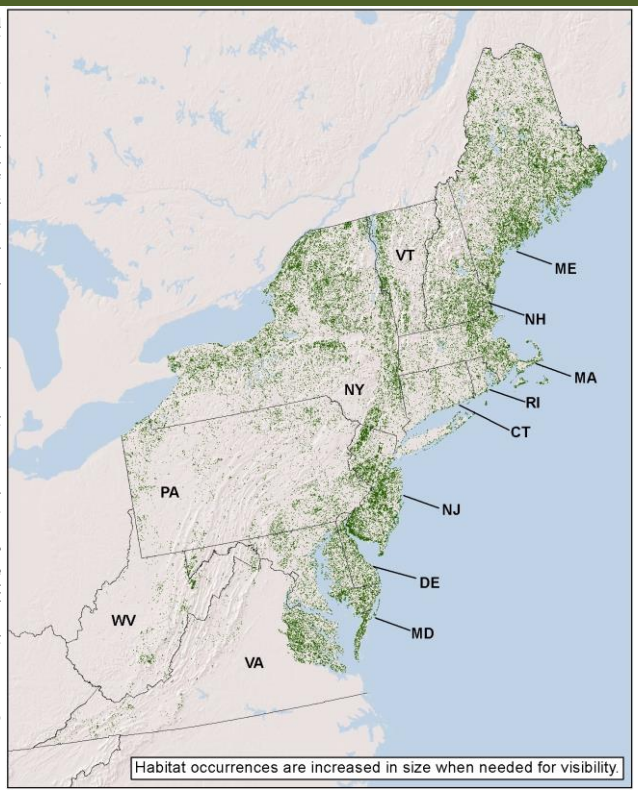
This chart shows the predicted loss of habitat over the next five decades (67,635 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1,353 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Laurentian-Acadian Freshwater Marsh

Macrogroup: Emergent Marsh



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Maine Natural Areas Program

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 906,723

Percent Conserved: 21.6%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
ME	25%	225,999	13,432	26,406	186,161
NY	25%	224,007	25,309	27,887	170,811
NJ	11%	98,802	17,497	9,039	72,265
VA	7%	61,229	1,285	3,949	55,995
MA	6%	57,011	4,217	12,825	39,969
MD	6%	52,867	2,802	10,177	39,888
PA	5%	48,783	3,585	4,395	40,802
NH	5%	48,642	2,373	10,747	35,523
VT	4%	39,373	2,385	5,542	31,445
DE	2%	21,773	1,518	3,960	16,294
CT	2%	16,321	1,506	2,964	11,851
WV	1%	6,766	156	244	6,366
RI	1%	5,089	413	1,010	3,666
DC	0%	61	0	0	61

Crosswalk to State Name Examples:

Herbaceous Inland Wetland - Freshwater Marshes (CT), Bulrush Deepwater Marsh (DE), Deep Emergent Marsh (MA), Cattail Marsh (ME), Emergent Marsh (NH), Robust Emergent Marsh (NJ), Deep Emergent Marsh/Backwater Slough (NY), Cat-Tail Marsh (PA), Emergent Marsh (RI), American Lotus Aquatic Bed (VA), Cattail Marsh (VT), Emergent Marsh (MD)

Description:

A freshwater emergent or submergent marsh dominated by herbaceous vegetation and associated with isolated basins, edges of streamways, and seepage slopes. Typical plants include cattails, marsh fern, touch-me-not, pondweeds, water lilies, pickerelweed, and tall rushes, species that tolerate sustained inundations and do not persist through the winter. Scattered shrubs are often present and usually total less than 25% cover. Trees are generally absent and, if present, are scattered. Zonation within a marsh is associated with water depth and length of inundation. This is a very broadly defined system, with many variants distributed widely in the Northeast.

Ecological Setting and Natural Processes:

Freshwater marshes are associated with lakes, ponds, headwater basins and slow-moving streams, impoundments, ditches, or any low lying basin that collects water. Such basins are often flat-bottomed and shallow, or marsh vegetation forms a ring around the edge of deeper basins. They typically occur on muck over mineral soil, and as part of a larger wetland complex that may include forested or shrubby swamps, peatlands, and/or open water.

Similar Habitat Types:

Very often occurs with Laurentian-Acadian Wet Meadow-Shrub Swamp, acidic or circumneutral forested swamps, peatlands, and floodplain vegetation in large, diverse complexes.

Crosswalk to State Wildlife Action Plans:

Herbaceous Inland Wetland - Freshwater Marshes (CT), Marshes and Wet Meadows - Deep Emergent Marsh (MA), Emergent Marsh and Wet Meadows (ME), Marsh and Shrub Wetlands (NH), Freshwater Marsh (NY), Wetlands - Emergent Freshwater (PA), Emergent Wetlands - Freshwater Wetland Unspecified (RI), Marshes and Sedge Meadows - Cattail Marsh (VT)

Places to Visit this Habitat:

Moosehorn National Wildlife Refuge | ME
Wharton State Forest | NJ
Five Ponds Wilderness Area | NY
Green Mountain National Forest | VT
Canaan Valley National Wildlife Refuge | WV

Associated Species: *Appendix lists scientific names*

BIRDS: american bittern, american black duck, blue-winged teal, common gallinule, great blue heron, least bittern, marsh wren, pied-billed grebe, sora, swamp sparrow, virginia rail, wood duck

MAMMALS: eastern cottontail, meadow jumping mouse, mink, moose, muskrat, raccoon, southern bog lemming, virginia possum, water shrew

HERPTILES: blue-spotted salamander, northern leopard frog, northern spring peeper, red-spotted newt, spotted turtle

INSECTS: bar-winged Skimmer, ringed emerald, spatterdock darner

PLANTS: autumnal water-starwort (Callitriche hermaphroditica), floating pennywort (Hydrocotyle ranunculoides), hardstem bulrush (Schoenoplectus acutus), marsh felwort (Lomatogonium rotatum), marsh hedge-nettle (Stachys pilosa),whorled pennywort (Hydrocotyle verticillata)

Species of Concern (G1-G4): *Appendix lists scientific names*

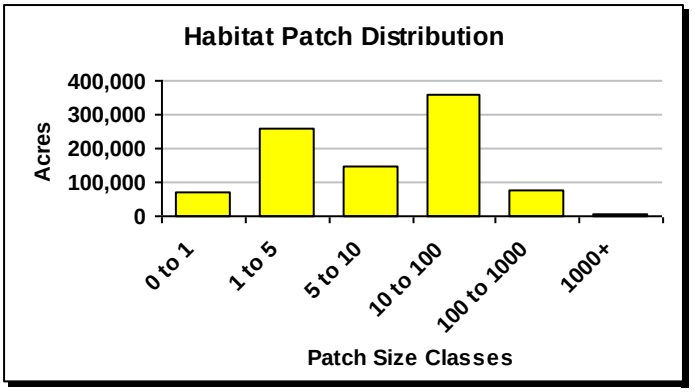
BIRDS: black tern, king rail, northern harrier

MAMMALS: water shrew

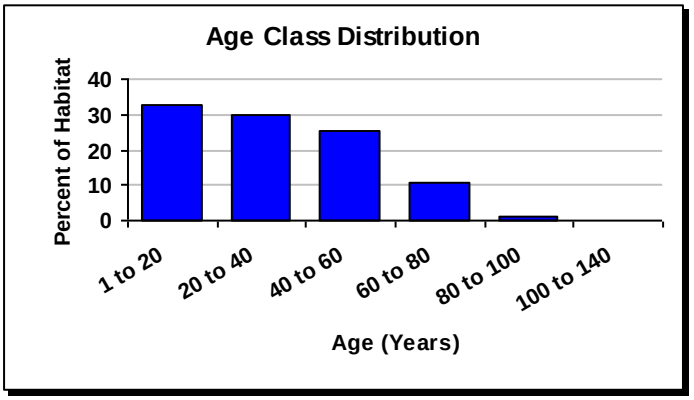
HERPTILES: wood turtle, blanding's turtle

INSECTS: bogbean buckmoth, broadtailed shadowdragon, eyed brown, granitosa fern moth, little bluet, Martha's pennant, scarlet bluet, spatterdock darner, two-spotted skipper

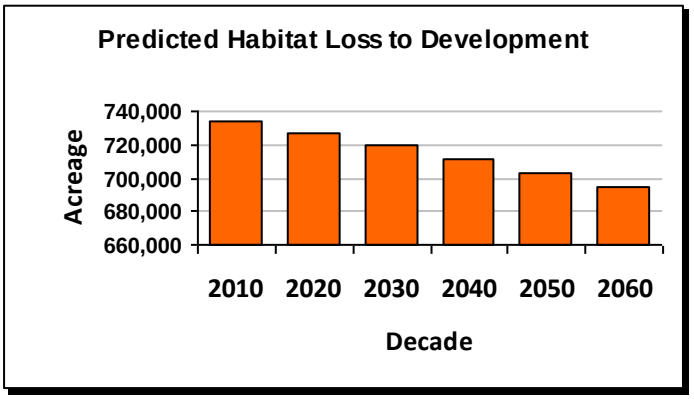
PLANTS: blue maiden-cane (Amphicarpum purshii), fly-poison (Amianthium muscitoxicum), northeastern bladderwort (Utricularia resupinata), ohio goldenrod (Oligoneuron ohioense), Robbins' spikerush (Eleocharis robbinsii), sago pondweed (Potamogeton pectinatus), Sartwell's sedge (Carex sartwellii), slender arrowhead (Sagittaria teres), Walter's sedge (Carex striata), watermeal (Wolffia papulifera)



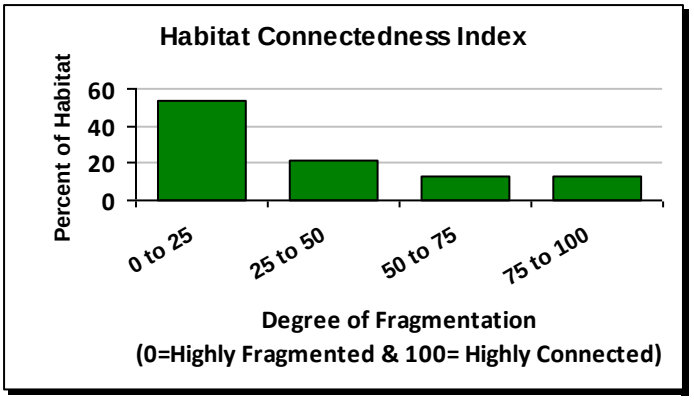
The average patch size for this habitat is 3 acres and the largest single patch is 1,258 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



This chart shows the predicted loss of habitat over the next five decades (39,208 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 784 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North-Central Appalachian Large River Floodplain

Macrogroup: Large River Floodplain

This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Bruce A. Sorrie (Massachusetts Division of Fisheries & Wildlife/Natural Heritage & Endangered Species Program)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 254,862

Percent Conserved: 19.8%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	56%	142,677	10,582	15,936	116,158
PA	24%	59,967	2,733	5,826	51,409
ME	4%	11,047	479	2,413	8,155
MA	4%	10,054	1,693	2,251	6,110
NJ	4%	9,846	4,177	520	5,149
NH	2%	4,646	131	778	3,737
CT	2%	4,024	251	980	2,793
MD	1%	3,708	708	298	2,702
VT	1%	3,430	199	324	2,906
VA	1%	3,290	56	131	3,103
WV	1%	1,982	9	70	1,903
DC	0%	90	1	0	89
DE	0%	82	10	30	42
RI	0%	19	0	2	17

Crosswalk to State Name Examples:

Floodplain Forest (CT), Silver Maple-Elm Floodplain Forest (DE), Major-River Floodplain Forest (MA), Montane - Piedmont Bottomland Forest (MD), Silver maple-wood nettle-ostrich fern floodplain forest (NH), Floodplain Forest (NJ), Floodplain Forest (NY), Silver Maple Floodplain Forest (PA), Silver Maple/Sycamore Floodplain Forest (RI), Piedmont / Central Appalachian Floodplain Swamp (VA), Silver Maple-Ostrich Fern Riverine Floodplain Forest (VT), Floodplain Forests And Swamps (WV)

Description:

A complex of wetland and upland vegetation on floodplains of medium to large rivers in Atlantic drainages. They are typical of larger rivers but they can occur on smaller rivers where the stream gradient is low and a broad floodplain develops. The vegetation complex includes floodplain forests in which silver maple, sycamore, box elder, and cottonwood are characteristic, as well as herbaceous sloughs, shrub wetlands, ice scours, riverside prairies, and woodlands. Most areas are underwater each spring; microtopography determining how long the various habitats are inundated. Depositional and erosional features may both be present depending on the particular floodplain.

Ecological Setting and Natural Processes:

Floodplains form on land adjacent to a stream or river that experiences periodic flooding when the river overflows its banks. A variety of microtopographic features form as a result of annual river activity. This broadly-defined system includes vegetation on deep alluvial deposits, on depositional levees and bars, in backwater sloughs, and (rarely) on bedrock where rivers cut through resistant geology.

Similar Habitat Types:

Shares dynamic processes with all other large river floodplain systems. Most similar to the silver maple-dominated Northern Appalachian-Acadian Large River type. Human impacts on this and other floodplain habitats regionally have made large, high quality occurrences rare.

Crosswalk to State Wildlife Action Plans:

Forested Inland Wetland - Floodplain Forests (CT), Floodplains (DC), Riparian Forests (MA), Floodplain Forests (MD), Floodplains - Major river silver maple floodplains (NH), Floodplains (NJ), Floodplain Forests (NY), Riparian Thickets/Forests (PA), Wetland Habitat - Forested (VA), Floodplain Forests - Silver Maple-Sensitive Fern Riverine Floodplain Forest (VT), Floodplain Forests and Swamps (WV)

Places to Visit this Habitat:

Rachel Carson National Wildlife Refuge | ME
Iroquois National Wildlife Refuge | NY
Allegheny National Forest Non-Reserved | PA
George Washington and Jefferson National Forest | VA
Bald Mountain Natural Area | VT

Associated Species: *Appendix lists scientific names*

BIRDS: alder flycatcher, bald eagle, cerulean warbler, northern waterthrush, red-shouldered hawk, veery, warbling vireo, willow flycatcher, wood duck, yellow warbler, yellow-throated vireo

MAMMALS: big brown bat, eastern pipistrelle, little brown myotis, long-tailed weasel, mink, moose, northern long-eared bat, northern short-tailed shrew, raccoon, red bat, river otter, silver-haired bat, virginia possum

HERPTILES: copperhead, leopard frog, northern water snake, marbled salamander, mole salamander, pickerel frog

INSECTS: brook snaketail, lake emerald, riffle snaketail, riverine clubtail

PLANTS: basil beebalm (Monarda clinopodia), green dragon (Arisaema dracontium), canada moonseed (Menispermum canadense), nodding trillium (Trillium flexipes), smooth bur-marigold (Bidens laevis)

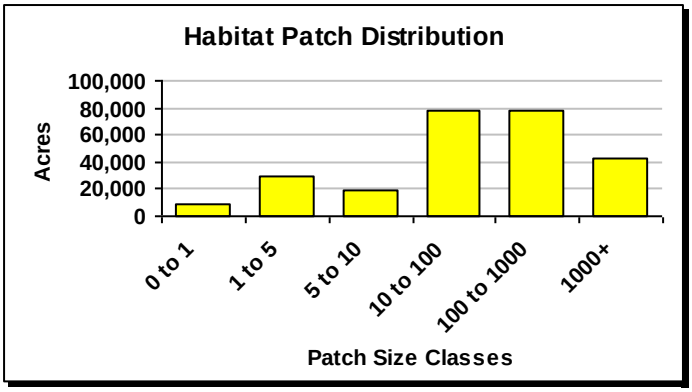
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: american bittern, prothonotary warbler

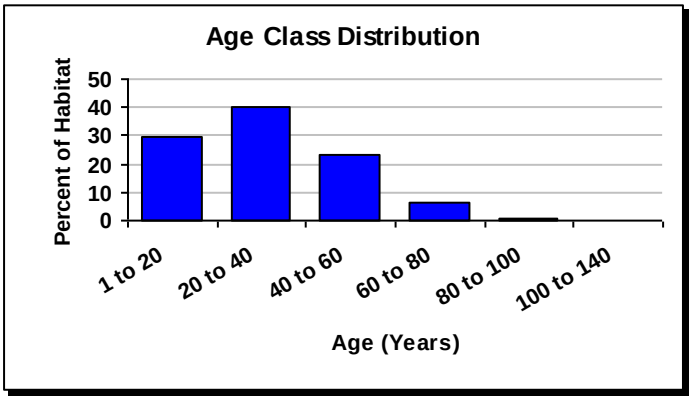
HERPTILES: blandings turtle, jefferson salamander, wood turtle

INSECTS: cobblestone tiger beetle, Newman's brocade, A ground beetle, little bluet, Maine snaketail, riverine clubtail

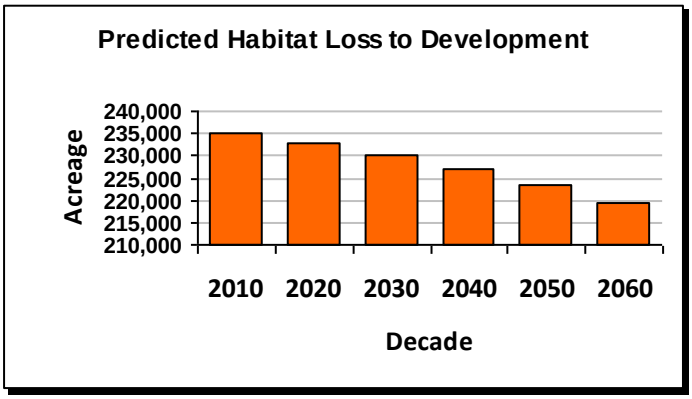
PLANTS: american lotus (Nelumbo lutea), coast violet (Viola brittoniana), eastern prairie white-fringed orchid (Platanthera leucophaea), heartleaf plantain (Plantago cordata), limestone wild petunia (Ruellia strepens), long's bulrush (Scirpus longii), maryland bur-marigold (Bidens bidentoides), navel-shape corn-salad (Valerianella umbilicata), stalked bulrush (Scirpus pedicellatus), tidal spikerush (Eleocharis aestuum)



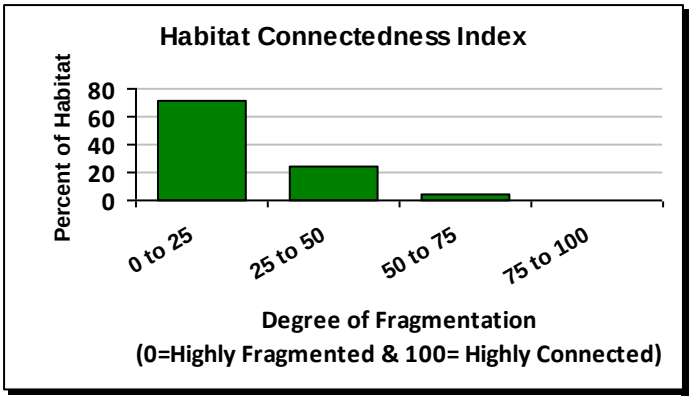
The average patch size for this habitat is 5 acres and the largest single patch is 3,512 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



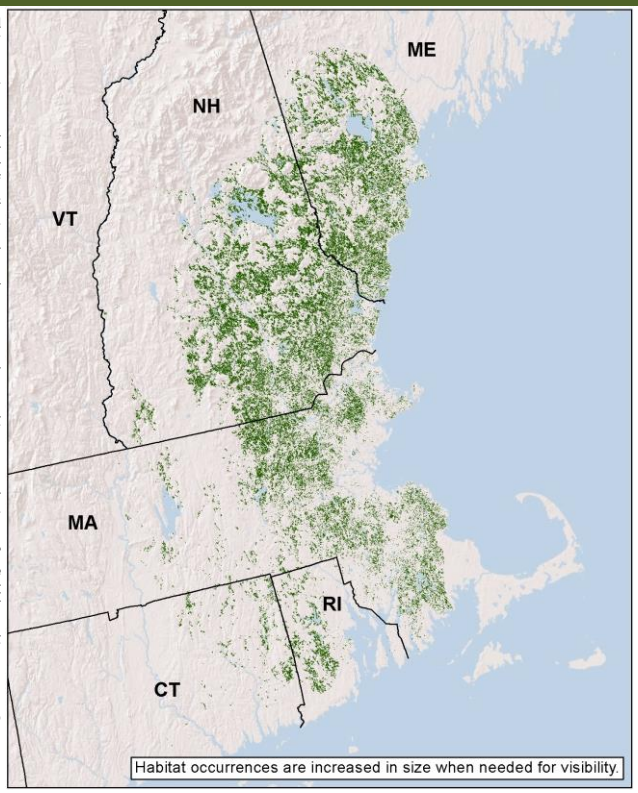
This chart shows the predicted loss of habitat over the next five decades (15,637 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 313 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Northeastern Coastal and Interior Pine-Oak Forest

Macrogroup: Northern Hardwood & Conifer



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

State Distribution: CT, MA, ME, NH, RI

Total Habitat Acreage: 1,538,080

Percent Conserved: 15.8%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NH	43%	654,780	12,748	89,778	552,254
MA	26%	403,139	9,054	81,076	313,009
ME	25%	391,637	5,423	19,649	366,566
RI	3%	50,081	2,770	15,070	32,241
CT	2%	38,443	835	7,136	30,471

Crosswalk to State Name Examples:

White Pine-Oak Forest (MA), Oak-Hickory Forest (ME), Mixed Oak/White Pine Forest (RI)

Description:

A mixed forest dominated by white pine, red oak, and hemlock in varying proportions. Red maple and white and black oak are common associates, and northern hardwoods like white ash and American beech can appear as minor components. This forest of low to moderate moisture is usually closed canopy and can be heavily coniferous, with some nearly pure stands of white pine and red maple; hemlock is often more abundant in moister settings. This system type occurs over broad areas, but most of it is in early to mid-successional stages and heavily fragmented. It may well be that it is more widespread and abundant as a result of human occupation of and changes to the New England landscape.

Ecological Setting and Natural Processes:

Usually occurs on flat to rolling glacial landscapes on nutrient-poor, sandy substrates, and is often found near water or wetlands. Upper elevation limit is about 1000' to 1200' (305-365m) in central Massachusetts and southern New Hampshire, but it is usually considerably lower.

Similar Habitat Types:

Often grades upslope to Appalachian (Hemlock-)Northern Hardwood, which has a stronger hardwood component. To the north, grades into Laurentian-Acadian Pine-Hemlock-Hardwood Forest, but it is not a Laurentian-Acadian system (from which white and black oak are essentially absent). Laurentian-Acadian Northern (Pine-)Oak Forests are cooler and drier, and feature red pine.

Crosswalk to State Wildlife Action Plans:

Places to Visit this Habitat:

Pachaug State Forest | CT
Harold Parker State Forest | MA
Sebago Lake State Park | ME
Great Bay National Wildlife Refuge | NH
Arcadia Management Area | RI

Associated Species: *Appendix lists scientific names*

BIRDS: black-and-white warbler, blue-headed vireo, brown creeper, eastern wood-pewee, hermit thrush, ovenbird, pine warbler, scarlet tanager, veery, wood thrush

MAMMALS: black bear, gray fox, gray squirrel, northern flying squirrel, southern flying squirrel, white-footed mouse

HERPTILES: jefferson salamander, marbled salamander, black rat snake, eastern hognose snake, eastern worm snake, northern black racer, northern coppperhead, northern redbelly snake

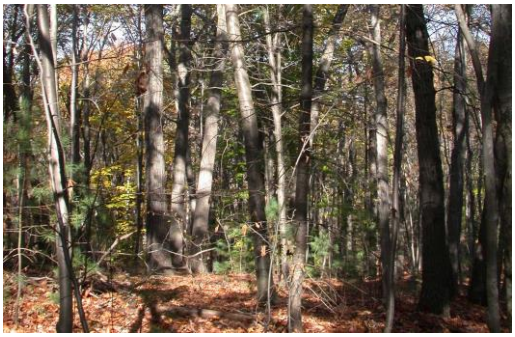
PLANTS: Sundial Lupine (Lupinus perennis), Large Whorled Pogonia (Isotria verticillata), Northern Blazingstar (Liatris scariosa var. novae-angliae), Philadelphia Panicgrass (Panicum philadelphicum), Sassafras (Sassafras albidum), Swamp Saxifrage (Saxifraga pensylvanica), Sand Violet (Viola adunca), Pale Green Orchid (Platanthera flava var. herbiola), Redtop Panicgrass (Panicum rigidulum var. pubescens)

Species of Concern (G1-G4): *Appendix lists scientific names*

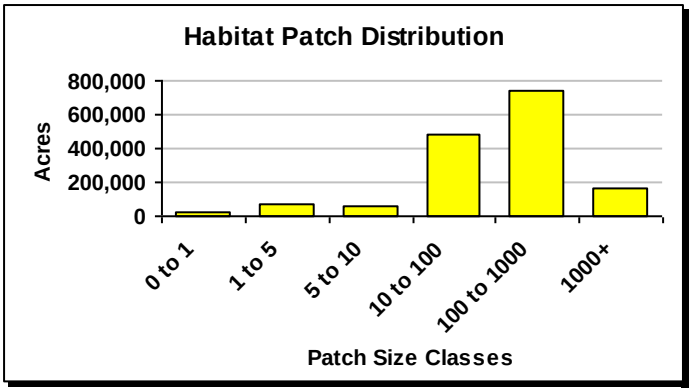
BIRDS: eastern whip-poor-will

INSECTS: red-winged sallow, ringed boghaunter

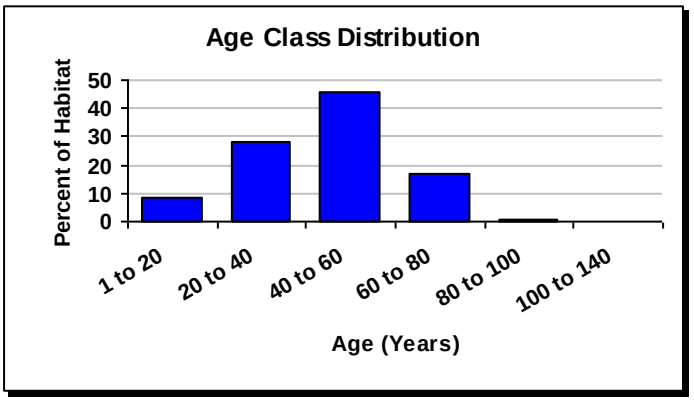
PLANTS: small whorled pogonia (Isotria medeoloides), climbing fern (Lygodium palmatum), plymouth gentian (Sabatia kennedyana)



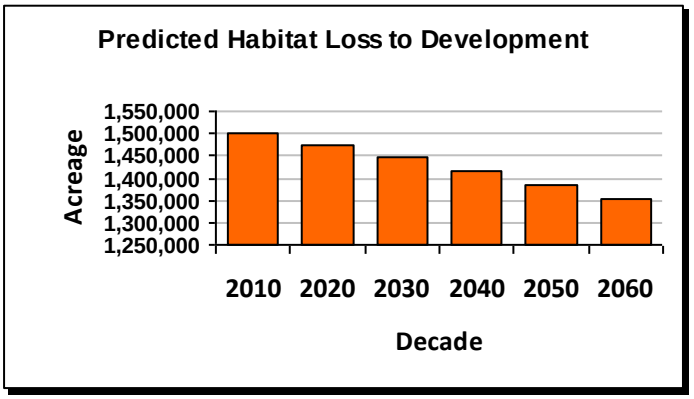
© Patricia Swain (Massachusetts Division of Fisheries & Wildlife/Natural Heritage & Endangered Species Program)



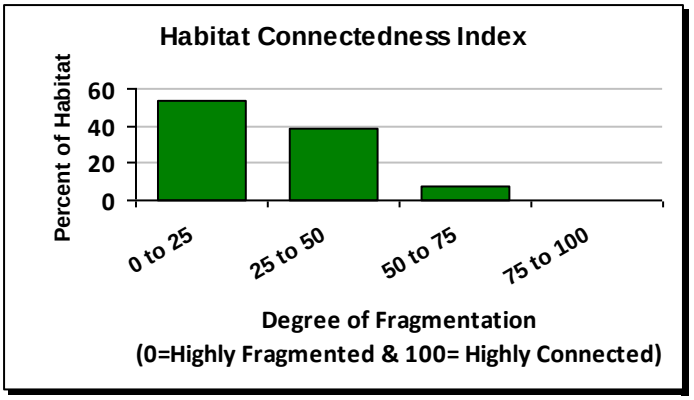
The average patch size for this habitat is 10 acres and the largest single patch is 2,638 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



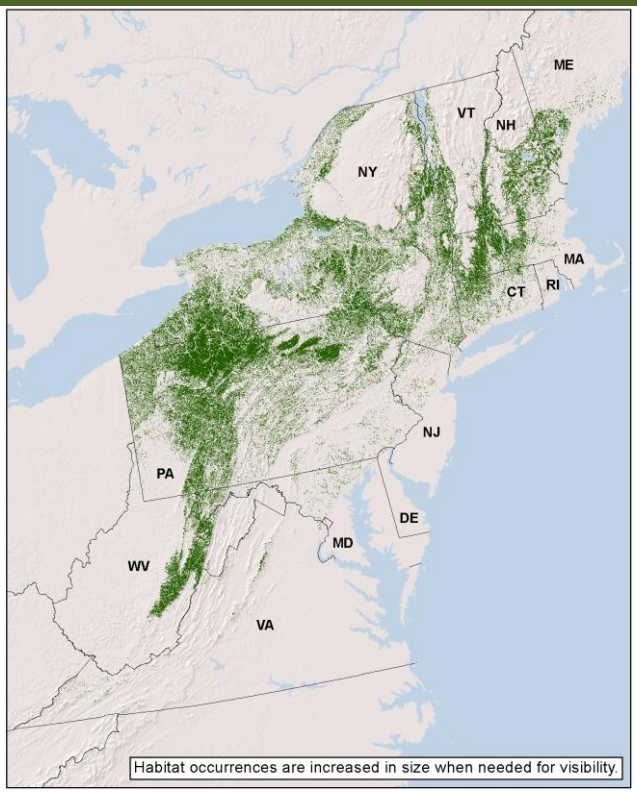
This chart shows the predicted loss of habitat over the next five decades (146,436 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 2,929 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Appalachian (Hemlock)-Northern Hardwood Forest

Macrogroup: Northern Hardwood & Conifer



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Maine Natural Areas Program

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 20,995,362

Percent Conserved: 20.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
PA	39%	8,222,612	277,012	1,806,913	6,138,687
NY	34%	7,076,972	152,324	658,583	6,266,065
NH	6%	1,198,529	27,144	159,115	1,012,270
MA	5%	1,146,700	28,973	293,801	823,926
WV	5%	1,124,973	87,413	350,843	686,717
VT	3%	618,372	11,962	31,754	574,655
CT	3%	584,654	33,138	82,288	469,229
ME	2%	458,159	4,591	19,974	433,594
MD	1%	282,180	22,613	51,901	207,666
VA	1%	137,971	46,141	23,812	68,018
NJ	1%	127,379	35,274	8,106	84,000
RI	0%	11,945	435	4,496	7,014
DE	0%	3,633	40	1,308	2,285
DC	0%	1,283	0	0	1,283

Crosswalk to State Name Examples:

Cove Forest (CT), Northern Hardwoods-Hemlock-White Pine Forest (MA), Eastern Hemlock - Hardwood Forest (MD), Hemlock Forest (ME), Hemlock - Oak - Northern Hardwood Forest (NH), Mesic Hemlock-Hardwood Forest (NJ), Hemlock-Northern Hardwood Forest (NY), Hemlock (White Pine) - Northern Hardwood Forest (PA), Appalachian Hemlock - Northern Hardwood Forest (VA), Northern Hardwood Forest - Hemlock-Northern Hardwood Forest (VT), Hemlock Forests (WV)

Description:

A hardwood forest of sugar maple, american beech, and yellow birch, sometimes mixed with, and sometimes dominated by, eastern hemlock. Northern red oak and white oak occur commonly, but do not dominate. Black cherry, black birch, white pine, and tuliptree are typical on nutrient rich or historically disturbed sites. This forest system is broadly defined, and is the only one to occur in at least parts of all 13 states of the Northeast and Mid-Atlantic. It is the dominant forest type in the central and northern part of its range (Allegheny Mountains northward through central New England), and occurs as smaller patches in more protected locations to the south.

Ecological Setting and Natural Processes:

This habitat type is an ecological generalist in much of its range, occupying low to mid-elevations on a variety of landforms and bedrock types. Drier, typic, and moist/cool variants occur along a gradient from higher, more exposed sites to lower, more protected ones. To the south, the hemlock wooly adelgid and a warming climate may push this system to more closely resemble Southern Appalachian Oak Forests.

Similar Habitat Types:

The hardwood mix in this system has a more Appalachian character than those found in cooler Laurentian-Acadian Northern Hardwood Forests. The L-A Pine-Hemlock-Hardwood Forest is similar to this system, but also favors cooler settings. Northeastern Coastal and Interior Pine-Oak Forest replaces it in lower relief areas on the coastal plain, and is more pine-rich.

Crosswalk to State Wildlife Action Plans:

Upland Forest - Coniferous Forests (CT), Upland Forest (MA), Northern Conifer – Hardwood Forests (MD), Deciduous and Mixed Forest (ME), Hemlock Hardwood Pine Forests (NH), Upland forests - mixed deciduous-coniferous forest (NJ), Mixed Northern Hardwoods (NY), Deciduous/Mixed Forest (upland) (PA), Deciduous Forests - Deciduous Forest Beech-Maple (RI), Forest Habitat - Mixed Forest (VA), Northern Hardwood Forest - Hemlock-Northern Hardwood Forest (VT), Hemlock forests (WV)

Places to Visit this Habitat:

Tunxis State Forest | CT
Savage River State Forest | MD
Allegany State Park | NY
Allegheny National Forest Non-Reserved | PA
Monongahela National Forest | WV

Associated Species: *Appendix lists scientific names*

BIRDS: barred owl, blackburnian warbler, black-throated blue warbler, black-throated green warbler, chesnut-sided warbler, eastern wood-pewee, hermit thrush, louisiana waterthrush, ovenbird, ruffed grouse, scarlet tanager, wood thrush

MAMMALS: black bear, fisher, gray fox, northern flying squirrel, porcupine, smoky shrew, southern flying squirrel, white-footed mouse, woodland jumping mouse

HERPTILES: northern redbelly snake

PLANTS: broad beech fern (Thelypteris hexagonoptera), flowering dogwood (Cornus florida), four-leaved milkweed (Asclepias quadrifolia), perfoliate bellwort (Uvularia perfoliata), round-leaved tick trefoil (Desmodium rotundifolium), spicebush (Lindera benzoin), squawroot (Conopholis americana), pinedrops (Pterospora andromedea)

Species of Concern (G1-G4): *Appendix lists scientific names*

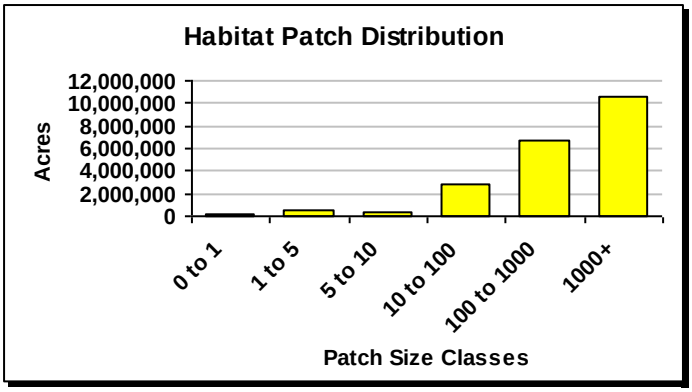
BIRDS: brown creeper, canada warbler, northern goshawk

MAMMALS: allegheny woodrat, indiana myotis, southern rock vole, southern water shrew, virginia northern flying squirrel

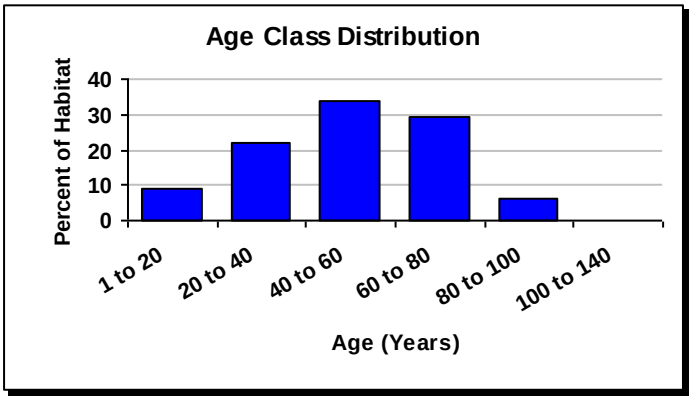
HERPTILES: cheat mountain salamander, eastern massasauga, green salamander, mountain earth snake, northern spring salamander

INSECTS: early hairstreak butterfly, spicebush swallowtail butterfly, west virginia white

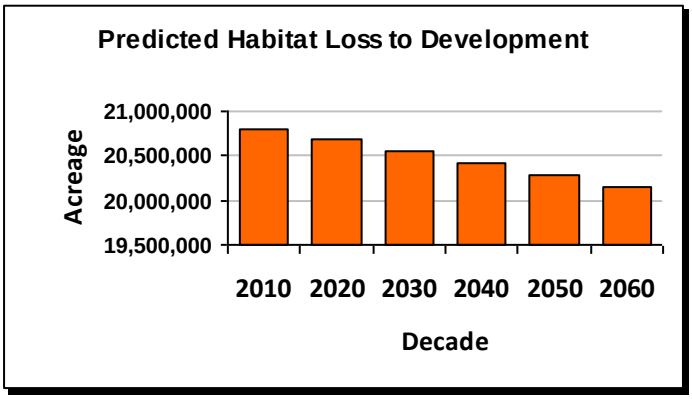
PLANTS: American ginseng (Panax quinquefolius), appalachian blue violet (Viola appalachiensis), black bugbane (Actaea racemosa), Case's ladies'-tresses (Spiranthes casei), hairy beardtongue (Penstemon hirsutus), laurentian bladder fern (Cystopteris laurentiana), mountain bugbane (Actaea podocarpa), small skullcap (Scutellaria parvula)



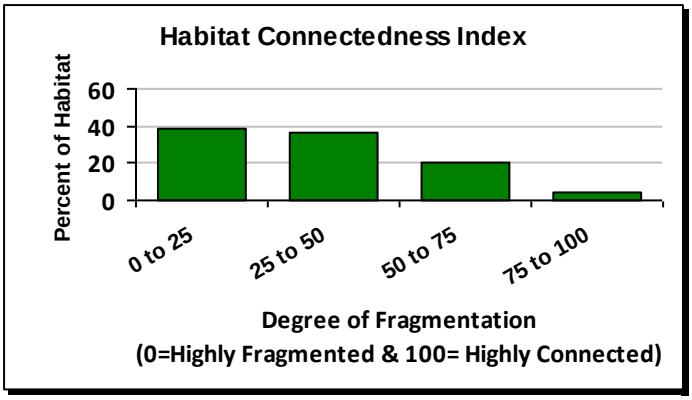
The average patch size for this habitat is 19 acres and the largest single patch is 39,064 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



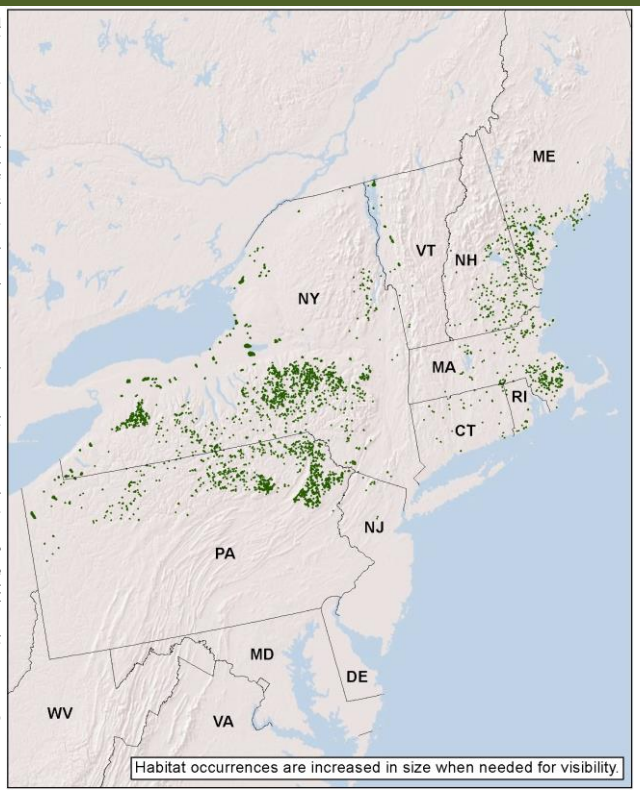
This chart shows the predicted loss of habitat over the next five decades (667,316 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 13,346 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North-Central Interior and Appalachian Acidic Peatland

Macrogroup: Northern Peatland



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Pennsylvania Natural Heritage Program

State Distribution: CT, MA, ME, NH, NJ, NY, PA, RI, VT

Total Habitat Acreage: 83,789

Percent Conserved: 38.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	45%	38,102	439	10,217	27,447
PA	36%	30,168	6,235	9,630	14,303
ME	6%	4,844	92	539	4,212
MA	5%	4,208	232	1,307	2,670
NH	3%	2,896	124	946	1,827
VT	3%	2,452	1,525	36	891
CT	1%	598	91	90	417
RI	0%	355	36	210	109
NJ	0%	164	141	17	7

Crosswalk to State Name Examples:

Shrub Inland Wetland - Bogs: (CT), Level Bog (MA), Leatherleaf Boggy Fen (ME), Highbush blueberry - mountain holly wooded fen (NH), Glacial Bog (NJ), Black Spruce-Tamarack Bog (NY), Leatherleaf – Bog-Rosemary Bog (PA), Dwarf Shrub Fen/Bog (RI), Open Peatlands - Dwarf Shrub Bog (VT)

Description:

A dwarf-shrub peatland of small basins south of the coldest regions of the Northeast down to near the glacial boundary, where stagnated ice left coarse deposits and glacial depressions. Vegetation is dominated by heath shrubs and dwarf-shrubs (e.g., leatherleaf), with patches of sedges and forbs. . Some peatlands may have a sparse tree layer (black spruce, larch, pitch pine). Although these are often called bogs, because the glacial "kettleholes" and small basins they form in are generally closed (i.e., without inlets or outlets of surface water), in most cases they should technically be called fens (albeit nutrient-poor ones) because the vegetation remains in contact with the groundwater.

Ecological Setting and Natural Processes:

The nutrient-poor substrate and the reduced throughflow of water create conditions fostering the development of peat and peatland vegetation. In deeper basins, the vascular vegetation grows on a peat mat over water, with no mineral soil development.

Similar Habitat Types:

Occur mostly south of the range of Boreal-Laurentian-Acadian Acidic Basin Fen. Similar to Laurentian-Acadian Conifer-Hardwood Acid Swamp, though with basin-associated landscape settings and vegetation typical of a more temperate climate.

Crosswalk to State Wildlife Action Plans:

Shrub Inland Wetland - Bogs: (CT), Peatlands - Fens (MA), Peatlands (ME), Peatlands - Open Peatlands (NH), Open Acidic Peatlands (NY), Wetlands - Forested Wetlands and Bogs (PA), Shrub Wetlands - Shrub Bog Unspecified (RI), Open Peatlands - Dwarf Shrub Bog (VT)

Places to Visit this Habitat:

Waterboro Barrens Preserve | ME
Hickory Lake State Forest | NY
Delaware State Forest | PA
Erie National Wildlife Refuge - Seneca Division | PA
Pymatuning State Park | PA

Associated Species: *Appendix lists scientific names*

BIRDS: alder flycatcher, blue-winged teal, Wilson's snipe, northern harrier, northern waterthrush, swamp sparrow, white-throated sparrow, willow flycatcher, yellow-bellied flycatcher

MAMMALS: meadow jumping mouse, masked shrew, snowshoe hare, southern red-backed vole

HERPTILES: queen snake, ribbon snake

INSECTS: azure bluet, green-striped darner, Henry's elfin, lilypad clubtail, northern bluet, petite emerald, ski-tipped emerald, sweetflag spreadwing

PLANTS: bog goldenrod (Solidago uliginosa), bog rosemary (Andromeda polifolia), boreal bog sedge (Carex magellanica), flatleaf bladderwort (Utricularia intermedia), common labrador tea (Ledum groenlandicum), northern comandra (Geocaulon lividum), northern green orchid (Platanthera aquilonis), pod grass (Scheuchzeria palustris), sword bogmat (Wolffiella gladiata), twig-rush (Cladium mariscoides)

Species of Concern (G1-G4): *Appendix lists scientific names*

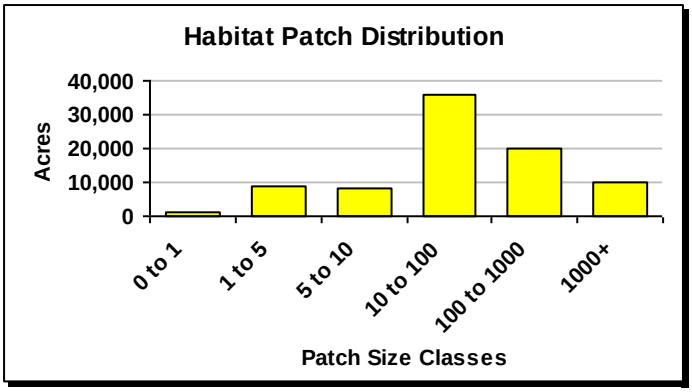
BIRDS: olive-sided flycatcher, rusty blackbird

MAMMALS: snowshoe hare

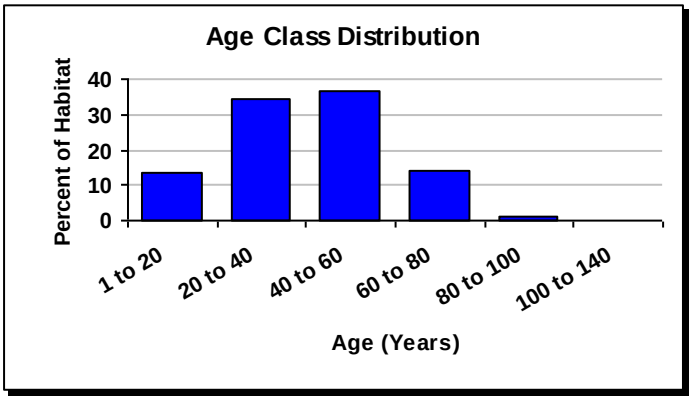
HERPTILES: Blanding's turtle, jefferson salamander

INSECTS: Appalachian eyed brown, attenuated bluet, black dash, bog copper, bog elfin, bogbean buckmoth, bronze copper, chain fern corer moth, coastal bog metarranthis, dusky azure, ebony boghaunter, elfin skimmer, four-lined chocolate moth, Harris's checkerspot, Hessel's hairstreak, incurvate emerald, mottled darner, new England bluet, pitcher plant borer moth, pitcher plant moth, ringed boghaunter, sundew cutworm Moth

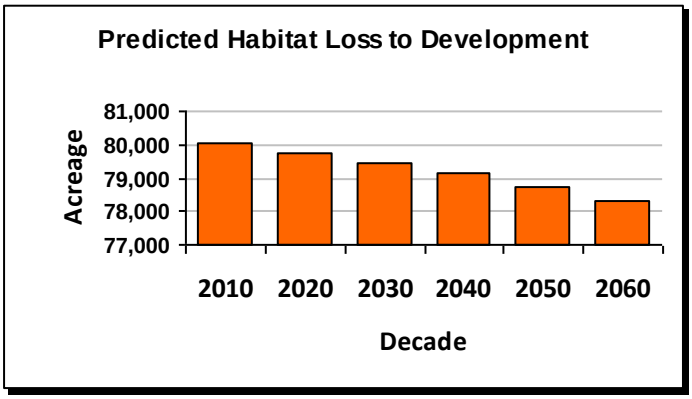
PLANTS: swamp-pink (Arethusa bulbosa), white-fringe orchis (Platanthera blephariglottis)



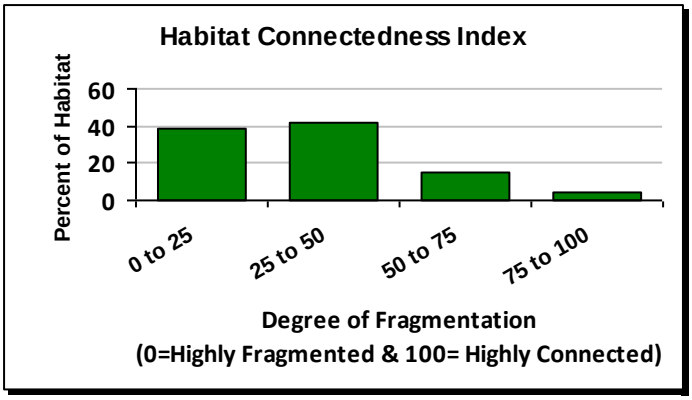
The average patch size for this habitat is 9 acres and the largest single patch is 2,839 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



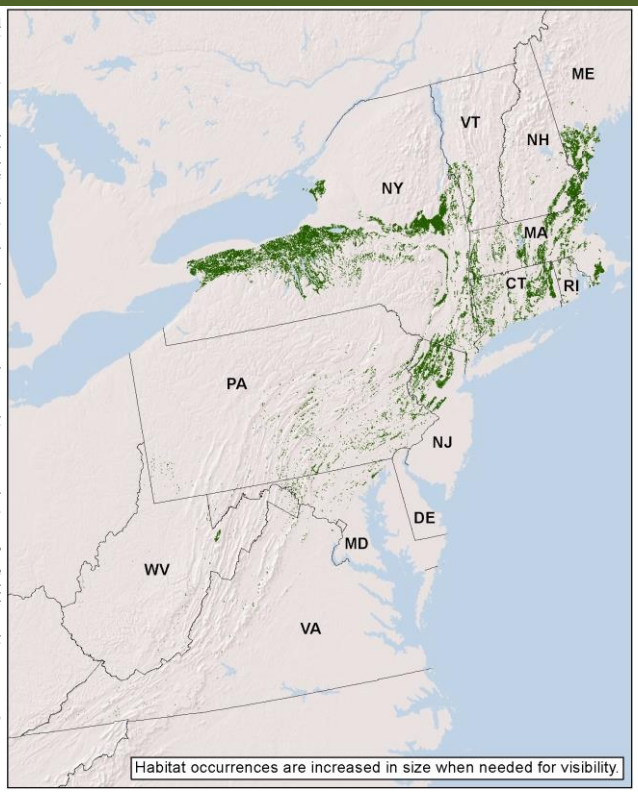
This chart shows the predicted loss of habitat over the next five decades (1,711 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 34 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North-Central Interior and Appalachian Rich Swamp

Macrogroup: Northern Swamp



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Elizabeth Thompson (Vermont Land Trust)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 830,818

Percent Conserved: 12.0%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	57%	477,197	8,788	23,091	445,318
MA	12%	97,085	3,219	20,942	72,924
NJ	8%	65,853	14,570	3,360	47,923
CT	7%	61,367	3,321	7,547	50,499
ME	6%	50,962	1,159	2,184	47,618
NH	3%	28,320	1,780	4,476	22,064
PA	3%	28,125	1,271	1,786	25,068
VT	1%	8,935	118	649	8,167
RI	1%	5,679	255	737	4,687
MD	1%	4,219	298	270	3,651
VA	0%	1,932	79	49	1,804
WV	0%	1,096	46	45	1,006
DE	0%	28	0	4	25
DC	0%	19	0	0	19

Crosswalk to State Name Examples:

Circumneutral Maple/Ash Basin Swamp (CT), Central Appalachian Basic Seepage Swamp (DE), Red Maple-Black Ash Swamp (MA), Montane Basic Seepage Swamp (MD), Red Maple - Black Ash Swamp (NH), Calcareous Seepage Swamp (NJ), Red Maple-Tamarack Peat Swamp (NY), Red Maple - Black Ash Palustrine Forest (PA), Red Maple/Ash Swamp (RI), Central Appalachian Basic Seepage Swamp (VA), Hardwood Swamps - Calcareous Red Maple-Tamarack Swamp (VT), Wetlands - Scrub/Shrub Swamps (PA)

Description:

A hardwood or occasionally mixed swamp of alkaline wetlands associated with limestone or other calcareous substrate in the southern portion of the region. Red maple and black ash are the dominant deciduous trees in most examples. Conifers may include larch, but typically not northern white cedar, which is characteristic of more northern wetlands. The canopy can be variable, as there may be shrubby or herbaceous openings within the swamp. A diverse ground cover is made up of some combination of herbs indicative of nutrient-rich conditions, ferns, and bryophytes characteristic of fens.

Ecological Setting and Natural Processes:

This forested wetland occurs at low to mid elevations. They are found in poorly drained depressions or at the margins of stream valley bottoms, where higher pH and/or nutrient levels are associated with a rich flora. The substrate is primarily mineral soil, but there may be some peat development. Basin settings may still be hydrologically connected to nearby streams.

Similar Habitat Types:

Similar to Laurentian-Acadian Alkaline Conifer-Hardwood Swamp, but with vegetation characteristic of a warmer climate. North-Central Appalachian Acidic Swamps include mixed swamps in the same part of the Northeast, but in less enriched settings, with different tree dominance and a less rich flora. Small patch rich fens may be embedded within the larger swamp complex.

Crosswalk to State Wildlife Action Plans:

Forested Inland Wetland - unspecified (CT), Forested Swamps (MA), Forested Seepage Wetlands (MD), Mixed Hardwood Swamp (NY), Wetlands - Forested Wetlands and Bogs (PA), Wetlands - Scrub/Shrub Swamps (PA), Forested Wetlands - Forested Deciduous Wetland Unspecified (RI), Hardwood Swamps - Calcareous Red Maple-Tamarack Swamp (VT)

Places to Visit this Habitat:

Salmon River State Forest | CT
Willowdale State Forest | MA
Wallkill River National Wildlife Refuge | NJ
Montezuma National Wildlife Refuge | NY
Canaan Valley National Wildlife Refuge | WV

Associated Species: *Appendix lists scientific names*

BIRDS: alder flycatcher, american black duck, blue-winged teal, least flycatcher, northern waterthrush, red-shouldered hawk, swamp sparrow, willow flycatcher, wood duck

MAMMALS: beaver

HERPTILES: four-toed salamander, longtail salamander, northern cricket frog, red-eyed slider, southern leopard frog, spotted salamander

INSECTS: Acadian hairstreak, bog tiger moth, frosted whiteface, Kennedy's emerald

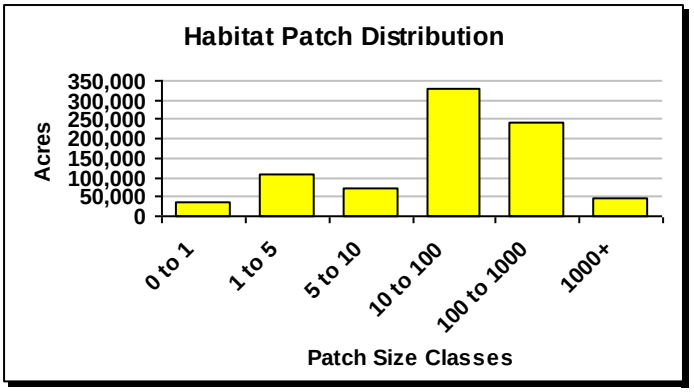
PLANTS: big shellbark hickory (Carya laciniosa), bitternut hickory (Carya cordiformis), dwarf dogwood (Cornus canadensis), four-flower loosestrife (Lysimachia quadriflora), naked bishop's-cap (Mitella nuda), pumpkin ash (Fraxinus profunda), purple avens (Geum rivale), roundleaf goldenrod (Solidago patula), showy lady's-slipper (Cypripedium reginae), yellow sedge (Carex flava)

Species of Concern (G1-G4): *Appendix lists scientific names*

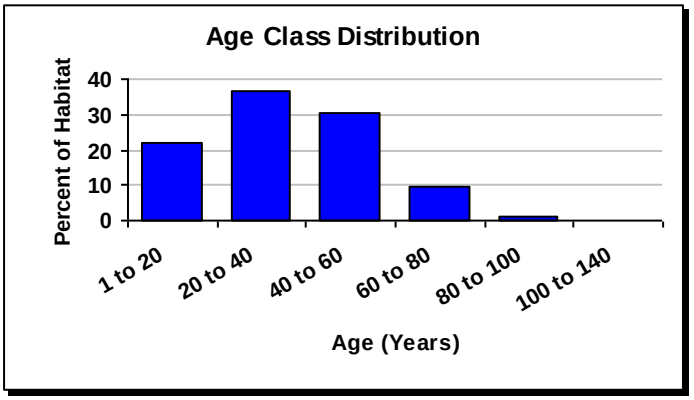
INSECTS: sable clubtail (Gomphus rogersii)

PLANTS: autumn willow (Salix serissima), Engelmann's spikerush (Eleocharis engelmannii), Hill's pondweed (Potamogeton hillii), many-headed sedge (Carex sychnocephala), prairie straw sedge (Carex suberecta), short-fruit rush (Juncus brachycarpus), spreading globeflower (Trollius laxus), weak stellate sedge (Carex seorsa)

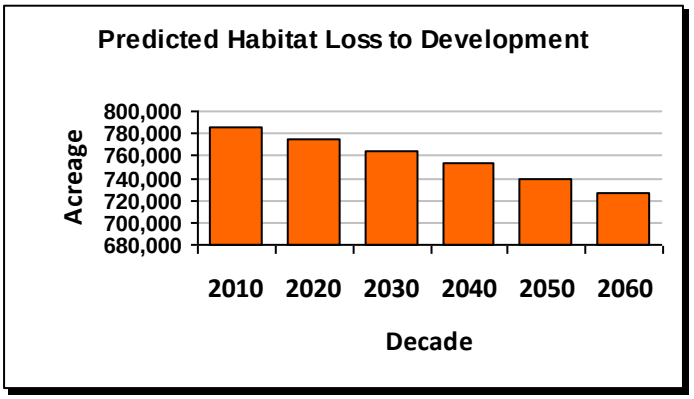
© Elizabeth Thompson (Vermont Land Trust)



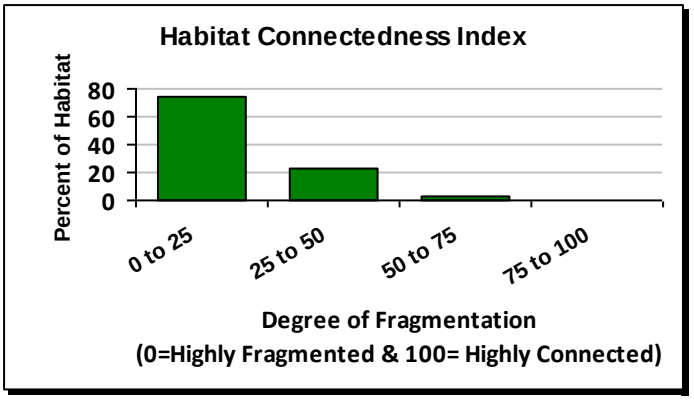
The average patch size for this habitat is 5 acres and the largest single patch is 3,380 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



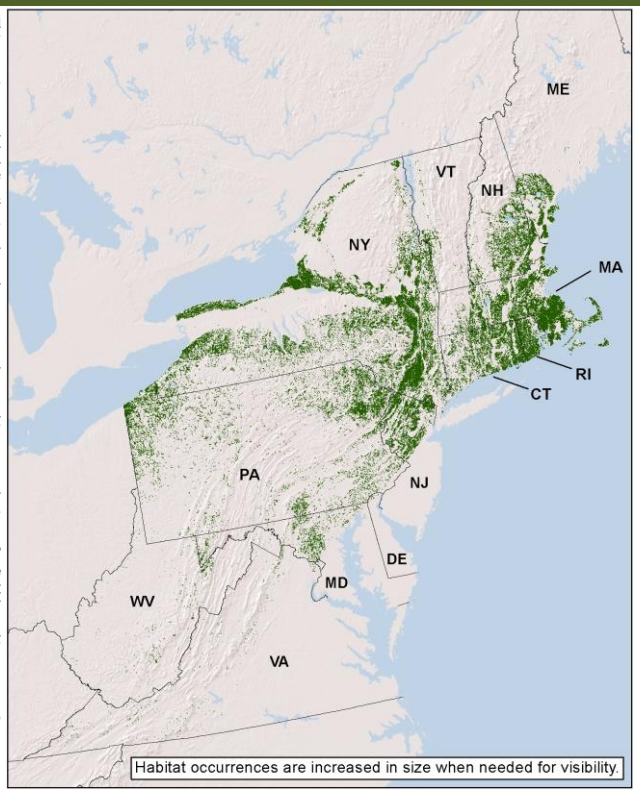
This chart shows the predicted loss of habitat over the next five decades (58,581 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1,172 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North-Central Appalachian Acidic Swamp

Macrogroup: Northern Swamp



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Shane Gebauer (New York Natural Heritage Program)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 1,505,822

Percent Conserved: 19.1%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
NY	38%	573,190	12,114	41,979	519,097
MA	18%	272,643	13,012	62,775	196,856
PA	14%	213,320	15,593	42,685	155,042
CT	7%	112,088	6,555	17,448	88,085
NJ	6%	86,025	18,977	6,977	60,071
NH	6%	85,981	3,020	15,884	67,078
RI	4%	67,734	6,254	13,470	48,010
ME	4%	61,849	1,027	4,633	56,189
MD	1%	15,080	424	2,666	11,991
VT	1%	10,235	149	544	9,542
VA	0%	4,111	113	498	3,500
WV	0%	3,060	22	180	2,857
DE	0%	358	6	137	215
DC	0%	147	0	0	147

Crosswalk to State Name Examples:

Acidic Red Maple-Ericaceous Basin Swamp (CT), Red Maple/Tussock Sedge Wooded Marsh (DE), Hemlock/Inland Atlantic White Cedar Swamp (MA), Montane - Piedmont Acidic Seepage Swamp (MD), Red Maple - Skunk Cabbage Swamp (NH), Inland Red Maple Swamp (NJ), Red Maple-Hardwood Swamp (NY), Red Maple - Mixed Shrub Palustrine Woodland (PA), Hemlock/Hardwood Swamp (RI), Central Appalachian Low-Elevation Acidic Seepage Swamp (VA), Red Maple-White Pine-Huckleberry Swamp (VT)

Description:

A conifer or mixed conifer-hardwood swamp of poorly drained acidic substrates throughout central New England and the Central Appalachians, encompassing a broad range of basin, seepage, and stream-associated wetland communities. Hemlock is usually present and may be dominant. It is often mixed with deciduous wetland trees such as red maple or black gum. Spruce is rarely present. Basin swamps tend to be more nutrient-poor than seepage swamps; in some settings, the two occur adjacent to each other with the basin swamp vegetation surrounded by seepage swamp vegetation on its upland periphery.

Ecological Setting and Natural Processes:

Occurs at low to mid elevations (generally <2000 feet) in poorly drained depressions that may be in proximity to a stream. The acidic substrate is mineral soil, often with a component of organic muck; if peat is present, it usually forms a thin layer over the mineral soil rather than a true peat substrate.

Similar Habitat Types:

Similar to the Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp system, but with vegetation characteristic of a warmer climate. North-Central Interior and Appalachian Rich Swamps occur in the same region, but in more enriched hydrologic settings. Small patch poor fens may be embedded within larger wetland complexes of this type.

Crosswalk to State Wildlife Action Plans:

Forested Inland Wetland - Red/Black Spruce Swamps (CT), Forested Swamps (MA), Upland Depression Swamps (MD), Forested wetlands - hardwood swamps (NJ), Mixed Hardwood Swamp (NY), Wetlands - Forested Wetlands and Bogs (PA), Forested Wetlands - Forested Deciduous Wetland Unspecified (RI), Wetland Habitat - Forested (VA), Softwood Swamps - Hemlock Swamp (VT)

Places to Visit this Habitat:

Pachaug State Forest | CT
Douglas State Forest | MA
Great Swamp National Wildlife Refuge | NJ
Stewart State Forest | NY
Delaware State Forest | PA

Associated Species: *Appendix lists scientific names*

BIRDS: blue-headed vireo, great-crested flycatcher, green heron, green-winged teal, northern waterthrush, veery, wood duck, yellow-bellied flycatcher

MAMMALS: black bear, golden mouse, northern flying squirrel, snowshoe hare

HERPTILES: spotted turtle

INSECTS: arctic skipper, belted whiteface, boreal bluet, common sanddragon, emerald spreadwing, great blue skimmer, harlequin darner

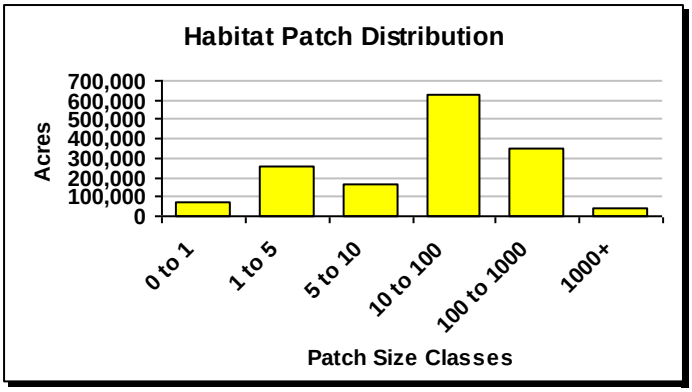
PLANTS: bog rosemary (Andromeda polifolia), boreal bog sedge (Carex magellanica), bushy cinquefoil (Potentilla paradoxa), canada lily (Lilium canadense), common labrador tea (Ledum groenlandicum), creeping snowberry (Gaultheria hispidula), hairy hedge-nettle (Stachys pilosa), smooth gooseberry (Ribes hirtellum), swamp dock (Rumex verticillatus), sweet bayberry (Myrica gale)

Species of Concern (G1-G4): *Appendix lists scientific names*

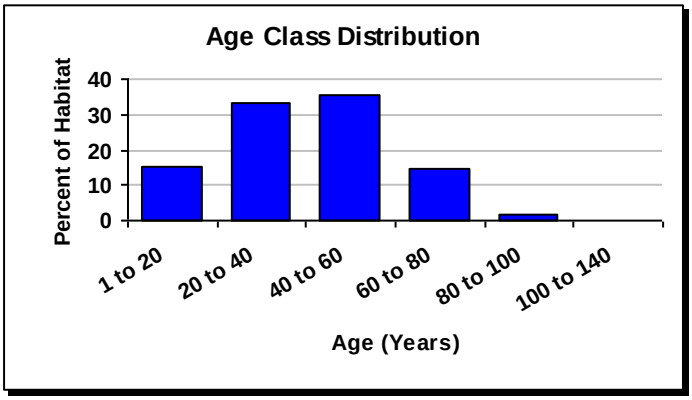
BIRDS: loggerhead shrike, olive-sided flycatcher

INSECTS: Amber-winged spreadwing, attenuated bluet, bog elfin, bog oligia, broad-lined catopyrrha, chain fern corer moth, macrochilo louisiana, northern brocade moth, white corporal

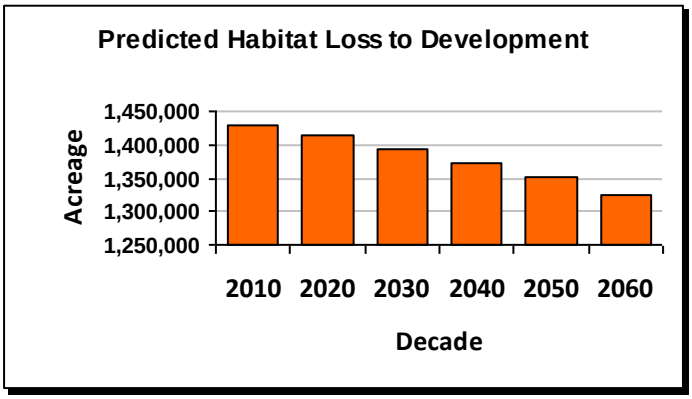
PLANTS: Collins' sedge (Carex collinsii), dwarf azalea (Rhododendron atlanticum), golden puccoon (Lithospermum caroliniense), incurved umbrella-sedge (Cyperus aristatus), many-fruit false-loosestrife (Ludwigia polycarpa), mitchell's sedge (Carex mitchelliana), tall beakrush (Rhynchospora macrostachya), tall bentgrass (Agrostis altissima)



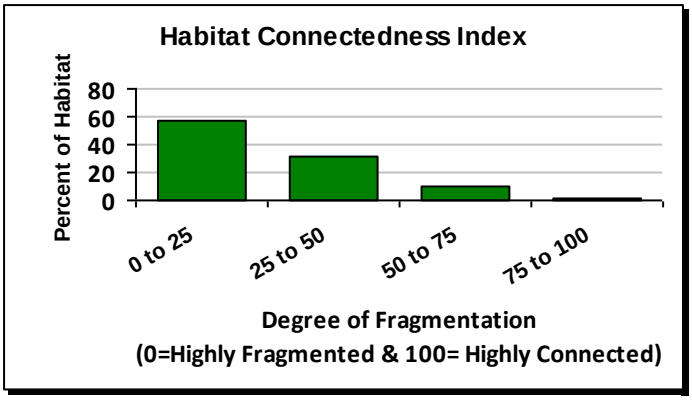
The average patch size for this habitat is 4 acres and the largest single patch is 2,811 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



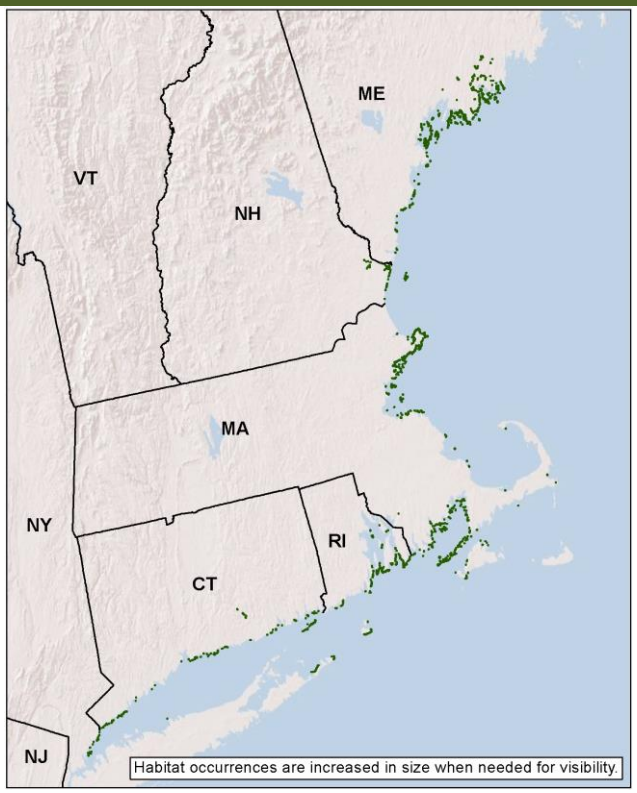
This chart shows the predicted loss of habitat over the next five decades (104,239 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 2,085 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Acadian-North Atlantic Rocky Coast

Macrogroup: Rocky Coast



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Josh Royte (The Nature Conservancy, Maine)

State Distribution: CT, MA, ME, NH, NY, RI

Total Habitat Acreage: 7,706

Percent Conserved: 16.6%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
ME	41%	3,146	270	223	2,653
MA	34%	2,626	150	305	2,171
RI	14%	1,064	97	61	907
CT	5%	417	45	14	358
NY	3%	242	0	55	187
NH	3%	211	5	57	149

Crosswalk to State Name Examples:

Unique And Man-Made - Coastal Bluffs And Headlands (CT), Marine Intertidal: Rocky Shore (MA), Crowberry - Bayberry Headland (ME), Coastal Rocky Headland (NH), Marine Rocky Intertidal (NY), Rocky Shore (RI)

Description:

An open rocky shoreline found in the narrow zone between the high tide line and the upland wooded areas. These intertidal zones of solid rock are often covered with seaweeds that tolerate extremes of exposure to winds, waves, currents, and ice-scour. Blue-green algae are common in the high intertidal zones; barnacles in the mid-intertidal zone; mussels in the lower intertidal. Diagnostic species include seaweeds (Irish moss, rockweed, knotted wrack, hollow-stemmed kelp) and invertebrates (blue mussels, common periwinkles, dogwhelks, and springtails). Tide pools provide nurseries for lumpfish, sea snails, pollock, and other fish. Many bird species frequent these: purple sandpiper, ruddy turnstone, sanderling, black-bellied plover, American oystercatcher, and pectoral sandpiper.

Ecological Setting and Natural Processes:

This system is found on rocky shores from the New England coast to the Canadian Maritimes. Slopes vary from flat rocks to cliffs. The intertidal zone widens with increasing maritime influence, and subjects these landscapes to extremes of wind, salt spray, and fog. Many coastal islands in this zone have graminoid-shrub areas that were maintained by sheep grazing and that now persist even after grazing has ceased.

Similar Habitat Types:

Other bare rock system types in which environmental conditions discourage the growth of trees and many other types of vegetation include Great Lakes Alvar, Southern and Central Appalachian Mafic Glade and Barrens, among others, though obvious biogeographic and ecological differences exist. Maritime forests and coastal heathlands and grasslands are often just inland.

Crosswalk to State Wildlife Action Plans:

Unique and Man-Made - Coastal Bluffs and Headlands (CT), Rocky Coastlines (MA), Rocky Coastlines and Islands (ME), Coastal Islands (NH), Intertidal - Estuarine Rocky Shore Bedrock (RI)

Places to Visit this Habitat:

Selden Neck Island State Park | CT
Boston Harbor Islands State Park | MA
Petit Manan National Wildlife Refuge | ME
Hither Hills State Park | NY
Bay Islands | RI

Associated Species: *Appendix lists scientific names*

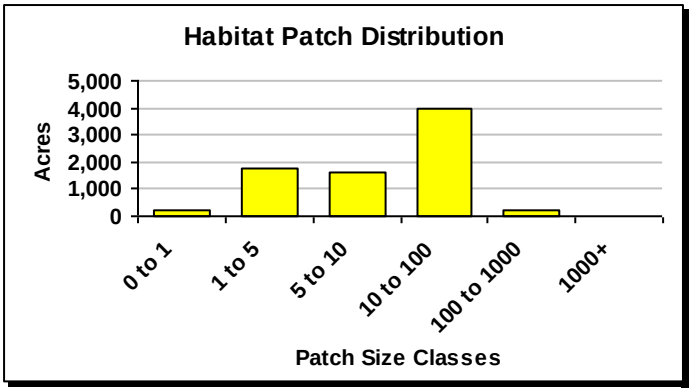
BIRDS: american black duck, atlantic puffin, black duck, common eider, great black-backed gull, great cormorant, herring gull, leach's storm petrel, northern gannet, razorbill, wintering purple sandpiper

INSECTS: crowberry blue butterfly

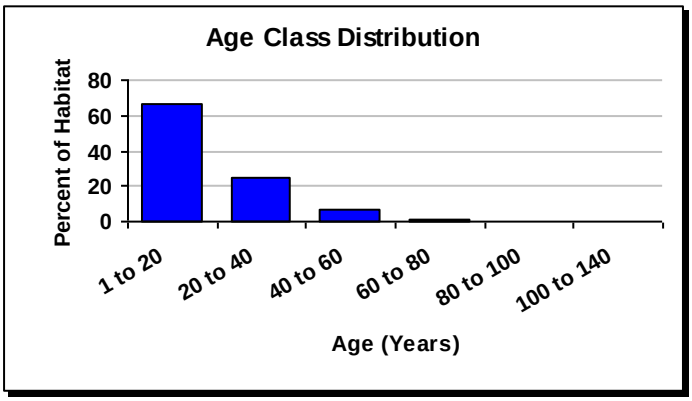
PLANTS: beach plum (Prunus maritima), bird's-eye primrose (Primula mistassinica), marsh felwort (Lomatogonium rotatum), nova scotia false foxglove (Agalinis neoscotica)

Species of Concern (G1-G4): *Appendix lists scientific names*

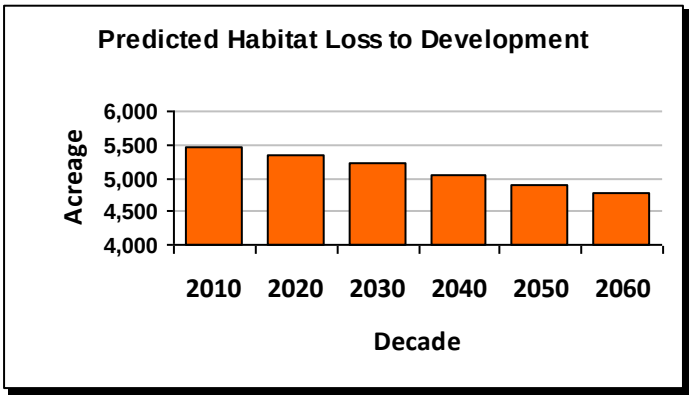
INSECTS: crowberry blue butterfly



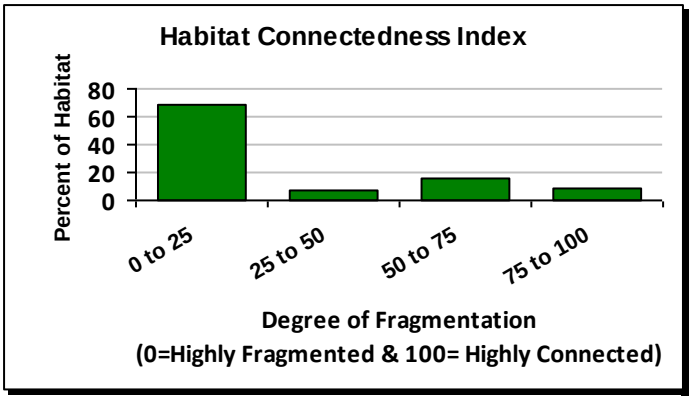
The average patch size for this habitat is 2 acres and the largest single patch is 81 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



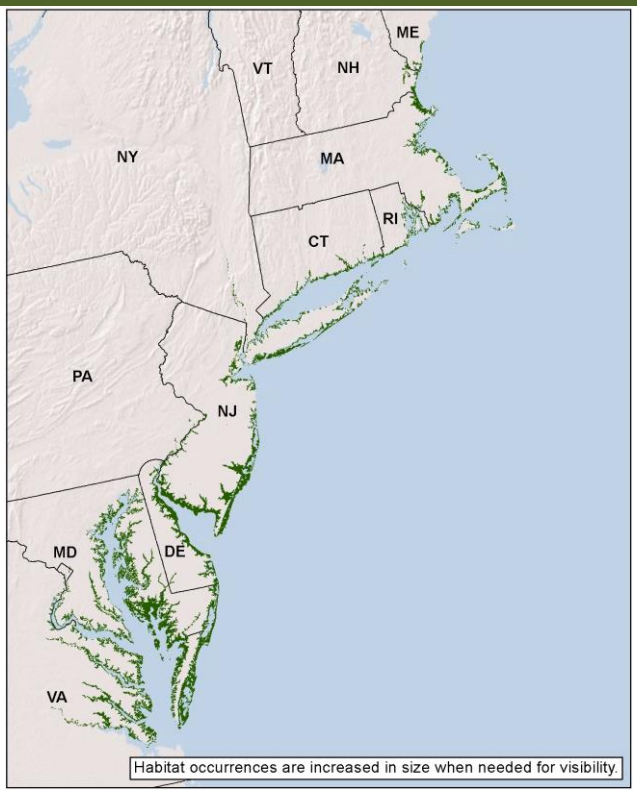
This chart shows the predicted loss of habitat over the next five decades (689 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 14 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

North Atlantic Coastal Plain Tidal Salt Marsh

Macrogroup: Tidal Marsh



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

© Kathleen Strakosch Walz (New Jersey Natural Heritage Program)

State Distribution: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA

Total Habitat Acreage: 920,107

Percent Conserved: 45.2%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
MD	27%	245,840	39,574	66,003	140,264
NJ	25%	228,298	126,237	3,886	98,175
VA	22%	204,148	32,632	55,758	115,758
DE	9%	85,398	16,761	25,547	43,090
MA	7%	67,163	11,057	16,240	39,867
NY	5%	49,268	6,189	3,152	39,927
CT	2%	18,538	2,751	4,088	11,699
RI	1%	8,583	1,213	1,116	6,254
NH	1%	7,214	601	1,155	5,458
ME	0%	3,901	1,600	82	2,219
PA	0%	1,636	516	58	1,062
DC	0%	120	0	3	117

Crosswalk to State Name Examples:

Salt/Brackish Intertidal Marsh (CT), North Atlantic High/Low Salt Marsh (DE), Estuarine Intertidal: Salt Marsh (MA), Tidal Mesohaline Marsh (MD), Spartina Saltmarsh (ME), Salt Marshes (NH), Salt Marsh Complex (NJ), High/Low Salt Marsh (NY), Freshwater Tidal Mixed High Marsh (PA), Salt Marsh (RI), High/Low Salt Marsh (VA), Intertidal Flat (NH)

Description:

A complex of tidally influenced marshes from the coastal shore on up the tidal rivers of the Northern Atlantic Coastal Plain. This habitat includes salt marsh, brackish marsh, and freshwater tidal marsh. A salt marsh profile features a low regularly flooded marsh dominated by salt marsh cordgrass; a higher irregularly flooded marsh dominated by saltmeadow cordgrass and saltgrass; low hypersaline pannes characterized by saltwort; and a salt scrub ecotone characterized by marsh elder, groundsel-tree, and switchgrass. Brackish areas support salt marsh cordgrass, giant cordgrass, narrowleaf cattail, and bulrush. Freshwater tidal areas include wild rice marshes, and forbs such as water hemp, and rosemallow.

Ecological Setting and Natural Processes:

The salt/brackish/oligohaline-freshwater gradient tracks the degree to which intertidal flats are removed from the open ocean. Brackish marshes can occur along upper edges of salt marshes and along tidal rivers. Freshwater tidal marshes occur on the upper reaches of large rivers influenced by tidal flooding beyond the reach of the salt wedge. Marshes of lower salinity levels are best developed in Chesapeake and Delaware Bays.

Similar Habitat Types:

These marshes are generally more extensive than those along the coast north of the coastal plain (Acadian Coastal Salt Marsh). They experience lunar tides, as opposed to the irregular wind-driven tides of the Atlantic Coastal Plain Embayed Region Freshwater and Brackish Marshes of southeast Virginia, and tend to be more productive than marshes there.

Crosswalk to State Wildlife Action Plans:

Tidal Wetland - Tidal Wetlands (CT), Emergent Tidal Wetlands (DC), Freshwater Tidal Forested and Scrub-Shrub Wetlands (DE), Freshwater Tidal Marshes (DE), Estuaries (MA), Tidal Marshes (MD), Estuarine Emergent Saltmarsh (ME), Salt Marshes (NH), Tidal salt marsh (NJ), Salt Marsh (NY), Wetlands - Emergent Estuarine (PA), Intertidal - Estuarine Intertidal Emergent Brackish Marsh (RI), Wetland Habitat - Emergent (VA)

Places to Visit this Habitat:

Bombay Hook National Wildlife Refuge | DE
Assateague Island National Seashore | MD
Edwin B. Forsythe National Wildlife Refuge | NJ
Fire Island National Seashore | NY
Chincoteague National Wildlife Refuge | VA

Associated Species: *Appendix lists scientific names*

BIRDS: american oystercatcher, arctic tern, black skimmer, black-crowned night-heron, clapper rail, common tern, forster's tern, glossy ibis, great egret, gull-billed tern, little blue heron, marsh wren, northern harrier, osprey, royal tern, tricolored heron, willet, yellow-crowned night-heron

MAMMALS: north american least shrew

INSECTS: big bluet, Needham's skimmer, salt marsh skipper

PLANTS: american sea-blite (Suaeda calceoliformis), dwarf glasswort (Salicornia bigelovii), large marsh pink (Sabatia dodecandra), salt reedgrass (Spartina cynosuroides), saltmarsh bulrush (Schoenoplectus maritimus), saltmarsh false foxglove (Agalinis maritima), sea pink (Sabatia stellaris), seacoast angelica (Angelica lucida), seaside heliotrope (Heliotropium curassavicum)

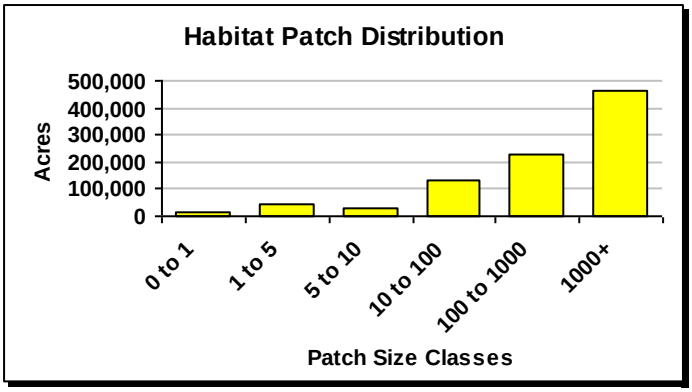
Species of Concern (G1-G4): *Appendix lists scientific names*

BIRDS: black rail, king rail, least tern, red knot, roseate tern, saltmarsh sparrow, seaside sparrow

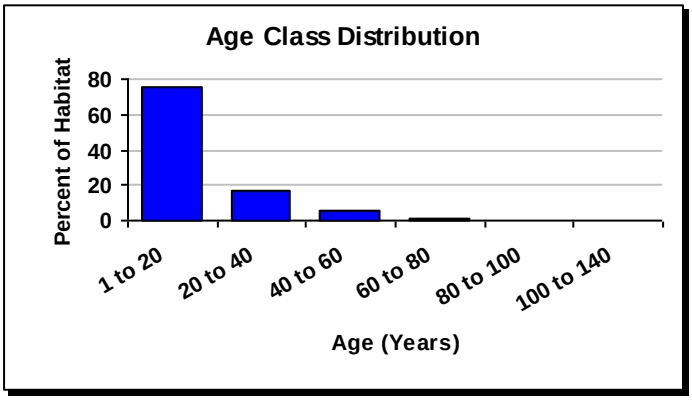
HERPTILES: diamondback terrapin, loggerhead, rainbow snake

INSECTS: checkered white, maritime sunflower borer moth, seaside goldenrod borer moth, spartina borer moth

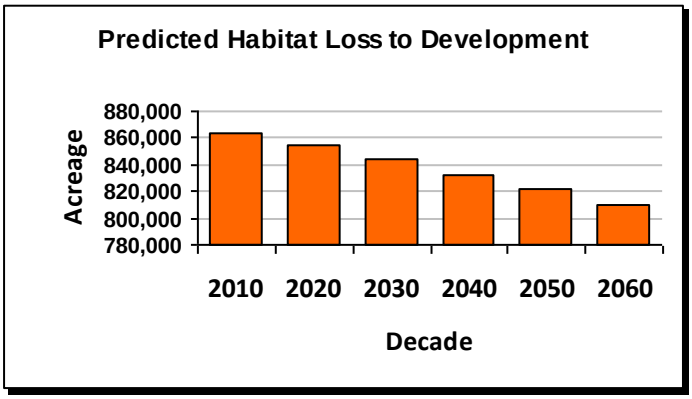
PLANTS: large salt marsh aster (Aster tenuifolius), Parker's pipewort (Eriocaulon parkeri), roland's sea-blite (Suaeda rolandii), salt marsh goosegrass (Puccinellia fasciculata), saltmarsh fleabane (Pluchea odorata), salt-marsh sedge (Carex recta), saltmarsh spikerush (Eleocharis halophila), seabeach dock (Rumex pallidus), seabeach knotweed (Polygonum glaucum), sea-chickweed (Honckenya peploides), seaside alder (Alnus maritima)



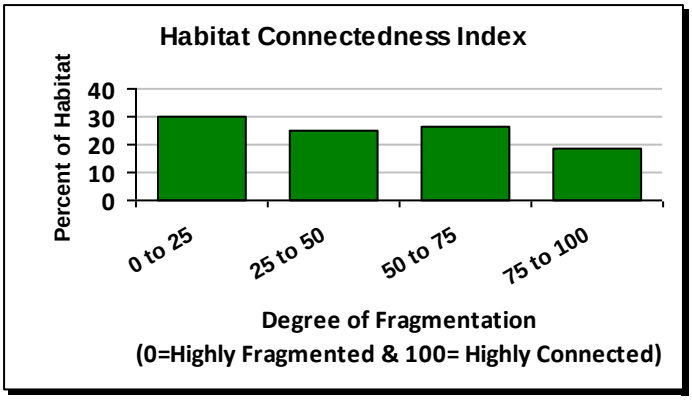
The average patch size for this habitat is 11 acres and the largest single patch is 19,464 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



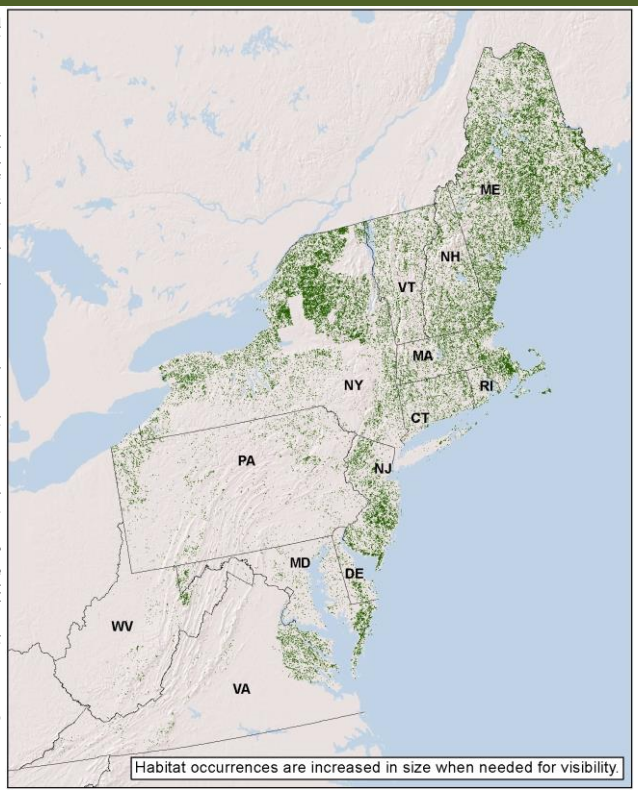
This chart shows the predicted loss of habitat over the next five decades (54,284 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 1,086 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.

Laurentian-Acadian Wet Meadow-Shrub Swamp

Macrogroup: Wet Meadow / Shrub Marsh



This map is a modeled distribution based on current data and is not a substitute for field based inventory. Contact your State Natural Heritage Ecologist for more information about this habitat.

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State Distribution: CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, WV

Total Habitat Acreage: 990,077

Percent Conserved: 25.5%

State	State Habitat %	State Acreage	GAP 1&2 (acres)	GAP 3 (acres)	Unsecured (acres)
ME	30%	297,075	11,928	39,478	245,668
NY	30%	293,979	59,329	38,332	196,318
MA	8%	76,718	4,358	17,980	54,380
NJ	7%	68,351	16,148	9,221	42,983
NH	6%	59,721	3,582	12,416	43,723
VT	4%	42,135	989	5,797	35,350
VA	4%	40,237	574	2,543	37,121
PA	4%	39,797	2,410	4,691	32,696
MD	3%	29,043	1,395	10,655	16,993
CT	2%	23,347	1,741	3,387	18,219
DE	1%	11,617	1,182	2,441	7,994
RI	1%	5,130	497	1,390	3,244
WV	0%	2,928	29	320	2,579

Crosswalk to State Name Examples:

Shrub Inland Wetland - Shrub Thickets (CT), Eastern Tussock Sedge Meadow (DE), Shrub Swamp (MA), Shrub Swamp (MD), Mixed Graminoid - Shrub Marsh (ME), Mixed Tall Graminoid - Scrub-Shrub Marsh (NH), Streamside/Lakeside Shrub Swamp (NJ), Sedge Meadow/Shrub Swamp (NY), Tussock Sedge Marsh (PA), Shrub Swamp (RI), Ridge And Valley Calcareous Spring Marsh (VA), Sedge Meadow (VT)

Description:

A shrub-dominated swamp or wet meadow on mineral soils characteristic of the glaciated Northeast and scattered areas southward. Examples often occur in association with lakes and ponds or streams, and can be small and solitary pockets or, more often, part of a larger wetland complex. The habitat can have a patchwork of shrub and herb dominance. Typical species include willow, red-osier dogwood, alder, buttonbush, meadowsweet, bluejoint grass, tall sedges, and rushes. Trees are generally absent or thinly scattered.

Ecological Setting and Natural Processes:

Shrub swamps and wet meadows are associated with lakes and ponds and along headwater and larger streams where the water level does not fluctuate greatly. They are commonly flooded for part of the growing season but generally do not have standing water throughout the season. This is a dynamic system that may return to marsh in beaver-impounded areas or succeed to wooded swamp with sediment accumulation or water subsidence.

Similar Habitat Types:

Most often occurs with Laurentian-Acadian Freshwater Marsh, acidic or circumneutral forested swamps, peatlands, and floodplain vegetation in large, diverse complexes.

Crosswalk to State Wildlife Action Plans:

Shrub Inland Wetland - Shrub Thickets (CT), Marshes and Wet Meadows - Wet Meadow (MA), Emergent Marsh and Wet Meadows (ME), Marsh and Shrub Wetlands (NH), Forested wetlands - scrub-shrub (NJ), Wet Meadow/Shrub Swamp (NY), Wetlands - Scrub/Shrub Swamps (PA), Emergent Wetlands - Emergent Marsh Shallow/ Wet Meadow (RI), Marshes and Sedge Meadows - Sedge Meadow (VT)

Places to Visit this Habitat:

Redden State Forest | DE
Chesapeake Forest Lands | MD
Wharton State Forest | NJ
Debar Mountain Wild Forest | NY
Canaan Valley National Wildlife Refuge | WV

Associated Species: *Appendix lists scientific names*

BIRDS: alder flycatcher, american woodcock, common yellowthroat, least bittern, nashville warbler, northern waterthrush, ruddy duck, sedge wren, swamp sparrow, tennessee warbler, veery, wilson's warbler, wilson's snipe, yellow warbler

MAMMALS: eastern cottontail, meadow jumping mouse, new england cottontail, northern bog lemming, northern short-tailed shrew, raccoon, smoky shrew, snowshoe hare, southern bog lemming, star-nosed mole, virginia possum, water shrew

HERPTILES: blue-spotted salamander, northern leopard frog, ribbon snake, spotted turtle

PLANTS: northern adder's-tongue (Ophioglossum pusillum), auricled twayblade (Listera auriculata), greater marsh-bellflower (Campanula uliginosa), swamp birch (Betula pumila), swamp lousewort (Pedicularis lanceolata)

Species of Concern (G1-G4): *Appendix lists scientific names*

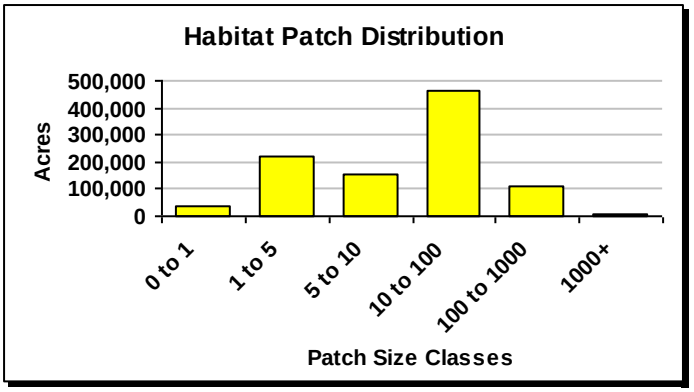
BIRDS: american bittern, black tern, rusty blackbird, three-toed woodpecker

MAMMALS: southern bog lemming

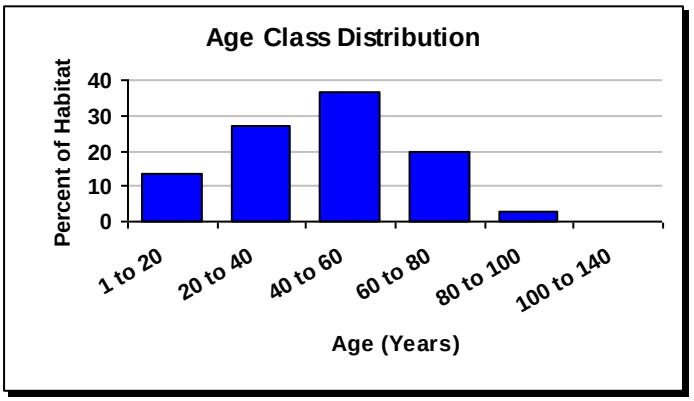
HERPTILES: Blanding's turtle, bog turtle, jefferson salamander, pine barrens treefrog, wood turtle

INSECTS: Clayton's copper butterfly, comet darner, don skipper, ebony boghaunter, elderberry long-horned beetle, helicta satyr, incurvate emerald, mottled darner, mulberry wing, tomah mayfly

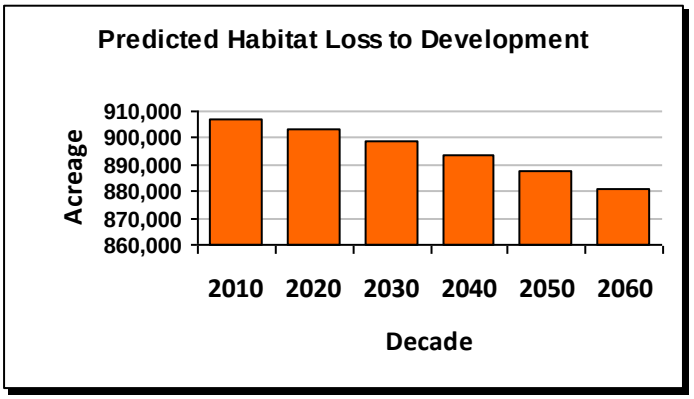
PLANTS: bead pinweed (Lechea pulchella), branching bur-reed (Sparganium androcladum), Long's bulrush (Scirpus longii), Ogden's pondweed (Potamogeton ogdenii), Pursh's goldenrod (Solidago uliginosa), stout smartweed (Polygonum robustius), Walter's paspalum (Paspalum dissectum)



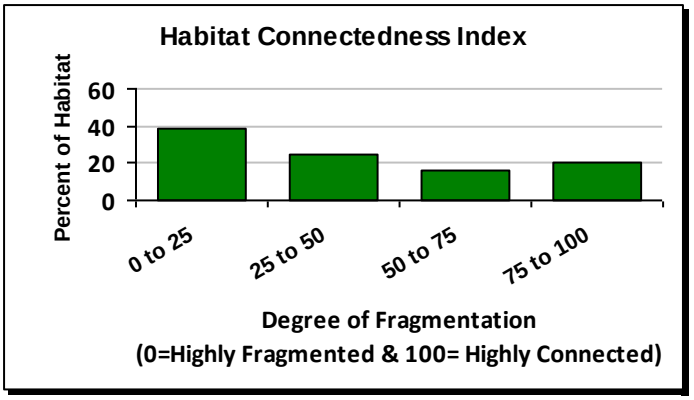
The average patch size for this habitat is 4 acres and the largest single patch is 1,460 acres. This chart shows the proportion of the habitat that is in each patch-size class.



This chart shows the average age of trees associated with this habitat based on forest Inventory data. For non-forested systems or small habitats the average age is influenced by the surroundings.



This chart shows the predicted loss of habitat over the next five decades (26,569 acres) if loss continues at the same rate as 1990-2000. The average rate of loss is 531 acres per year.



This metric measures how connected or fragmented the land directly surrounding (18 square miles) the habitat is, this the chart shows the proportion of the habitat in each connectedness class.