

*Cryptostegia grandiflora*  [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Gentianales	Asclepiadaceae

**Common name** India rubber vine (English), caucho de la India (Spanish, Galapagos), rubber vine (English), palay rubber vine (English), purple allamanda (English), liane de gatope (French, New Caledonia)

**Synonym** *Nerium grandiflorum*, Roxb. ex R. Br.

**Similar species**

**Summary** *Cryptostegia grandiflora* is a self supporting, many-stemmed vine that is capable of growing over trees up to 15m high, smothering and pulling them down. It occurs in dry and moist forests in disturbed situations where there is temporary or permanent water, such as in rainforest openings and along roadsides. *C. grandiflora* is poisonous to stock when consumed and it forms impenetrable thickets that may restrict stock access to water. It decreases water catchments due to increased transpiration resulting in a loss of trees and native vines, which in turn leads to a loss of biodiversity and habitat.



[view this species on IUCN Red List](#)

## Species Description

*Cryptostegia grandiflora*, is a self supporting, scrambling, many-stemmed vine that grows to 2 metres tall with long trailing whips. A milky sap oozes from stems, leaves and seedpods when cut or broken. Leaves are dark green and glossy, 6-10cm long, 3-5cm wide and in opposite pairs. Roots have been found at a depth of 13 metres in mine shafts. Roots of seedlings are twice as long as shoots. The growth form of the vine differs depending on the surrounding conditions. They can form dense canopies of overpapping plants with long whips, form towers upto 30mts high the height of native trees and grow as freestanding shrubs in the absence of other vegetation. Flowers are large and showy, with five white to light purple petals in a funnel shape. The seedpods are rigid, 10-12cm long, 3-4cm wide and grow in pairs at the end of a short stalk. The flowers resemble those of the purple Allamanda (*Allamanda violacea*) (PIER, 2003).

## Lifecycle Stages

*Cryptostegia grandiflora* produces seeds that last more than 12 months in the soil (Grice, 1996). Plants begin reproducing at about 200 days (CSIRO Australia, 2001).

## Uses

Ornamental

## Habitat Description

*Cryptostegia grandiflora* is an aggressive woody climbing shrub which is capable of growing over trees up to 30m high. Plants are common in disturbed situations where there is temporary or permanent water, such as along gullies, rivers, creeks, waterholes and in saltmarsh areas (Marohasy and Forster, 1991. In PIER, 2003). It found growing in dry forest, roadsides, moist forest, rainforest openings at low elevations (PIER, 2003).



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Cryptostegia grandiflora*

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## Reproduction

Wind- and water-dispersed seeds. Seeds form in large pods about 15cm long which are often found in pairs, joined at the base. Each pod contains numerous seeds, each seed has a tuft of long white silky hairs. (WA, Department of Agriculture).

It can produce more than 8000 seeds in a single reproductive episode and can set seed at least twice per year. More than 90% of seeds will germinate within 10 days of moisture becoming available (Grice 1996). Each seed pod produces 340-840 seeds, and seeds can float in salt water for up to 40 days, and may still remain 60% viable after this.

## Nutrition

Prefers high levels of soil moisture for rapid growth, and subsequently is often found bordering rivers, (WA, Department of Agriculture). However roots have been known to grow up to 13m deep allowing growth even in arid conditions.

## General Impacts

*Cryptostegia grandiflora* forms impenetrable thickets and smothers vegetation resulting in a loss of trees and native vines which in turn leads to a loss of biodiversity and habitat, (CSIRO Australia, 2001). *C. grandiflora* is poisonous to stock when consumed and its rampant growth may restrict stock access to water points reducing productivity and pasture production, (WA, Department of Agriculture).

## Management Info

Preventative measures: A [Risk assessment of \*Cryptostegia grandiflora\*](#) for Australia was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 16 and a recommendation of: reject the plant for import (Australia) or species likely to be a pest (Pacific).

The Rubber vine management manual includes a comprehensive range of techniques for controlling rubber vine, and a selection of case studies demonstrating landholder approaches and experiences. Several of the landholder case studies indicate that controlling rubber vine would have been easier if they had taken steps to remove it before it 'took off'. Maintaining good pasture competition is also beneficial in preventing the establishment and spread of rubber vine.

The [Weed Control Methods Handbook](#) provides you with detailed information about the tools and techniques available for controlling invasive plants, or weeds, in natural areas. This Handbook is divided into eight chapters, covering a range of different control methods: manual, mechanical, promoting competition from native plants, grazing, biocontrol, herbicides, prescribed fire, solarization, flooding, and other, more novel, techniques. Each control method has advantages and disadvantages in terms of its effects against the target weed(s), impacts to untargeted plants and animals, risks to human health and safety, and costs.

## Pathway

Introduced for cultivation in India to produce a poor quality rubber latex, (WA, Department of Agriculture). Initially introduced to Australia as an ornamental species, (CSIRO Australia, 2001). <http://www.rareflora.com/cryptostegiagran.htm>

**Principal source:** [Pacific Islands Ecosystems at Risk \(PIER\), 2003, 2009. \*Cryptostegia grandiflora\* Roxb. ex R.Br., Apocynaceae](#)

**Compiler:** IUCN SSC Invasive Species Specialist Group

Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

**Review:** Dr Wayne Vogler. Weed Scientist Tropical Weeds Research Centre, Dept. Natural Resources and Mines, Queensland Australia

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## ALIEN RANGE

[1] ARUBA	[1] ATLANTIC - WESTERN CENTRAL
[3] AUSTRALIA	[1] CAYMAN ISLANDS
[1] CURACAO	[1] ECUADOR
[1] FIJI	[1] FRENCH POLYNESIA
[1] GUAM	[1] INDIA
[1] MARSHALL ISLANDS	[1] MAURITIUS
[1] MAYOTTE	[1] MONTSERRAT
[3] NEW CALEDONIA	[1] NORTHERN MARIANA ISLANDS
[1] REUNION	[1] SAINT MARTIN (FRENCH PART)
[1] SOUTH EAST ASIA	[1] UNITED STATES
[1] VIRGIN ISLANDS, U.S.	

## BIBLIOGRAPHY

23 references found for *Cryptostegia grandiflora*

### Management information

[Australian Department of the Environment and Heritage, 2003. Rubber vine \(\*Cryptostegia grandiflora\*\). Weeds of National Significance: Weed Management Guide Department of the Environment and Heritage and the CRC for Australian Weed Management, 2003.](#)

**Summary:** Available from: <http://www.weeds.gov.au/publications/guidelines/wons/c-grandiflora.html> [Accessed 23 October 2008]

Commonwealth Scientific and Industrial Research Organisation (CSIRO), 2001. Rubbervine. © Copyright 1999 - 2000, CSIRO Australia.

[Department of Natural Resources, Mines and Energy, Queensland Government, 2004. Rubber vine management: Control methods and case studies. This manual is sponsored by the National Weeds Program \(Natural Heritage Trust\), Department of Natural Resources, Mines and Energy and Department of Primary Industries and Fisheries](#)

**Summary:** Available from: [http://www.weeds.org.au/docs/Rubber\\_Vine\\_Mgmnt.pdf](http://www.weeds.org.au/docs/Rubber_Vine_Mgmnt.pdf) [Accessed 26 July 2010]

[European and Mediterranean Plant Protection Organization \(EPPO\), 2006. Guidelines for the management of invasive alien plants or potentially invasive alien plants which are intended for import or have been intentionally imported. EPPO Bulletin 36 \(3\), 417-418.](#)

[IUCN/SSC Invasive Species Specialist Group \(ISSG\), 2010. A Compilation of Information Sources for Conservation Managers.](#)

**Summary:** This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.

Kriticos, D.J.; R.W. Sutherst; J.R. Brown; S.W. Adkins and G.F. Maywald, 2003. Climate change and biotic invasions: a case history of a tropical woody vine. *Biological Invasions* 5: 145-165, 2003.

[NRM Facts Pest Series. Rubber Vine. Land Protection. Department of Natural Resources and Mines, Qld.](#)

**Summary:** Management of Rubber Vine in Queensland- Factsheet.

[PIER \(Pacific Island Ecosystems at Risk\), 2003, 2009. \*Cryptostegia grandiflora\*](#)

**Summary:** Ecology, synonyms, common names, distributions (Pacific as well as global), management and impact information.

Available from: [http://www.hear.org/pier/species/cryptostegia\\_grandiflora.htm](http://www.hear.org/pier/species/cryptostegia_grandiflora.htm) [Accessed 4 July 2010]

[Rentería, Jorge Luis; Rachel Atkinson, Ana Mireya Guerrero, Johanna Mader 2006. Manual de Identificación y Manejo de Malezas en las Islas Galápagos. Segunda edición, Fundación Charles Darwin, Santa Cruz, Galápagos, Ecuador.](#)

**Summary:** An illustrated guide providing practical information for the effective control of the worst invasive plant species in Galapagos. Designed for farmers and other land managers, it describes manual and chemical control methods. It also includes 8 species that are potential problems for Galapagos. Language: Spanish

Una guía con ilustraciones que provee información para el control efectivo de las peores plantas invasoras en Galápagos. Esta diseñada para los agricultores y personas involucradas en conservación. De una forma clara y simple se describe los métodos de control manuales y químicos; también incluye 8 especies que potencialmente podrían ser un problema para Galápagos. Lenguaje: Español.

[Rentería, Jorge Luis; Rachel Atkinson & Chris Buddenhagen., 2007. Estrategias para la erradicación de 21 especies de plantas. Fundación Charles Darwin, Departamento de Botánica. Programa de Especies Invasoras en Galápagos potencialmente invasoras en Galápagos.](#)

**Summary:** This document comprises costed eradication plans for 21 invasive species in Galapagos. The plans were developed as part of a GEF funded project ECU/00/G31 Control of Invasive species in the Galapagos Archipelago. The management plans report projects at different stages of development and for species that have invaded to different extents. Three of the projects have already been finished successfully, 5 have yet to be started, and for the rest the projects have been running for between 1 and 6 years. The cost and time needed for eradication varies considerably by species and demonstrates the importance of species eradication as soon as possible after detection

Resumen

El presente documento proporciona planes de manejo y el costo para la erradicación de 21 especies que se encuentran presentes en Galápagos. Los planes fueron desarrollados como parte del proyecto ECU/00/G31 Control de las especies invasoras en el Archipiélago de las Galápagos, suscrito por el Gobierno Ecuatoriano, representado por el Ministerio del Ambiente, con el Fondo para el Medio Ambiente Mundial (GEF). El Proyecto es implementado por el Programa de las Naciones Unidas para el Desarrollo (UNDP), tiene como instituciones ejecutoras al Servicio Parque Nacional Galápagos (SPNG), Instituto Nacional Galápagos (INGALA), Servicio Ecuatoriano de Sanidad Agropecuaria-Galápagos (SESA-Galápagos), y Fundación Charles Darwin (FCD). Los planes de manejo representan proyectos en diferentes estados de desarrollo y dimensión. Tres de estos proyectos ya han sido desarrollados completamente, trece están en proceso y cinco aún no se han iniciado. El costo y tiempo para la erradicación varía considerablemente según la especie y se muestra la importancia económica que implica desarrollar proyectos de erradicación tan pronto las especies son detectadas.

[Rubber Vine in Queensland. Pest Status Review Series. Department of Natural Resources and Mines. Qld.](#)

**Summary:** Review of management of Rubber Vine in Queensland.

[Tropical Savannas CRC. Cooperative Research Centre for the Sustainable Development of Tropical Savannas.](#)

**Summary:** Factsheet - using fire to control Rubber Vine.

[Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.](#)

**Summary:** This database compiles information on alien species from British Overseas Territories.

Available from: <http://www.jncc.gov.uk/page-3660> [Accessed 10 November 2009]

## General information

Barthelat, pers. comm., 2007

**Summary:** Personal communication with Fabien Barthelat, an expert of flora of Mayotte.

[Conservatoire Botanique National De Mascarin \(BOULLET V. coord.\) 2007. Cryptostegia grandiflora - Index de la flore vasculaire de la Réunion \(Trachophytes\) : statuts, menaces et protections. - Version 2007.1](#)

**Summary:** Base de données sur la flore de la Réunion. De nombreuses informations très utiles.

Available from: <http://flore.cbnm.org/index2.php?page=taxon&num=fb87582825f9d28a8d42c5e5e5e8b23d> [Accessed March 19 2008]

[Florence J., Chevillotte H., Ollier C., & Meyer J.-Y. 2007. Cryptostegia grandiflora. Base de données botaniques Nadeaud de l'Herbier de la Polynésie française \(PAP\).](#)

**Summary:** Base de données sur la flore de Polynésie Française.

Available from: [http://www.herbier-tahiti.pf/Selection\\_Taxonomie.php?id\\_tax=3042](http://www.herbier-tahiti.pf/Selection_Taxonomie.php?id_tax=3042) [Accessed 19 March 2008]

[Gargominy, O., Bouchet, P., Pascal, M., Jaffre, T. and Tourneau, J. C. 1996. Consequences des introductions d'espèces animales et végétales sur la biodiversité en Nouvelle-Calédonie. Rev. Ecol. \(Terre Vie\) 51: 375-401.](#)

**Summary:** Consequences to the biodiversity of New Caledonia of the introduction of plant and animal species.

Grice, A. C. 1996. Seed production, dispersal and germination in *Cryptostegia grandiflora* and *Ziziphus mauritiana*, two invasive shrubs in tropical woodlands of northern Australia. Australian Journal of Ecology, 21(3), 324-331.

**Summary:** Information about seed numbers, germination rates, and methods of dispersal for *C. grandiflora* and *Ziziphus mauritiana*

[ITIS \(Integrated Taxonomic Information System\), 2004. Online Database Cryptostegia grandiflora](#)

**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:

[MacKee, H.S. 1994. Catalogue des plantes introduites et cultivées en Nouvelle-Calédonie, 2nd edn. MNHN, Paris.](http://www.cbif.gc.ca/pls/itiscat/taxastep?king=every&p_action=containing&taxa=Cryptostegia+grandiflora&p_format=&p_ifx=plgt&p_lang=[Accessed December 31 2004]</a></p>
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**Summary:** Cet ouvrage liste 1412 taxons (espèces, sous espèces et variétés) introduits en Nouvelle-Calédonie. L'auteur précise dans la majorité des cas si l'espèce est cultivée ou naturalisée.

Meyer, Jean-Yves & Loope, Lloyd & Sheppard, A. & Munzinger, Jérôme & Jaffré, Tanguy. (2006). Les plantes envahissantes et potentiellement envahissantes dans l'archipel néo-calédonien : première évaluation et recommandations de gestion.

[Meyer, J.-Y. 2000. Invasive plants in the Pacific Islands. In: The Invasive Species in the Pacific: A Technical Review and Draft Regional Strategy. Sherley, G. \(tech. ed\). Published in June 2000 by the South Pacific Regional Environment Programme \(SPREP\).](#)

**Summary:** Resource that includes the distribution of invasive species throughout the Pacific Islands.

[Western Australia \(WA\), Department of Agriculture, 2002. Cryptostegia grandiflora](#)

**Summary:** General information about the weed Rubber Vine in an Australian context.

Available from: <http://www.agric.wa.gov.au/programs/app/Weeds/rubbervine.htm> [Accessed 3 July 2003]