

*Acacia melanoxylon*  [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Fabales	Fabaceae

**Common name** Tasmanian blackwood (English), Australiese swarthout (Afrikaans), blackwood (English), Australian blackwood (English), blackwood acacia (English), aroma salvaje (Spanish), algarrobo (Spanish), acacia de madera negra (Spanish), acácia-preta (Portuguese, Brazil)

**Synonym** *Racosperma melanoxylon*, (R.Br.) C.Martius

**Similar species** *Acacia mangium*, *Acacia cyclops*

**Summary** *Acacia melanoxylon* is native in eastern Australia. This tree grows fast and tall, up to 45m height. It has a wide ecological tolerance, occurring over an extensive range of soils and climatic conditions, but develops better in colder climates. Control of its invasion of natural vegetation, commercial timber plantations and farmland incurs considerable costs, but its timber value and nursing of natural forest succession provides a positive contribution.



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

## Species Description

Unarmed, evergreen tree 8-15 (sometimes up to 45) metres high; trunk straight, crown dense and pyramidal to cylindrical, sometimes with heavy spreading branches. Leaves: Bipinnate (feathery) leaves on seedlings and coppice shoots turn into phyllodes. Phyllodes are 7-10cm long, greyish turning dark dull-green, straight to slightly curved, with 3-7 prominent longitudinal veins and fine net-veins between; often bipinnate on young plants and coppice shoots. Flowers: Pale yellow, globular flower heads. Fruits: Reddish-brown pods, narrower than leaves, slightly constricted, twisted; flat roundish shiny black seeds 2-3mm long, seeds almost encircled by pinkish-red seed stalks (aril)" (Henderson, 1995. In PIER, 2002). It has a shallow root system with dense, surface feeder roots.

## Notes

This fast growing perennial tree is a successional species. It lives for 15 – 50 years, regularly producing large numbers of well-dispersed seeds. Seed viability is sufficiently long to bridge the time between successive seedling stages. It is intolerant of shade. (Hopkins *et al* 1977)

## Uses

Timber for high quality furniture and wood turning products, shelterbelts in agricultural land, and ornamental tree in landscaping and home gardens. (Geldenhuys, pers.comm. 2003)

## Habitat Description

Native to rainforests in Australia, from the Atherton Tableland (17°17'6S) in Queensland above 500m above sea level to central Tasmania (43°17'6S) between sea level and 1000m above sea level (Farell and Ashton, 1978; Jennings, 2002). In these areas, it occurs as an understorey tree in wet eucalypt forests, as a pioneer to co-dominant trees in riverine rainforest and as a dominant tree in blackwood/teatree swamps in northwest Tasmania. It is best adapted to cooler, moist sites.

In South Africa it invades forest edges or gaps, wooded kloofs, grassland and watercourses (Henderson, 1995, in PIER, 2002), but shows no invasive tendencies in New Zealand.

It tolerates drought, poor drainage, any soil, salt air, gusty, steady or cold winds if grown in open, fog, smog, temperature extremes, sun or shade (FUF).

## Reproduction

Seed dispersal: The pink-red aril attracts birds for dispersal of the seed. Once birds in host-countries become adapted to feeding on the pink-red aril around the seed, the seed is dispersed widely, as in South Africa. It is possible that in host countries where the species has not become invasive, birds and/or other frugivores were not forced by food shortages (as result of drought or other natural phenomena) to switch to this food source. Soil-stored seed banks develop that can remain viable for many years. Seeds germinate easily when placed in hot (boiling water) over night, or when soil-stored seeds are heated by the sun (in disturbed or exposed sites), or after fire (Hill, 1982). *Acacia melanoxylon* reproduces prolifically after fire.

Vegetative regrowth: Coppice shoots develop from cut and damaged stems, and from damaged roots. (Geldenhuys, pers.comm. 2003)

## General Impacts

Replaces native non-tree vegetation, such as grassland and shrubland, and transforms such habitats. It invades the understorey of relatively open pine and eucalypt plantations (Geldenhuys, 1986 & 1996). Tree stands facilitate the establishment of natural evergreen forest species and the development of regrowth forest (Geldenhuys, 1996). Windfalls obstruct water flow along invaded streams and rivers. Root suckering, it may require root barriers when planted for landscaping in built-up areas (FUF).

## Management Info

Preventative measures: In general, blackwood is either recognised as an invader species in some areas, or it does not invade in other areas (although its potential to invade is recognised), or its invasion status is not yet recognised. South Africa provides information on the management of areas where blackwood invasion has become a problem (Geldenhuys, 1986 & 1996; Seydack, 2002; Vermeulen & Seydack, 2000). In areas where blackwood is not yet an invasion problem or where the species is in an early stage of invasion, the following options could be followed:

- Be careful with the introduction of *Acacia melanoxylon* into natural areas or area where the species is not present because of the potential of the species to become invasive.

- Production of viable seed should be monitored.

- Seedling recruitment should be monitored in natural ecosystems and along drainage lines.

Plants in natural ecosystems should be removed before they flower and produce seed.

(Geldenhuys, pers.comm. 2003)

A [Risk Assessment of \*Acacia melanoxylon\*](#) 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 12 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 core, which is based on published sources describing species biology and behaviour in Hawai'i and/or other parts of the world."



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Acacia melanoxylon*

## Pathway

Nursery trade, Specific seed collections. (Geldenhuys, pers.comm. 2003) Nursery trade, Landscaping, Tree seed distributors. (Geldenhuys, pers.comm. 2003)

**Principal source:** Dr Coert J. Geldenhuys, Forestwood cc, P O Box 228, La Montagne, Pretoria 0184, South Africa.

[Pacific Islands Ecosystems at Risk, \(PIER, 2002\)](#)

**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.

**Publication date:** 2006-04-11

## ALIEN RANGE

[1] ARGENTINA	[1] BELGIUM
[1] BHUTAN	[1] BOLIVIA
[1] BRAZIL	[1] CHILE
[1] CHINA	[1] COLOMBIA
[1] ETHIOPIA	[1] FRANCE
[1] INDIA	[1] KENYA
[1] LESOTHO	[1] MAURITIUS
[1] NEW CALEDONIA	[1] NEW ZEALAND
[1] PAKISTAN	[1] PERU
[2] PORTUGAL	[1] REUNION
[1] SAINT HELENA	[7] SOUTH AFRICA
[1] SPAIN	[1] SRI LANKA
[1] SWAZILAND	[1] TANZANIA, UNITED REPUBLIC OF
[7] UNITED STATES	[1] URUGUAY
[1] VENEZUELA	

## BIBLIOGRAPHY

34 references found for *Acacia melanoxylon*

### Management information

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. Dr Coert J. Geldenhuys, pers.comm. 6 January 2003.

**Summary:** Personal communication with Dr Coert J. Geldenhuys. Forestwood cc, P O Box 228, La Montagne, Pretoria 0184, South Africa. Tel/Fax +27 12 803-3277.

[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.](#)

Geldenhuys, C.J. 1986. Costs and benefits of the Australian Blackwood, *Acacia melanoxylon*, in South African Forestry. In: I.A.W. Macdonald, F.J. Kruger and A.A. Ferrar (eds) The ecology and management of biological invasions in Southern Africa. Oxford University Press, Cape Town. p.275-283.

Geldenhuys, C.J. 1996. The Blackwood Group System: its relevance for sustainable forest management in the southern Cape. South African Forestry Journal 177, 7-21.

Geldenhuys, C.J. 2002. *Acacia melanoxylon* in South Africa: commercial and conservation issues in resource management. In: Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. p. 28-35.

Henderson, L. 1995. Plant invaders of southern Africa. Plant Protection Research Institute Handbook No. 5, Agricultural Research Council, Pretoria, South Africa. 56 p.

Julien, M. H. (ed.) 1992. Biological control of weeds: a world catalogue of agents and their target weeds (3rd edition). CAB International, Wallingford, UK. 28pp.

[PIER \(Pacific Island Ecosystems at Risk\), 2002. \*Acacia melanoxylon\*.](#)

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

Available from: [http://www.hear.org/pier/species/acacia\\_melanoxylon.htm](http://www.hear.org/pier/species/acacia_melanoxylon.htm) [Accessed 3 October 2002].

Seydack, A.H.W. 2000. Invasion ecology of Australian Blackwood (*Acacia melanoxylon*) in Southern Cape forests. In: Seydack, A.H.W., Vermeulen, W.J. & Vermeulen, C. (eds). Towards sustainable management based on scientific understanding of natural forests and woodlands. Proceedings of the Natural Forests and Savanna Woodlands Symposium II, Department of Water Affairs & Forestry, Knysna. Pp 40-44.

Seydack, A.H.W. 2002. Management options for Australian Blackwood (*Acacia melanoxylon*) in Southern Cape forests, South Africa. Southern African Forestry Journal 196, 55-66.

Swaziland s Alien Plants Database., Undated. *Acacia melanoxylon*

**Summary:** A database of Swaziland s alien plant species.

[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]

Vermeulen, W.J. & Seydack, A.H.W. 2000. Management policy changes for Blackwood (*Acacia melanoxylon*) in the southern Cape. In: Seydack, A.H.W., Vermeulen, W.J. & Vermeulen, C. (eds). Towards sustainable management based on scientific understanding of natural forests and woodlands. Proceedings of the Natural Forests and Savanna Woodlands Symposium II, Department of Water Affairs & Forestry, Knysna. Pp 45-52.

## General information

Bertalot, M. and Mendoza E. Nodulation and root sucker formation in *Acacia melanoxylon*. Instituto Biodinâmico de Desenvolvimento Rural, Caixa Postal 321, Botucatu, São Paulo 18603-970, Brazil.

**Summary:** Nodulation and root sucker formation in *Acacia melanoxylon*.

Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. Proceedings of an International Workshop, Rotorua, New Zealand, 22 November 2002. 103 pp.

**Summary:** Deal with Management from a timber production point of view.

[CONABIO. 2008. Sistema de información sobre especies invasoras en México. Especies invasoras - Plantas. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Fecha de acceso.](#)

**Summary:** English:

The species list sheet for the Mexican information system on invasive species currently provides information related to Scientific names, family, group and common names, as well as habitat, status of invasion in Mexico, pathways of introduction and links to other specialised websites. Some of the higher risk species already have a direct link to the alert page. It is important to notice that these lists are constantly being updated, please refer to the main page (<http://www.conabio.gob.mx/invasoras/index.php/Portada>), under the section Novedades for information on updates.

Invasive species - Plants is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Plantas](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Plantas) [Accessed 30 July 2008]

Spanish:

La lista de especies del Sistema de información sobre especies invasoras de México cuenta actualmente con información acerca de nombre científico, familia, grupo y nombre común, así como hábitat, estado de la invasión en México, rutas de introducción y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la página de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualización, por favor consulte la portada

(<http://www.conabio.gob.mx/invasoras/index.php/Portada>), en la sección novedades, para conocer los cambios.

Especies invasoras - Plantas is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Plantas](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Plantas) [Accessed 30 July 2008]

[Conservatoire Botanique National De Mascarin \(BOULLET V. coord.\) 2007. - \*Acacia melanoxylon\* 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=b53b3a3d6ab90ce0268229151c9bde11> [Accessed 28 March 2008]

Fangqiu, Z., Searle, S. & Zuxu, C. 2002. *Acacia melanoxylon* - Provenance and family variation in survival, height and stem number at 14 months in Guangdong Province, China. In: Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. p. 60-67.

**Summary:** Provenance research to help with timber quality in future.

Farrell, T.P. & Ashton, D.H. 1978. Population studies on *Acacia melanoxylon* R.Br. I. Variation in seed and vegetative characteristics. Australian Journal of Botany 26, 365-379.

**Summary:** Ecology and harvesting of Blackwood in the natural forest (its native environment).

Gifford, H., Nicholas, I., Barton, I., Jackson, R. & Harwood, R. 2002. In: Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. p. 7-10.

**Summary:** Deal with Management from a timber production point of view.

[Haubensak, K. & Smyth, A. Univ. of Calif. at Berkeley, for Channel Islands National Park. 11-99.](#)

**Summary:** Fact sheet of general information on *Acacia melanoxylon*.

Available from: [http://usgssrv1.usgs.nau.edu/swepic/factsheets/Acacia\\_melanoxylon.pdf](http://usgssrv1.usgs.nau.edu/swepic/factsheets/Acacia_melanoxylon.pdf) [Accessed 3 October 2002]

Hill, R.S. 1982. Rainforest fire in western Tasmania. Australian Journal of Botany 30, 583-589.

Hopkins, M.S., Kikkawa, J., Graham, A.W., Tracey, J.G. & Webb, L.J. 1977. An ecological basis for the management of rainforest. In: The Border Ranges: a land use conflict in regional perspective. Brisbane, Royal Society of Queensland. pp. 57-66.



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Acacia melanoxylon*

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[ILDIS, 2001. \*Acacia melanoxylon\*. International Legume Database & Information Service.](#)

**Summary:** Taxonomic information and some global distribution.

Available from: <http://www.ildis.org/LegumeWeb?version~10.01&LegumeWeb&tno~314&genus~Acacia&species~melanoxylon> [Accessed 12 April 2006]

[ITIS \(Integrated Taxonomic Information System\), 2004. Online Database \*Acacia melanoxylon\*](#)

**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=26431](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=26431) [Accessed December 31 2004]

Jennings, S.M. 2002. Managing Blackwood in Native forests in Tasmania. In: Brown, A.G. (ed). Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. pp. 11-16.

Mackee, H.S. 1994. Catalogue des plantes introduites et cultivées en Nouvelle-Calédonie, 2nd edn. MNHN, Paris.

**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.

Nicholas, I. 2002. Blackwood in New Zealand: An overview. In: Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. p. 2-6.

Nicholas, I. & Brown, I. 2002. Blackwood: A handbook for growers and users. Forest Research Bulletin No. 225, Forest Research, Rotorua, New Zealand.

**Summary:** This bulletin is about the management of Blackwood in New Zealand, for timber production. It does not deal with the invasion problem. It does contain a very long list of references, not confined to the BW production, but also invasions.

Pinilla, J.C., Gutiérrez, B. & Molina, M.P. 2002. *Acacia melanoxylon*: Its potential in Chilean Forestry. In: Brown, A.G. (ed) 2002. Blackwood management: Learning from New Zealand. International Workshop, Rotorua, New Zealand. p. 20-27.

Seydack, A.H.W., 1995. An unconventional approach to timber yield regulation for multi-aged, multispecies forests. I. Fundamental considerations. Forest Ecology and Management 77, 139-168.

**Summary:** Deal with Management from a timber production point of view.

[Tunison, Tim. 1991. Element Stewardship Abstract. The Nature Conservancy, 1815 North Lynn Street, Arlington, Virginia 22209.](#)

**Summary:** An abstract covering all general information associated with Blackwood acacia. (Information provided by C. J. Geldenhuys).

Available from: <http://tncweeds.ucdavis.edu/esadocs/documnts/acacmel.html>

[USDA Natural Resources Conservation Service, Plant Profile.](#)

**Summary:** Taxonomic information and some distribution throughout America.

Available from: [http://plants.usda.gov/cgi\\_bin/plant\\_profile.cgi?symbol=ACME](http://plants.usda.gov/cgi_bin/plant_profile.cgi?symbol=ACME) [Accessed 3 October 2002].