

Vegetation of Rose Island

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Introduction: Welcome to Rose Island- formally called Conockonoquit Island to the Narragansett tribe (Jamestown historical society). Like most of RI, the ecology on Rose Island consists of maritime shrubland and maritime strand ecological communities. Before the 1970's, there was a lack of vegetation on the island. However, when the coastguard closed the lighthouse in 1971, the lack of activity and upkeep caused major vegetation overgrowth- thus creating the dense coastal maritime shrubland along the island we see there today.

Maritime (beach) Strand: The maritime beach strand community is a sparsely- vegetated community set above the daily high tides along the wrack line as part of the barrier beach system. This community co-occurs with the Marine Intertidal Sand/Gravel beach system, thriving in unstable sand, gravel, or cobble beaches. This community can withstand stressful environments; however, the vegetation may be scarce and often modified due to storm waves, salt spray, spring high tide events and wind erosion. The maritime strand community typically found in Rhode Island is largely dominated by sea rocket (*Cakile maritima*), dune grass (*Ammophila breviligulata*), sea-beach orache (*Atriplex cristata*), seabeach sandwort (*Honckenya peploides*), common saltwort (*Salsola kali*), and seabeach knotweed (*Polygonum glaucum*). On Rose Island this is the first plant community you will see as you step off the dock, dominated by a few of these species including the beach pea (*Lathyrus japonicus*).



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Maritime Shrubland: The majority of the island is considered a maritime shrubland community, which is characterized by dry coasts and islands that have adapted to ocean winds and salt spray. Areas are normally dominated by a few species, which in the case of Rose Island include honeysuckle (*Lonicera* spp.), oriental bittersweet (*Celastrus orbiculatus*), beach rose (*Rosa rugosa*), and multiflora rose (*Rosa multiflora*). Typically, only shrubs and small trees are found in maritime shrubland communities, but because of this island's unique history and intervention, various larger species have been established, such as oak, apple, and cherry trees. Other common plants native to maritime shrubland but have not been identified on Rose Island are northern bayberry (*Morella pennsylvanica*), beach plum (*Prunus maritima*), and poison ivy (*Toxicodendron radicans*).

Human Impact & Future Efforts: Little is known about the vegetative history of the island, but there have been mentions of certain species, as well as documented accounts complete destruction of the established plants. One lighthouse keeper in particular, Charles Curtis, did have gardens filled with string beans, cucumbers, tomatoes, and corn; chickens roamed the island as a method of food production both for eggs and poultry; and strawberry bushes lived on the land, although it is unclear if they were wild or cultivated. As recently as 1947, the military had cleared the entirety of the island vegetation, so what can be seen today is over 50 years of regrowth after being left alone to recover. Rose Island is considered a Level I Arboretum, meaning it has an arboretum plan, an arboretum organizational group, an arboretum collection, staff or volunteers, and some public dimension. Due to the conservation needs of it being a recognized arboretum and wildlife refuge, efforts have been made to promote biodiversity and increased presence of breeding birds, specifically introducing a garden that attract pollinators and other unique species.