

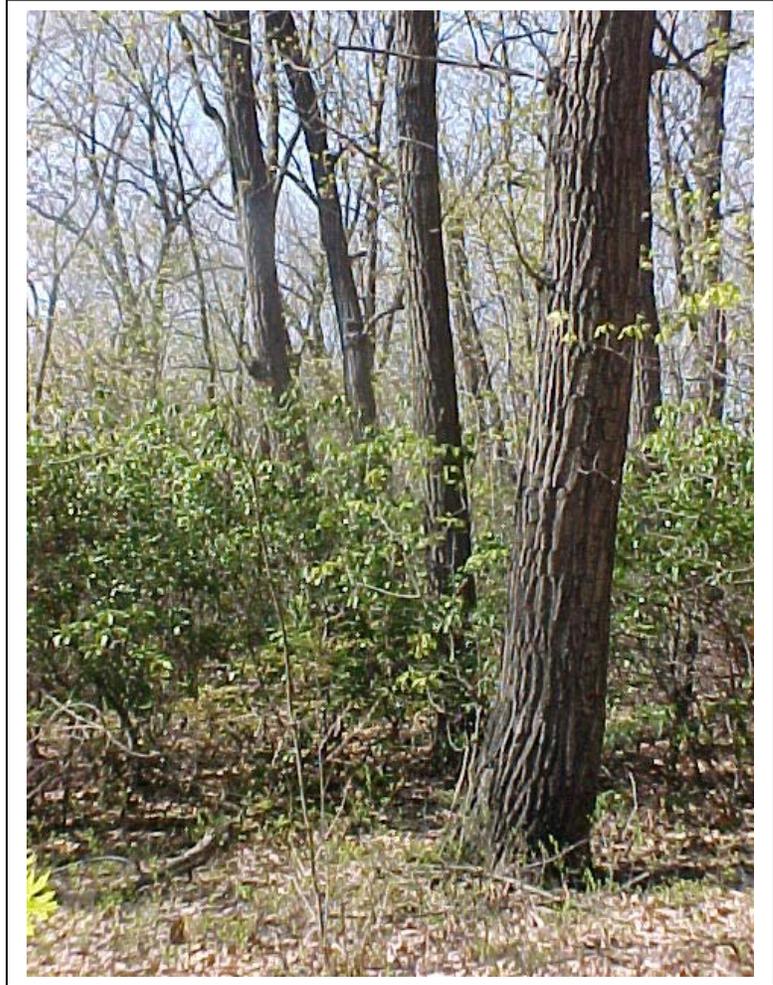
# Select Forest Communities of Monmouth County Parks

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## Chestnut Oak Forests

### Description

Chestnut oaks can be a dominant component of the forest on the poor and dry soils that are often found on top of cuesta ridges and hilltops. The open woodland is usually dominated by the evergreen mountain laurel in the understory. The sandy soils are protected from erosion by 'peanut stone' formed of pebbles and sand consolidated by iron oxide.



### Plant Components

#### Trees

- Chestnut Oak (*Quercus prinus*)
- Northern Red Oak (*Quercus rubra*)
- Black Oak (*Quercus velutina*)
- Scarlet Oak (*Quercus coccinea*)
- Chestnut (*Castanea dentata*)
- Black birch (*Betula lenta*)
- Hickory (*Carya* spp.)

#### Shrubs

- Mountain Laurel (*Kalmia latifolia*)
- Pinxterflower (*Rhododendron periclymenoides*)
- Lowbush blueberry (*Vaccinium angustifolium* & *V. pallidum*)
- Black Huckleberry (*Gaylussacia baccata*)
- Maple-leaved Viburnum (*Viburnum acerifolium*)

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### Herbs

- Spotted wintergreen (*Chimaphila maculata*)
- Wintergreen (*Gaultheria procumbens*)
- Path sedge (*Juncus tenuis*)
- Wild Sarsaparilla (*Aralia nudicaulis*)
- Bracken fern (*Pteridium aquilinum*)
- Pennsylvania sedge (*Carex pensylvanica*)
- White wood aster (*Eurybia divaricata*)
- White moss (*Leucobryum glaucum*)

### Ecology

These areas are subjected to extremes in climate, destructive weather and fires result in trees with broken tops and multiple trunks from resprouting. Evidence of fire can often be seen at the uphill side at the base of trunks where flames burn the hottest. The shrub layer is equally tolerant of extremes; for example, mountain laurel readily re-sprouts after a burn. Some of the chestnut oaks can reach significant age; rings on one tree cut at Mount Mitchell showed the tree to be over 135 years old.

### Threats

This community is influenced by occasional fires and may undergo change when fire is suppressed. The environment is usually very sandy and sloped, so erosion can be significant if the vegetative cover is compromised by poor trail or roadway design or by extensive disturbances from windstorm or catastrophic fires.

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## Beech – Oak Forest

### Description

American Beech dominated forests are found within the Inner Coastal Plain section of New Jersey. In addition to beech, these forests also include a tall canopy of mixed oak species, tulip trees, and American holly.



### Plant Components

#### Trees

- American Beech (*Fagus grandifolia*)
- White Oak (*Quercus alba*)
- Chestnut Oak (*Quercus prinus*)
- Black Oak (*Quercus velutina*)
- Tulip Tree (*Liriodendron tulipifera*)
- American Holly (*Ilex opaca*)
- Black Cherry (*Prunus serotina*)
- Sassafras (*Sassafras albidum*)

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## Shrubs

- Maple-leaved Viburnum (*Viburnum acerifolium*)
- Arrowwood (*Viburnum dentatum*)
- Black Huckleberry (*Gaylussacia baccata*)
- Pinxter Flower (*Rhododendron periclymenoides*)
- Mountain Laurel (*Kalmia latifolia*)
- Lowbush Blueberry (*Vaccinium pallidum*)
- Sweet Pepperbush (*Clethra alnifolia*)
- Bayberry (*Myrica pensylvanica*)
- Greenbrier (*Smilax* spp.)
- Dewberry (*Rubus flagellaris*)
- Japanese Honeysuckle (*Lonicera japonica*)
- Poison Ivy (*Toxicodendron radicans*)

## Herbs

- Rattlesnake Weed (*Hieracium venosum*)
- Spotted Wintergreen (*Chimaphila maculata*)
- Solomon's-seal (*Polygonatum biflorum*)
- False Solomon's seal (*Maianthemum racemosum*)
- Canada Mayflower (*Maianthemum canadense*)
- Beech Drops (*Epifagus virginiana*)
- Pink Lady's-slipper (*Cypripedium acaule*)
- Pennsylvania Sedge (*Carex pensylvanica*)

## Ecology

There are several beech and oak-dominated forest alliances making it difficult to distinguish one from the other. Typical species of these forests, however, consists of American beech with any combination of the oak species listed above with tulip tree and black birch components. The well-drained soils support arrowwood and maple-leaved viburnum with few herbaceous species.

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## Pine-Dominated Forest

### Description

Pine-dominated forests are representative of the southern coastal portions of Monmouth County and south to the Pine Barrens. These forests are dominated by fire-resistant pitch pine with components of shortleaf pine, black huckleberry, and lowbush blueberry.



## Plant Components

### Trees

- Pitch pine (*Pinus rigida*)
- Shortleaf pine (*Pinus echinata*)
- Black oak (*Quercus velutina*)
- Chestnut oak (*Quercus prinus*)
- White oak (*Quercus alba*)
- Scarlet oak (*Quercus coccinea*)
- Post oak (*Quercus stellata*)
- Sassafras (*Sassafras albidum*)

### Shrubs

- Scrub oak (*Quercus ilicifolia*)
- Blackjack oak (*Quercus marilandica*)
- Mountain laurel (*Kalmia latifolia*)

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- Black huckleberry (*Gaylussacia baccata*)
- Early lowbush Blueberry (*Vaccinium pallidum*)
- Staggerbush (*Lyonia mariana*)
- Dangleberry (*Gaylussacia frondosa*)
- Glaucous greenbrier (*Smilax glauca*)

### Herbs

- Golden heather (*Hudsonia ericoides*)
- Bracken fern (*Pteridium aquilinum*)
- Little bluestem (*Schizachyrium scoparium*)
- Pennsylvania sedge (*Carex pensylvanica*)
- Wild indigo (*Baptisia tinctoria*)
- Goat's rue (*Tephrosia virginiana*)
- Frostweed (*Helianthemum canadense*)
- Sweet goldenrod (*Solidago odora*)
- Pine Barrens sandwort (*Arenaria caroliniana*)
- Rattlesnake weed (*Hieracium venosum*)
- Ipecac spurge (*Euphorbia ipecacuanhae*)
- Stiff aster (*Ionactis linariifolius*)

### Ecology

These areas are unique to the Outer Coastal Plain region of New Jersey. A combination of sandy, infertile soils and a fire disturbance regime influences the types of plants able to reside here. This type of disturbance clears the forest floor of leaf litter and detritus, allowing pine seedlings to become established. The openness of pine-dominated forests allow for a considerable amount of light to reach the floor, allowing for the development of a dense shrub layer.

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## Red Maple-Dominated Swamp Forest

### Description

Located within the Inner Coastal Plain region of Monmouth County, red maple dominates these freshwater wetland areas along with skunk cabbage as a significant component. Black gum and green ash are also present in these areas. These forested wetlands are located in poorly drained depressions, valleys, and floodplains.



### Plant Components

#### Trees

- Red Maple (*Acer rubrum*)
- Black Gum (*Nyssa sylvatica*)
- Green Ash (*Fraxinus pennsylvanica*)
- Sweetgum (*Liquidambar styraciflua*)

#### Herbs

- Skunk Cabbage (*Symplocarpus foetidus*)

### Ecology

Red maple swamps have seasonally high water tables and poorly drained soils high in organic content. The canopy of red maple, black gum, and sweetgum provide some cover while skunk cabbage thrives in these wet, acidic soils.