Rhodomyrtus tomentosa 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Myrtales	Myrtaceae

Common name downy myrtle (English, Florida), Isenberg bush (English, Hawaii), rose myrtle (English, Florida), downy rose myrtle (English, Florida), hill gooseberry (English), hill guava (English), Ceylon hill gooseberry (English), myrte-groseille (French), feijoa (French)

Synonym
Myrtus tomentosa , Aiton 1789
Rhodomyrtus parviflora , Alston 1931
Rhodomyrtus tomentosa , Ait. Wight
Myrtus canescens , Lour.

Similar species

Summary Rhodomyrtus tomentosa is a large evergreen shrub native to Southeast Asia that has become an invasive species in other tropical and subtropical countries. Introduced to many areas as an ornamental plant, it has spread, forming large, monospecific thickets that displace native flora and fauna. Areas especially affected include Florida, Hawai'i and French Polynesia.

view this species on IUCN Red List

Species Description
A large shrub to small tree, up to 12 feet tall. Leaves 2 to 3 inches long, 3-veined from the base, oval, obtuse to sharp pointed at the tip, glossy green above, densely grey or rarely yellowish-hairy beneath, entire, with wide leafstalk. Flowers 3/4 to 1 inch wide, solitary or two to three; petals tinged white outside with purplish-pink or all pink. Fruit purple, round, 3- or 4-celled, capped with persistent calyx lobes, about 1/2 inch wide, soft with double row of seeds in each cell, edible (Haselwood, 1966 in PIER, 2003). Seeds disc-shaped. Forms dense, monospecific thickets.

Notes
Introduced to Hawai'i c.1920 (Degener, 1963 in Langeland and Burks, 1999). By the 1950s was forming impenetrable thickets on Kauai and Hilo (Hosaka and Thistle, 1954 in Langeland and Burks, 1999). Currently on the State of Hawai'i noxious weed list (Meyer, 1998 in PIER, 2003).

A serious problem on Raiatea, French Polynesia (Meyer, 1998 in PIER, 2003).

Introduced to Florida in the 1920s by the US Department of Agriculture as an ornamental and landscape plant, as well as for its fruit (Gordon and Thomas, 1997 in PIER, 2003). It escaped cultivation soon after and has now spread to 17 counties (Center for Natural Resources, 2003).

Research was conducted at the University of Florida 1998-2000 to describe the ecology and determine effective control methods for this species.

Lifecycle Stages
Flowers abundantly in spring (Langeland and Burks, 1999). In Florida, fruits are ripe in August and September (Possley, pers. comm.).

Uses
Has shown promise as a fire retardant species for use in fire breaks in the Himalayas (Ministry of Environment & Forests, 2003). Is aesthetically pleasing, hence its use as an ornamental and landscaping plant (Center for Natural Resources, 2003). Has sweet edible fruit, which can be made into pies and jams, or used in salads. The fruit is also a food source for birds and mammals (Center for Aquatic and Invasive Plants, 2001).

Habitat Description
Moist and wet forests, bog margins, up to 2400m elevation (Hosaka and Thistle, 1954 in Langeland and Burks, 1999). Able to invade a range of habitats, from pine flatwoods to mangrove marshes (Center for Natural Resources, 2003). Grows in a wide range of soil types, including salty coastal soil, but is sensitive to heavy salt spray (Menninger, 1964 in Langeland and Burks, 1999). Frost-tolerant (Bailey and Bailey, 1976 in Langeland and Burks, 1999). 'Fire-adapted,' is able to resprout prolifically after fire (Center for Aquatic and Invasive Plants, 2001).

Reproduction
Seeds are dispersed by frugivorous birds. Can only spread by seed drop, as it does not spread vegetatively (Center for Aquatic and Invasive Plants, 2001). Has a large amount of seed production and high germination rate (Center for Natural Resources, 2003). Berries usually contain 40-45 seeds (Possley, pers. comm.).

General Impacts
Invades the understory of native pinelands in Florida, forming dense monoculture thickets that displace native flora and fauna through overcrowding and competition. Has the potential to alter the natural fire regimes of invaded areas (Center for Aquatic and Invasive Plants, 2001).

Management Info
Preventative measures: A Risk Assessment of *Rhodomyrtus tomentosa* for Hawai'i and other Pacific islands was prepared by Dr. Curtis Daehler (UH Botany) with funding from the Kaulunani Urban Forestry Program and US Forest Service. The alien plant screening system is derived from Pheloung *et al*. (1999) with minor modifications for use in Pacific islands (Daehler *et al.* 2004). The result is a score of 8 and a recommendation of: \"Likely to cause significant ecological or economic harm in Hawai'i and on other Pacific Islands as determined by a high WRA score, which is based on published sources describing species biology and behaviour in Hawai'i and/or other parts of the world.\"
\r\nIntegrated management: Seedlings can be manually removed. Mature shrubs may be felled using a chainsaw or brush cutter and treating the stumps with a commercial herbicide (Stocker and Possley 2001).

Pathway
Introduced to Florida by US Dept. of Agriculture in 1920s as a landscaping plant, for ornamentation, and for its edible fruit (Center for Natural Resources, 2003).

Principal source:

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Jennifer Possley, Fairchild Tropical Garden, Miami, Florida, USA.

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ALIEN RANGE

[5] CHINA
[1] HONG KONG
[1] JAPAN
[1] MACAO
[20] UNITED STATES
[2] FRENCH POLYNESIA
[1] INDONESIA
[1] LAO PEOPLE'S DEMOCRATIC REPUBLIC
[1] THAILAND
[1] VIET NAM

BIBLIOGRAPHY

23 references found for **Rhodomyrtus tomentosa**

Managment information

Collier County Natural Resources Department, Florida - Exotic plants management Downey Rosemyrtle (*Rhodomyrtus tomentosus*).
Summary: Good images, very brief notes, including some on management.
Available from: http://co.collier.fl.us/natresources/exotics/drm.htm [Accessed 27 May, 2003].

Daehler, C.C; Denslow, J.S; Ansari, S and Huang-Chi, K., 2004. A Risk-Assessment System for Screening Out Invasive Pest Plants from Hawaii and Other Pacific Islands. Conservation Biology Volume 18 Issue 2 Page 360.
Summary: A study on the use of a screening system to assess proposed plant introductions to Hawaii or other Pacific Islands and to identify high-risk species used in horticulture and forestry which would greatly reduce future pest-plant problems and allow entry of most nonpests.

PIER (Pacific Island Ecosystems at Risk), 2002. *Rhodomyrtus tomentosa*
Summary: Ecology, synonyms, common names, distributions (Pacific as well as global), management and impact information..
Available from: http://www.hear.org/pier/species/rhodomyrtus_tomentosa.htm [Accessed 5 February 2003].

Possley, J., K. Kitajima and R.K. Stocker. In press. Seasonal allocation of carbohydrates in an invasive Florida shrub: *Rhodomyrtus tomentosa*. Florida Scientist.
Summary: Condensed version of masters thesis includes description of phenology, growth, and carbohydrate allocation of this species in a Florida pine flatwoods. Includes management recommendations.

Stocker, R.K., and Possley, J. 2001. Comparing application methods and herbicides for control of *Rhodomyrtus tomentosa*. Ecological Restoration 19(1):34-36.
Summary: Examination of several common herbicides and three different application methods (foliar spray, hack-and-squirt, and basal bark). Includes management recommendations, black and white photographs, and line drawing.

General information

Alexander, T. 1981. An exotic plant pest. The Palmetto 1(1):2-3.
Summary: Discussion of the spread and invasion of this species into Florida s natural areas.

Atlas of Florida Vascular Plants, 2003. Institute for Systematic Botany.
Summary: Synonyms.
Available from: http://www.plantatlas.usf.edu/main.asp?plantID=86 [Accessed 27 May, 2003].

CAIP (Center for Aquatic and Invasive Plants), 2001. University of Florida and Sea Grant
Summary: Very useful general information about this species. Has great links to images and more information.
Available from: http://aquat1.ifas.ufl.edu/rhotom.html [Accessed 20 May 2003].

Center for Natural Resources, 2003. Maintaining and Restoring Landscape Integrity: Invasive and Exotic Species Emphasis. University of Florida/Institute of Food and Agricultural Sciences.
Summary: Has details of poster presentations, one of which is concerned with *R. tomentosa*. Provides a synopsis of planned research in Florida, the history of the situation there, and a list of potential contacts.

Daley s Fruit Tree Nursery, 2003.
Summary: Has the common name Ceylon Hill gooseberry
Available from: http://www.daleysfruit.com.au [Accessed 27 May, 2003].

Florence J. Chevillotte H. Ollier C.& Meyer J.-Y. 2007. *Rhodomyrtus tomentosa* Base de donn&#65533;es botaniques Nadeaud de l Herbier de la Polyn&#65533;sie fran&#65533;aise (PAP).
Summary: Base de donn&#65533;es sur le flore de Polyn&#65533;sie Fran&#65533;aise.
Available from: http://www.herbier-tahiti.pf/Selection_Taxonomie.php?id_tax=2792 [Accessed 10 April 2008]

Haselwood, E.L. and G.G. Motter, eds. 1966. Handbook of Hawaiian Weeds. Hawaiian Sugar Planters&#65533; Association.
Summary: Includes great line drawing.

Hau, B. C. H., 2001. Preliminary Survey of Slopes on Lantau. The University of Hong Kong.
Summary: Has information on the distribution of *R. tomentosa* on Lantau Island, Hong Kong.
Available from: http://www.epd.gov.hk/epd/eia/register/profile/latest/dir070attachmente.pdf [Accessed on 27 May, 2003]

Hawaii s Most Invasive Horticultural Plants

Hosaka, E.Y. and A. Thistle. 1954. Noxious plants of the Hawaiian Ranges. Extension Bulletin 62, University of Hawaii.
Summary: Only 1/2 page of info, but very relevant & thorough.

ITIS (Integrated Taxonomic Information System), 2005. Online Database *Rhodomyrtus tomentosa*
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
Available from: http://www.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Rhodomyrtus+tomentosa&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]

Langeland, K.A. and Burks, K. C (Eds) 1998. Identification and Biology of Non-Native Plants in Florida s Natural Areas, University of Florida. *Rhodomyrtus tomentosa*.
Summary: Information on plants that pose threats to natural resource areas in Florida.
Available from: http://www.fleppc.org/ID_book/Rhodomyrtus%20tomentosa.pdf [Accessed 10 June 2003]
Meyer, J.-Y. 2004. Threat of invasive alien plants to native flora and forest vegetation of eastern Polynesia. Pacific Science, 58, 357-375
Summary: Dans cet article, la menace croissante des plantes exotiques envahissantes est discut�e et les esp�ces les plus envahissantes sont d�crites. Des hypoth�ses sur l invasibilit� des �les sont pr�sent�es � la lumi�re des observations et des donn�es r�colt�es.
Ministry of Environment & Forests, 2003. Government of India. ANNUAL REPORT, Ch. 7.
Summary: Research done for the annual report. Brief mention of *Rhodomyrtus tomentosa* with regards to fire regime research.
Available from: http://envfor.nic.in/report/0102/chap07.html [Accessed 27 May, 2003]
Possley, J. pers. comm.
Summary: Details available on Contacts page.
Scott, A.J. 1978. A revision of Rhodomyrtus (Myrtaceae). Kew Bulletin 33(2):311-329.
Summary: Important taxonomic reference.
W3TROPICOS, 2003. Missouri Botanical Garden.
Summary: Contains synonyms.
Available from: http://mobot.mobot.org/W3T/Search/vast.html [Accessed 27 May, 2003].
Wagner, W.L., Herbst, D.R. and Sohmer, S.H.� 1990.� Manual of the flowering plants of Hawai i.� Volume 1.� University of Hawaii Press.
Summary: History of introduction/spread in Hawaii. Describes origin of common name Isenberg Bush.