GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Acacia farnesiana***

Acacia farnesiana 简体中文 正體中文 **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Fabales	Fabaceae

Common name

cashia (English, Puerto Rico), Ellington curse (English), vaivai vakavotona (English, Fiji), aromo (Spanish, spain), ban baburi (English, Fiji), mimosa (Spanish, Spain), huisache (English, Mexico), esponjeira (Portuguese, Portugal), espino blanco (English, El Salvador), carambuco (Spanish, Spain), espino ruco (English, El Salvador), rayo (English, Puerto Rico), opoponax (English, southern United States), Westindische akazie (German), mimosa bush (English, Australia), needle bush (English, Australia), debena (English, Nauru), tekaibakoa (English, Kiribati), oki (English, Fiji), kolu (English, Hawaii), popinac (English, Guam), aroma (English, Guam), kandaroma (English, Commonwealth of the Northern Mariana Islands), popinac (English, Commonwealth of the Northern Mariana Islands), titima (English, Cook Islands), acacia jaune (French), klu (English), sweet acacia (English), huisache dulce (Spanish), Small's acacia (English), klu bush (English), cassie (French), esponja (Portuguese, Brazil)

Synonym

Mimosa farnesiana , L.
Mimosa acicularis , Poir.
Acacia minuta ,(M.Jones) Beauchamp subsp. *densiflora* (Alex. ex Small) Beauchamp
Mimosa indica , Pers.
Acacia indica ,(Pers.) Desv.
Mimosa farnesiana ,L.
Vachellia densiflora ,Alex. ex Small
Acacia smallii ,Isely
Mimosa acicularis ,(Humb. & Bonpl. ex Willd.) Poir.
Mimosa edulis ,(Humb. & Bonpl. ex Willd.) Poir.
Vachellia farnesiana ,(L.) Wight & Arn.forma *typica*Speg.
Vachellia farnesiana ,(L.) Wight & Arn. var. *typica*Speg.
Vachellia farnesiana ,(L.) Wight & Arn.
Mimosa pedunculata ,(Willd.) Poir.
Acacia farnesiana ,(L.) Willd. var. *pedunculata*(Willd.) Kuntze
Acacia pedunculata , Willd.
Acacia ferox ,M. Martens & Galeotti
Farnesia odora , Gasp.
Acacia acicularis , Humb. & Bonpl. ex Willd.
Acacia lenticellata , F.Muell.
Acacia densiflora ,(Alex. ex Small) Cory
Acacia edulis , Humb. & Bonpl. ex Willd.

Similar species

Acacia nilotica, Prosopis

Summary

Probably a native of tropical America, Acacia farnesiana was introduced to many tropical countries for its bark, gum, seed and wood. It is often planted as an ornamental or to check erosion, and is also used in the perfume industry because of its scented flowers. This thorny, deciduous shrub grows to 4m in height forming impenetrable thickets or sometimes a more open cover and prefers dry habitats between sea level and 1000 m. In Australia it occurs along watercourses on rangeland and farmland limiting access to water. It has also become an invasive species in Fiji, French Polynesia, New Caledonia, Solomon Islands, and Vanuatu.

view this species on IUCN Red List

Species Description
\"This thorny, deciduous shrub grows to 4 metres in height, sometimes forming impenetrable thickets, although in most areas it forms a more open cover\" (Smith, 1985. In PIER, 2002). \"Erect much-branched shrub; leaves with 4-8 pairs of pinnae, pinnae with 10-12 pairs of small asymmetric leaflets ; stipular thorns straight and slender; flowers in pedunculate axillary heads, 1-3 heads together, subglobose; flowers yellow, fragrant; heads about 1-1,5cm across; stamens numerous; pods dark brown or black, up to 8cm long, to 12mm broad, plump, often slightly curved; pulp within sweetish; seeds compressed, elliptic, brown\" (Stone, 1970, in PIER, 2003) (differences according to Paiva, 1999).

Notes
In Hawaii *Acacia farnesiana* was formerly cultivated for an attempted perfume industry. It is now naturalised and common, sometimes becoming a pest in dry, open, disturbed areas, 2-400m (Wagner *et al*., 1999. In PIER, 2002). Although the aerial portions of the plant may be killed by fire, it soon regenerates from basal shoots, (Smith, 1985. In PIER, 2002). In Spain *Acacia farnesiana* is naturalised in rocky, poor soils (Paiva, 1999)

Uses
A tree of economic importance in South and East Africa, Rhodesia, India and the Rio Grande do Sul area of South America (Duke, 1983). The bark and the pods are a source of tannin and are used for tanning and dying leather (University of Connecticut, 2003). The flowers provide a fragrant essential oil which is used in the perfume industry as a violet scent substitute (Le Hou'erou, 2002). A gummy substance obtained from the pods is used in Java as cement for broken crockery. Other parts of the plant are used as an ingredient in the Ivory Coast for arrow poison (University of Connecticut, 2003). Trees add nitrogen and organic material, which improve the soil and are sometimes used for erosion control on poor sloping soils unsuitable for agriculture (Duke, 1983). Products are often used in folk medicine as styptics or astringents (Duke, 1983). In India and some African countries the pods are used as substitute for tamarind *Tamarindus indica* L. (Paiva, 1999). Cultivated in S.W. Europe for ornamental purposes and for perfumery industry (Tutin *et al*, 1992).

Habitat Description
Acacia farnesiana thrives in dry localities and on loamy or sandy soils where it may serve as a sand binder (ranging from warm temperate dry through tropical desert to moist forest life zones, *Acacia farnesiana* is reported to tolerate annual precipitation of 6.4 – 40.3 dm (a mean of 20 cases is 14.0 dm), annual mean temperature of 14.7–27.8°C (mean of 20 cases = 24.1°C), and pH of 5.0–8.0 (mean of 15 cases = 6.8) (Duke, 1983). Dry habitats between sea level and 1000m (PIER, 2002). Smith (1985 In PIER, 2002) reports that\r\nalthough the aerial portions may be killed by fire, this plant soon regenerates from basal shoots.

Reproduction
It is a prolific seed producer (Scifres, 1974). The seeds readily germinate after soil disturbance and plants grow rapidly (Mutz *et al*., 1978, Land Protection, 2001). Seeds are dispersed by ungulates which eat the pods (PIER, 2002).

Nutrition
Acacia farnesiana can fix atmospheric nitrogen through symbiotic relation with *Rhizobium* allowing growth in nitrogen poor soils. Thrives on poor, dry soils but favours deeper, moister, more fertile soils (Duke, 1983).

General Impacts
Acacia farnesiana can spread readily and grow quickly, (Land Protection, 2001). As it often forms thorny thickets along some watercourses in Australia, it can be a considerable nuisance during mustering and can also hinder access to water (Land Protection, 2001). While access is less of a problem in areas where cattle graze on the mimosa, they readily eat the nutritious seed pods assisting its spread.

Management Info
Preventative measures: A Risk Assessment of *Acacia farnesiana* 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 14 and a recommendation of: \"Likely to cause significant ecological or economic harm in Hawai'i and on other Pacific Islands as \r\ndetermined 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.\"
Physical: \"Destroyed by cultivation and grubbing\" (Swarbrick, 1997. In PIER, 2002). Although the aerial portions may be killed by fire, it soon \r\r\nregenerates from basal shoots\"\" (Smith, 1985). Once established, the seedlings grow rapidly and resprout readily following damage or top removal. *Acacia* \r\r\n*farnesiana* sprouts may grow to almost half their original total plant height within 5 months after shredding (Powell *et al*., 1972). Thus, mechanical top \r\r\nremoval results in only short-term suppression of *A. farnesiana* (Mutz *et al.* 1978) and gives the species competitive advantage over associated, slower \r\r\ngrowing woody plants. Almost pure, dense stands of *A. farnesiana* may develop within two to three growing seasons following brush control methods that \rdisturb the soil.\r\n
Chemical: Probably susceptible to translocated herbicides, including picloram, metsulfuorn-methyl, glyphosate and triclopyr, and possibly 2,4-D applied to the foliage, freshly cut stumps or by stem injection at standard rates.
Also probably susceptible to residual herbicides, including tebuthiuron and hexazinone (Swarbrick, 1997 in PIER, 2002). \"Sensitive to foliar applications of triclopyr at 1 lb/acre and metsulfuron at 0.45 oz/a and to basal bark applications of 2,4-D or triclopyr at 2% in diesel. Drizzle applications were not effective in foliar and basal bark trials at Kihei, Maui, but these trials were confounded by a severe drought\" (Motooka *et al.* 2002. In PIER, 2002).

Pathway
In Hawaii, formerly cultivated for an attempted perfume industry (Wagner *et al.*, 1999. In PIER, 2002)

Principal source: Pacific Islands Ecosystems at Risk, (PIER, 2002) *Acacia farnesiana*

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

Review: Dr. Hélia Marchante. Escola Superior Agrária de Coimbra Departamento de Ciências Exactas e Ambiente Sector de Biologia e Ecologia, Bencanta. 3040-316 Coimbra Portugal.

Pubblication date: 2006-03-23

ALIEN RANGE

[1] ANGUILLA
[1] ARABIAN PENINSULA
[1] BAHAMAS
[1] CAMBODIA
[1] CHINA
[1] CUBA
[1] EAST AFRICA
[1] ANTIGUA AND BARBUDA
[6] AUSTRALIA
[1] BARBADOS
[1] CAYMAN ISLANDS
[2] COOK ISLANDS
[1] DOMINICA
[1] EASTERN AFRICA

[2] FIJI
[3] FRENCH POLYNESIA
[1] GUADELOUPE
[1] INDIA
[2] ITALY
[2] JAPAN
[2] KIRIBATI
[1] MARTINIQUE
[1] MAYOTTE
[1] NAURU
[1] NIUE
[2] NORTHERN MARIANA ISLANDS
[1] PHILIPPINES
[1] PUERTO RICO
[1] SAHEL
[1] SEYCHELLES
[1] SOUTH AMERICA
[1] TAIWAN
[2] UNITED STATES
[1] VIET NAM
[2] FRANCE
[1] GRENADA
[1] GUAM
[1] INDONESIA
[1] JAMAICA
[1] KENYA
[1] MALAYSIA
[1] MAURITIUS
[1] MONTSERRAT
[2] NEW CALEDONIA
[1] NORTHERN AFRICA
[1] PAKISTAN
[1] PORTUGAL
[1] REUNION
[1] SAINT HELENA
[1] SOLOMON ISLANDS
[1] SPAIN
[1] THAILAND
[1] VANUATU

BIBLIOGRAPHY

30 references found for **Acacia farnesiana**

Managment information

Ar�valo, Jos� Ram�n; Leila Afonso; Agust�n Naranjo and Marcos Salas, 2010. Invasion of the Gran Canaria ravines ecosystems (Canary Islands) by the exotic species *Acacia farnesiana*. Plant Ecology. Volume 1 / 1948 - Volume 210 / 2010

Bontrager, O.E., Scifres, C.J. and Drawe, D.L. 1979. Huisache Control by Power Grubbing. Journal of Range Management, 32(3): 185-188.
Summary: Management information by Power Grubbing.
Available from: http://jrm.library.arizona.edu/data/1979/323/6bont.pdf [Accessed 10 October 2002].

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.

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.

Land Protection, 2001. pest series Mimosa bush (*Acacia farnesiana*). The State of Queensland, Department of Natural Resources and Mines, June 2001.

Le Hou�rou. *Acacia farnesiana* (L.) Willd. Grassland Index. UN FAO.
Summary: Drawings, description, common names, habitat, soil, propagation, distribution, crop management, products and uses, links, references, photos.
Available from: http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000113.HTM [Accessed on 10 October 2002].

Motooka, P., L. Castro, D. Nelson, G. Nagai and L. Ching . 2002. Weeds of pastures and natural areas of Hawaii and their management. In press.

Rasmussen, G.A., Scifres, C.J. and Drawe, D.L. 1983. Huisache Growth, Burning Quality, and Use Browse Following. Journal of Range Management 36(3): 337:342.
Summary: Huisache Growth, Burning Quality, and Use Browse Following.
Available from: http://jrm.library.arizona.edu/data/1983/363/15rasm.pdf [Accessed 10 October 2002].

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, F. 2005. Note sur les esp�ces exotiques envahissantes Mayotte. Direction de l'Agriculture et de la For�t. 30p
Summary: Tableau synth�tique des plantes exotiques de Mayotte class�es en fonction de leur niveau d envahissement.

Chihuahuan Desert website, 2002. Sweet Acacia (*Acacia farnesiana*).
Summary: Includes common names and scientific names, plus distribution.
Available from: http://nasa.utep.edu/chih/gardens/plants/acaciafarn.htm [Accessed 27 November 2002].

Conservatoire Botanique National De Mascarin (BOULLET V. coord.) 2007. - *Acacia farnesiana* Index de la flore vasculaire de la R�union (Trach�ophytes) : statuts, menaces et protections. - Version 2007.1
Summary: Base de donn�es sur la flore de la R�union. De nombreuses informations tr�s utiles.
Available from: http://flore.cbnm.org/index2.php?page=taxon&num=6c8349cc7260ae62e3b1396831a8398f [Accessed 28 March 2008]

Deyrup, M., Davis, L. and Cover, S. 2000. Exotic ants in Florida. Transactions of the American Entomological Society 126: 293-326.
Summary: More than 50 species of exotic ants have established breeding populations in Florida. This is the largest exotic ant fauna of any U.S. state. An annotated list of species (including distribution, origin, and pest status) includes 4 new records for the U.S.
Duke, James A. 1983. Handbook of Energy Crops. Unpublished. *Acacia mearnsii.* Center for New Crops & Plant Products, Purdue University.
Summary: Uses, Folk Medicine, Chemistry, Description, Germplasm, Distribution, Ecology, Cultivation, Harvesting, Yields and Economics, Energy, Biotic Factors, References.
Available from: http://www.hort.purdue.edu/newcrop/duke_energy/Acacia_mearnsii.html [Accessed 10 October 2002].
Fernald, H. T. 1947. The little fire ant as a house pest. J. Econ. Entomol. 40: 428.
Florence J. Chevillotte H. Ollier C.& Meyer J.-Y. 2007. *Acacia farnesiana* 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=2445 [Accessed 26 March 2008]
Franco, J.A. 1943. Dendrologia Florestal. Lisboa.
Summary: Dendrology book of species present in Portugal.
Gargominy, O., Bouchet, P., Pascal, M., Jaffre, T. and Tourneu, J. C. 1996. Consequences des introductions d'especes animals et vegetales sur la biodiversite en Nouvelle-Caledonie. Rev. Ecol. (Terre Vie) 51: 375-401.
Summary: Consequences to the biodiversity of New Caledonia of the introduction of plant and animal species.
ITIS (Integrated Taxonomic Information System), 2004. Online Database *Acacia farnesiana*
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=26427 [Accessed December 31 2004]
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 recommandantions de gestion.
Summary: Synth&#65533;se sur les plantes exotiques envahissantes et potentiellement envahissantes en Nouvelle-Cal&#65533;donie. Des recommandations de gestion sont &#65533;galement propos&#65533;es.
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. 2007. Conservation des for&#65533;ts naturelles et gestion des aires prot&#65533;g&#65533;es en Polyn&#65533;sie fran&#65533;aise. Bois et for&#65533;ts des tropiques, 291 (1), 25-30.
Mutz, J.L., Scifres, C.J., Drawe, D.L., Box,T.W. and Whitson, R.E. 1978. Range vegetation after mechanical brush treatments on the Coastal Prairie. Texas Agr. Exp. Sta. Bull. 1191.
Paiva, J. 1999. Acacia. In Talavera, S. Aedo, C, Castroviejo, S, Romero Zarco, C, S&#65533;ez, L, Salgueiro, F.J & Velayos, (ed). Flora Iberica - Plantas Vasculares de la Pen&#65533;nsula Ib&#65533;rica e Islas Baleares. Vol.VII(I). Leguminosae. Real Jard&#65533;n Bot&#65533;nico, CSIS. Madrid. ISBN 84-00-06221-3. pp. 11- 25.
Summary: Flora of Iberian Peninsula.
Plant Gene Resources of Canada (PGRC). Research Branch of Agriculture and Agri-Food Canada.
Summary: Available from: http://pgrc3.agr.ca/cgi-bin/npgs/html/taxon.pl?844 [Accessed 14 December, 2003].
Scifres, C.J. 1974. Salient aspects of huisache seed germination. Southw. Natur. 18:383-392.
Space, J. C. 2000. Pacific Island Ecosystems at Risk (PIER). *Acacia farnesiana*
Summary: Fact Sheet.
Tassin, J., Rivi&#65533;re, J.N., Cazanove, M., Bruzzeses, E. 2006. Ranking of invasive woody plant species for management on r&#65533;union Island. Weed research 46, 388-403
Summary: L inventaire de 318 esp&#65533;ces de plantes ligneuses introduites &#65533; la R&#65533;union, permet d en identifier 132 comme naturalis&#65533;es dans les &#65533;cosyst&#65533;mes naturels. 26 de ces esp&#65533;ces choisies parmi les plus envahissantes ont &#65533;t&#65533; class&#65533;es en fonction de leur impact biologique sur les &#65533;cosyst&#65533;mes indig&#65533;nes.
University of Connecticut. *Acacia farnesiana* (L.) Willd. Ecology & Evolutionary Biology Conservatory.
Summary: Common Names, Habitat, Description, Uses, Classification.
Available from: http://florawww.eeb.uconn.edu/acc_num/198500174.html [Accessed on 07 January 2003].
USDA-NRCS (Natural Resource Conservation Service). 2005. *Acacia farnesiana*. The PLANTS Database Version 3.5 [Online Database] National Plant Data Center, Baton Rouge, LA.
Summary: Available from: http://plants.usda.gov/java/nameSearch?mode=Scientific+Name&keywordquery=Acacia+farnesiana [Accessed 12 March 2006].