

*Cestrum nocturnum*  [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Solanales	Solanaceae

**Common name** onaona lapana (Hawaiian), ike he po (Niuean), thauthau (Fijian), ali'l o le po (Samoan), teine 'o le po (Samoan), galan de noche (Spanish), ye xiang shu (Mandarin), laukau po'uli (Tongan), fafine o te po (Tuvaluan), ala aumoe (Hawaiian), kupaoa (Hawaiian), thauthau ni mbongi (Fijian), tiare ariki va'ine (Cook Islands), jonoul ruo awa (Marshallese), ai pua e pogi (Rotuman), ariki-va'ine (Cook Islands), night jessamine (English), kara (Fijian), dama de noche (Chamorro), night queen (English), lady of the night (English), night cestrum (English), night-blooming jasmine (English), night-flowering cestrum (English), dama di noche (Chamorro), night-flowering jasmine (English), queen of the night (English)

**Synonym** *Cestrum parqui*

**Similar species** *Cestrum parqui*

**Summary** *Cestrum nocturnum* commonly known as queen of the night, is a popular ornamental species widely distributed for its strongly fragrant flowers that bloom at night. Having bird-dispersed seeds and the ability to reproduce vegetatively has resulted in escapes from cultivation, where in some areas it aggressively colonises disturbed sites such as road edges and forest gaps forming dense impenetrable thickets and resulting in competition with and displacement of native plant species. *C. nocturnum* is also known to be poisonous if ingested, forming a risk to grazing livestock and has been known to produce hay-fever like symptoms in some people.



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

## Species Description

*Cestrum nocturnum* is a glabrous shrub that grows from 1 to 5 m tall (depending on location) with ovate-oblong, petiolate, and obtuse leaves mostly 7 - 20 cm long (Webb *et al.*, 1988; Tharman *et al.*, 1994; Zhang *et al.*, 1994). It has cymose racemes which are longer than the petiole and flowers that are greenish-white or pale greenish-yellow that emit a strong sweet fragrance at night (Webb *et al.*, 1988; Tharman *et al.*, 1994). The flowers of *C. nocturnum* have a green, 5-toothed, calyx about 1/3 as long as the 2.0 - 2.5 cm corolla which has obtuse, erect or spreading lobes which are 5-6 mm long (Tharman *et al.*, 1994). The flower also includes 5 stamens which are puberulent at their bases (Tharman *et al.*, 1994). *C. nocturnum* produces small white berries about 8-10 mm long, with 1 - 3 seeds capable of being dispersed by birds (Tharman *et al.*, 1994).

## Uses

*Cestrum nocturnum* is commonly cultivated in many countries as an ornamental plant due to its fragrant flowers that bloom at night (Tharman *et al.*, 1994; Vander Velde, 2003; Starr *et al.*, 2005).



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## Habitat Description

*Cestrum nocturnum* is often cultivated as an ornamental plant in gardens (Tharman *et al.*, 1994; Vander Velde, 2003; Starr *et al.*, 2005). Escapes are possible and can result in the establishment of dense, impenetrable thickets in scrub (Meyer *et al.*, 1988), moist or wet forests including riparian zones (Oppenheimer, 2007), secondary forests and dense lowland forests (Meyer, 2000) as well as open areas, both natural and disturbed (Webb *et al.*, 1988). *C. nocturnum* is also known as an aggressive invader of disturbed sites such as trailsides, forest gaps and landslides (Meyer, 2004).

## Reproduction

*Cestrum nocturnum* produces small white berries about 8-10 mm long, with 1 - 3 seeds capable of being dispersed by birds (Tharman *et al.*, 1994). Seeds are produced after 18 months of establishment and can remain dormant in the soil for many years (Williams, 2008). Vegetative reproduction is also possible from cut roots or buds from creeping roots (Williams, 2008).

## General Impacts

*Cestrum nocturnum* is known to aggressively colonise disturbed areas (Meyer, 2004) and is capable of forming dense impenetrable thickets in the undergrowth of some forest systems (Meyer, 2004; Oppenheimer, 2007; Williams, 2008) possibly displacing other plant species and altering natural successional processes. It has been shown to be more suited to capturing and using light than native Hawaiian species in greenhouse conditions (Pattison *et al.*, 1998) with its competitiveness thought to be partly responsible for the possible extinction of the endemic *Acalypha wilderi* on Rarotonga (McCormack, pers. comm., 2000; in Meyer, 2004). Like all *Cestrum* species, all parts of *C. nocturnum* are known to be highly toxic either fresh or when dried (Connor, 1977). As such, *C. nocturnum* forms a risk to livestock with 120 g (approximately 60 leaves) of *Cestrum* spp. material enough to result in the death of a 400 kg cattle beast (Environment Bay of Plenty, 2003). In humans, *C. nocturnum* can cause hay-fever like symptoms (Williams, 2008) and while a non-fatal poisoning of a human child was reported by Connor (1977), no poisonings have been reported since 2002 (Williams, 2008) and there have been no records of any fatal poisonings (Connor, 1977; Williams, 2008).



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## Management Info

**Preventative Measures:** A Risk assessment of [Cestrum nocturnum 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 of high risk (Pacific).

In New Zealand *C. nocturnum* has been included in the Auckland Regional Pest Management Strategy as a "Research Organism" and as such there are no rules or regulations restricting their propagation and growth (ARC, 2007). It has not been included in the National Plant Pets Accord, primarily due to a lack of information on current distribution and potential effects (Biosecurity New Zealand, 2010). While not included in any other Regional Pest Management Strategies, *C. nocturnum* is apparently prohibited from sale in the Northland Region (Williams, 2008) and *Cestrum* spp. in the Bay of Plenty Region have been prohibited from propagation, sale and distribution (Environment Bay of Plenty, 2010).

**Physical Control:** Small plants can be hand pulled all year round and left on site to rot down (Weedbusters, 2010). As stems can resprout and reinfestation can occur through the seed bank, bared sites should be replanted to prevent regrowth (Weedbusters, 2010).

**Chemical Control:** Good control results for *C. nocturnum* have been reported using triclopyr ester at 20% in crop oil applied basal bark (Katie Cassel, pers. comm.; in Motooka, *et al.*, 2003) with *C. nocturnum* probably sensitive to foliar application of triclopyr (Motooka *et al.*, 2003). Cutting and painting the cut surface with a herbicide solution can be done all year round (Weedbusters, 2010) with Environment Bay of Plenty (2010) recommending the use of one part Tordon Brushkiller to 20 parts of water (50 ml / L), and Weedbusters (2010) recommending 100 ml / L of Tordon Brushkiller, 100 ml / L of triclopyr 600 EC or 500 ml / L of Yates Hydrocotyle Killer. Larger infestations should be sprayed (Environment Bay of Plenty, 2010), ideally in spring or summer (Weedbusters, 2010) with Environment Bay of Plenty (2010) suggesting the use of 50 ml of Tordon Brushkiller in 10 L of water and Weedbusters (2010) recommending the use of triclopyr 600 EC (30 ml/ 10 L) or Yates Hydrocotyle Killer (15 ml / L).

## Pathway

Possibly introduced in Philippines by Spaniards century ago as medicinal and ornamental plant

## Principal source:

**Compiler:** Comité français de l'IUCN (IUCN French Committee) & IUCN SSC Invasive Species Specialist Group (ISSG)

## Review:

**Publication date:** 2010-09-13

## ALIEN RANGE

[2] AMERICAN SAMOA

[1] BERMUDA

[3] COOK ISLANDS

[4] FIJI

[1] GUADELOUPE

[2] INDIA

[1] KIRIBATI

[1] MARTINIQUE

[2] MICRONESIA, FEDERATED STATES OF

[2] NEW CALEDONIA

[1] AUSTRALIA

[1] CHINA

[2] ECUADOR

[5] FRENCH POLYNESIA

[1] GUAM

[1] JAPAN

[2] MARSHALL ISLANDS

[1] MAYOTTE

[1] NAURU

[3] NEW ZEALAND

[1] NIUE  
 [1] PITCAIRN  
 [1] SAMOA  
 [6] UNITED STATES  
 [2] WALLIS AND FUTUNA

[1] PHILIPPINES  
 [1] REUNION  
 [3] TONGA  
 [1] UNITED STATES MINOR OUTLYING ISLANDS

## BIBLIOGRAPHY

48 references found for *Cestrum nocturnum*

### Management information

[Environment Bay of Plenty. 2010. Weed index result. Solanaceae.](#)

**Summary:** Available from: <http://www.envbop.govt.nz/Environment/Weed256.aspx> [Accessed July 16, 2010]  
 Motooka, P., Castro, L., Nelson, D., Nagai, G., & Ching, L. (2003). Weeds of Hawaii's pastures and natural areas: an identification and management guide. College of Tropical Agriculture and Human Resources (University of Hawaii-Manoa), Honolulu. *Cestrum nocturnum*. [Pacific Island Ecosystems at Risk \(PIER\), 2010. Cestrum nocturnum L., Solanaceae](#)

**Summary:** Available from: [http://www.hear.org/pier/species/cestrum\\_nocturnum.htm](http://www.hear.org/pier/species/cestrum_nocturnum.htm) [Accessed 1 July 2010]

[Pacific Island Ecosystems at Risk \(PIER\), 2010. Risk Assessment: Cestrum nocturnum L., Solanaceae](#)

**Summary:** Available from: [http://www.hear.org/pier/wra/pacific/cestrum\\_nocturnum\\_htmlwra.htm](http://www.hear.org/pier/wra/pacific/cestrum_nocturnum_htmlwra.htm) [Accessed 1 July 2010]

Space, J.C., & Flynn, T. (2000). Report to the government of Niue on invasive plant species of environmental concern. U.S.D.A. Forest Service.

[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]

[Waitakere City Council, 2010. Invasive or Environmental Weeds of Waitakere](#)

**Summary:** Available from: <http://www.waitakere.govt.nz/cnlser/pw/plantweed/pdf/weedlist-env-inv.pdf> [Accessed 1 July 2010]

### General information

Barthelat, F. 2005. Note sur les espèces exotiques envahissantes de Mayotte. Direction de l'Agriculture et de la Forêt. 30p

**Summary:** Tableau synthétique des plantes exotiques de Mayotte classées en fonction de leur niveau d'envahissement.

[Biosecurity New Zealand. \(2010\). Technical Advisory Group Assessment of National Pest Plant Accord Species.](#)

**Summary:** Available from: <http://www.biosecurity.govt.nz/files/regs/imports/risk/b-d-tag-assessments.pdf> [Accessed July 16, 2010]

[Centre des ressources biologiques. Plantes tropicales. INRA-CIRAD. 2007.](#)

**Summary:** Available from: <http://collections.antilles.inra.fr/> [Accessed 31 March 2008]

[Connor, H.E. \(1977\). The poisonous plants in New Zealand. Wellington: Government Printer](#)

[Conservatoire Botanique National De Mascarin \(BOULLET V. coord.\) 2007. - Cestrum nocturnum 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=7fb8ceb3bd59c7956b1df66729296a4c> [Accessed 1 April 2008]

de Carvalho Soares, Edson Luis; Vignoli-Silva, Marcia; Mentz, Lilian Auler, 2007. The *Cestrum* L. (Solanaceae) genus of Rio Grande do Sul, Brazil. *Pesquisas Botanica*.(58). 2007. 263-282.

[Environment Bay of Plenty. 2003. Poisonous Plants. Fact Sheet 19.](#)

**Summary:** Available from: <http://www.envbop.govt.nz/Factsheets/PestPlants-030815-Factsheet19PoisonousPlants.pdf> [Accessed July 16, 2010].

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

**Summary:** Available from: [http://www.herbier-tahiti.pf/Selection\\_Taxonomie.php?id\\_tax=3893](http://www.herbier-tahiti.pf/Selection_Taxonomie.php?id_tax=3893) [Accessed 4 April 2008]

Fosberg, F.R. (1955). Northern Marshall Islands expedition, 1951-1952. Land biota: vascular plants. *Atoll Research Bulletin*, 39.

Fournet, J. 2002. Flore illustrée des phanogames de guadeloupe et de Martinique. CIRAD-Gondwana éditions.

[ITIS \(Integrated Taxonomic Information System\), 2008. Online Database Cestrum nocturnum L.](#)

**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.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=30498](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=30498) [Accessed 13 March 2008]

Meyer, Jean-Yves, 2004. Threat of invasive alien plants to native flora and forest vegetation of eastern Polynesia *Pacific Science*. 58(3). July 2004. 357-375.

[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.

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 discutée et les espèces les plus envahissantes sont décrites. Des hypothèses sur l'invasibilité des îles sont présentées à la lumière des observations et des données récoltées.

Meyer, J.-Y., Loope, L., Sheppard, A., Munzinger, J., Jaffre, T. 2006. Les plantes envahissantes et potentiellement envahissantes dans l'archipel néo-calédonien : première évaluation et recommandations de gestion. in M.-L. Beauvais et al. (2006) : Les espèces envahissantes dans l'archipel néo-calédonien, Paris, IRD éditions, 260 p.+ complément.

Negi, P.S., & Hajra, P.K. (2007). Alien flora of Doon Valley, Northwest Himalaya. *Current Science*, 92(7), 968-978.



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FULL ACCOUNT FOR: *Cestrum nocturnum*

- Oppenheimer, H.L. (2007). New plant records from Molokai, Lanai, Maui, and Hawaii for 2006. In: Evenhuis, Neal L. and Eldredge, Lucius G., (eds.) Records of the Hawaii Biological Survey for 2006. Part 2: Notes. Bishop Museum Occasional Papers 96: 17-34.
- Oppenheimer, H.L., & Bartlett, R.T. (2000). New plant records from Maui, Oahu, and the Hawaii Islands. In: Evenhuis, Neal L. and Eldredge, Lucius G., (eds.) Records of the Hawaii Biological Survey for 1999. Part 2: Notes. Bishop Museum Occasional Papers. 64: 1-10.
- Pattison, R.R., Goldstein, G., & Ares, A. (1998). Growth, biomass allocation and photosynthesis of invasive and native Hawaiian rainforest species. *Oecologia*, 117, 449-459.
- [Reddy, C. Sudhakar; G. Bagyanarayana; K.N. Reddy; Vatsavaya S. Raju, 2008. Invasive Alien Flora of India. Published by National Biological Information Infrastructure, USGS, USA](#)
- Summary:** Available from: [http://www.gisnetwork.org/IndiaInvasivePlants/documents/assessment\\_Invasive\\_India-jan08.pdf](http://www.gisnetwork.org/IndiaInvasivePlants/documents/assessment_Invasive_India-jan08.pdf) [Accessed 1 July 2010]
- [Space, James C. and Clyde T. Imada, 2004. Report to the Republic of Kiribati on Invasive Plant Species on the Islands of Tarawa, Abemama, Butaritari and Maiana. Contribution No. 2003-006 to the Pacific Biological Survey](#)
- Summary:** Available from: [http://www.hear.org/Pier/pdf/kiribati\\_report.pdf](http://www.hear.org/Pier/pdf/kiribati_report.pdf) [Accessed June 8th 2010]
- [Space, James C. and Marjorie Falanruw, 1999. Observations on invasive plant species in Micronesia. Prepared for the meeting of the Pacific Islands Committee, Council of Western State Foresters, Majuro, Republic of the Marshall Islands, February 22-26, 1999.](#)
- Summary:** Available from: <http://sprep.org/att/IRC/eCOPIES/INVASIVE%20SPECIES/micronesia.pdf> [Accessed 1 July 2010]
- Space, James C. and Tim Flynn, 1999. Observations on invasive plant species in American Samoa.
- [Space, James C., Barbara Waterhouse, Julie S. Denslow and Duane Nelson, 2000. Invasive Plant Species on Rota, Commonwealth of the Northern Mariana Islands. U.S.D.A. Forest Service Pacific Southwest Research Station Institute of Pacific Islands Forestry Honolulu, Hawaii i, USA](#)
- Summary:** Available from: [http://sprep.org/att/IRC/eCOPIES/INVASIVE%20SPECIES/CMI\\_rota.pdf](http://sprep.org/att/IRC/eCOPIES/INVASIVE%20SPECIES/CMI_rota.pdf) [Accessed 1 July 2010]
- Space, J.C., & Flynn, T. (2001). Report to the Kingdom of Tonga on invasive plant species of environmental concern. U.S.D.A. Forest Service.
- Space, J.C., & Flynn, T. (2002b). Report to the government of Samoa on invasive plant species of environmental concern. U.S.D.A. Forest Service.
- Space, J.C., & Flynn, T. (2002). Report to the government of the Cook Islands on invasive plant species of environmental concern. U.S.D.A. Forest Service.
- Starr, F., & Martz, K. (1999). Botanical survey of Midway Atoll 1999 update. Midway Atoll National Wildlife Refuge.
- Starr, F., Starr, K., & Loope, L.L. (2003). New plant records from the Hawaiian Archipelago. In: Evenhuis, Neal L. and Eldredge, Lucius G., (eds) Records of the Hawaii Biological Survey for 2001-2002. Part 2: Notes. Bishop Museum Occasional Papers. 74:23-34.
- Starr, F., Starr, K., & Loope, L.L. (2005). Roadside survey and expert interviews for selected plant species on Molokai, Hawaii.
- Thaman, R.R., Fosberg, F.R., Manner, H.I., and Hassall, D.C. (1994). The flora of Nauru. Atoll Research Bulletin, 392
- Tuiwawa, Marika 2005. Recent Changes in the Upland Watershed Forest of Monasavu, a Cloud Forest Site along the PABITRA Gateway Transect on Viti Levu, Fiji. *Pacific Science* (2005), vol. 59, no. 2:159-163
- [USDA, ARS, 2010. Taxon: Cestrum nocturnum L. National Genetic Resources Program. Germplasm Resources Information Network - \(GRIN\) \[Online Database\].](#)
- Summary:** Available from: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?9997> [Accessed 1 July 2010]
- [USDA, NRCS, 2010. Cestrum nocturnum L. night jessamine. The PLANTS Database. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.](#)
- Summary:** Available from: <http://plants.usda.gov/java/profile?symbol=CENO> [Accessed 1 July 2010]
- Velde, N.V. (2003). The vascular plants of Majuro Atoll, Republic of the Marshall Islands. Atoll Research Bulletin, 503.
- Waitakere City Council. (2006). Waitakere City parks roadside five year work programme.
- [Webb, C. J., Sykes, W.R., & Garnock-Jones, P.J. \(1988\). Flora of New Zealand Volume IV; Naturalised Pteridophytes, Gymnosperms, Dicotyledons. Christchurch, Botany Division, D.S.I.R.](#)
- Summary:** Available from <http://floraseries.landcareresearch.co.nz/pages/Book.aspx?fileName=Flora%204.xml> [Accessed July 15, 2010]
- Williams, P.A. 2008. Biological success and weediness of some terrestrial weeds not presently in the Northland Regional Council's RPMS. Landcare Research Contract Report.
- Woodcock, D. (2003). Restoring the watersheds: early twentieth-century tree planting in Hawaii. *Annals of the Association of American Geographers*, 93(3), 624-635.
- [WWF, 2006. National list of naturalised invasive and potentially invasive garden plants](#)
- Summary:** Available from: <http://wwf.org.au/publications/ListInvasivePlants/> [Accessed 1 July 2010]
- Zhang, Z., Lu, A., & D Arcy, W. (1994) Solanaceae. *Flora of China*, 17, 300-332.