2022

Vegetation of Rose Island

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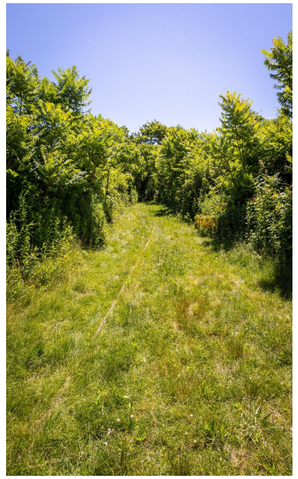

Maritime woodland

Natural History of Rose Island

Today Rose Island is covered with dense vegetation, but before World War II the island was cleared of trees and shrubs. Without trees or shrubs, military posts could see across the island from a high point. Military use of the island ended after World War II, and by 1969 the island was abandoned when the Newport bridge made the lighthouse obsolete as a navigational aid. Rose Island was listed in the national register in 1987. The island serves as an important bird sanctuary for nesting colonial waterbirds (egrets, herons, ibis). In 2012 the Newport Tree Conservancy aided the establishment of an arboretum on Rose Island showcasing plants from different parts of the world. The vegetation growing on Rose Island today has three distinct biological communities; maritime shrubland, maritime woodland, and human cultivated communities.

Cucumber (*Cucumis sativus*)

Spindle tree (*Euonymus europaeus*)

Human Impact and Future efforts

Rose Island was sold to the United States government in 1799 and there is little to no information on the vegetative species that have grown on the island until the present. Lighthouse keeper Charles Curtis planted fruits and vegetables on the island including, apple trees, green beans, and cucumbers. Today there is also a garden with various plants on the island. In the 19th century, Rose Island was mainly used as a quarantine station for yellow fever and cholera cases. In the 20th century, it became an ammunition dump for the Newport torpedo station. Ever since World War II, the island has had over 50 years of natural growth and as of the 1970s, the island became a protected bird sanctuary and later also an arboretum.

Arboretum additions to Rose Island

Under close management since private ownership, gardens and arboretum comprise an important but small area of the island, forming its own biological community. Nationally recognized as a level 1 arboretum with plants from all over the world including Colorado blue spruce (*Picea pungens*), Japanese black pine (*Pinus thunbergii*), spindle tree (*Euonymus europaeus*), river birch (*Betula nigra*), English oak (*Quercus robur*), swamp white oak (*Quercus bicolor*), pin oak (*Quercus palustris*), American elm (*Ulmus americana*), and slippery elm (*Ulmus rubra*).

Northern bayberry (*Myrica pensylvanica*) – maritime shrubland

Oriental Bittersweet (*Celastrus orbiculatus*) – maritime shrubland

Wild black cherry (*Prunus serotina*) – maritime woodland

Staghorn Sumac (*Rhus typhina*) – maritime woodland

Maritime Shrubland

The maritime shrub community is comprised of naturally short woody vegetation (less than 15 feet (5m) tall) of barrier island uplands and swales, where salt spray and wind erosion influence plant growth. The maritime shrubland communities across Rhode Island, of which Rose Island is a wonderful example, are dominated by honeysuckle (*Lonicera spp.*), oriental bittersweet (*Celastrus orbiculatus*), beach rose (*Rosa rugosa*), multiflora rose (*Rosa multiflora*), northern bayberry (*Morella pensylvanica*), beach plum (*Prunus maritima*), poison ivy (*Toxicodendron radicans*), sea-beach orache (*Atriplex cristata*), seabeach sandwort (*Honckenya peploides*), common saltwort (*Salsola kali*), and seabeach knotweed (*Polygonum glaucum*).

Maritime Woodland

The maritime woodlands community grows along coastal barrier islands that support a great diversity of plants and animals. Trees and other plants in maritime forests can deal with strong winds and salt spray but by being further away from the ocean's edge than the shrub community trees in the maritime woodlands grow taller, averaging about 30 feet (10m) tall. Many trees are multiple-stemmed and contorted from coastal pruning by winds carrying salt and sand. Many migratory birds travel to maritime woodlands to stop and rest during migration. The maritime woodland communities across Rhode Island, of which Rose Island is a wonderful example are dominated by trees such as black cherry (*Prunus serotina*), sassafras (*Sassafras albidum*), oaks (*Quercus sp.)*, red cedar (*Juniperus virginiana*), and staghorn sumac (*Rhus typhina*).

Maritime shrubland