Acacia longifolia **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Fabales	Fabaceae

Common name long-leaf wattle (English), acácia-de-espigas (Portuguese, Portugal), acácia (Portuguese, Portugal), acácia-de-folhas-longas (Portuguese, Portugal), acácia-marítima (Portuguese, Brazil), acácia-trinervis (Portuguese, Brazil), salgueiro-amarelo (Portuguese, Brazil), golden wattle (English), sallow wattle (English, Australia), Sydney golden wattle (English), western yarrow (English), langblaarwattel (Afrikaans, South Africa)

Synonym
Acacia latifolia , hort.
Mimosa longifolia , Andrews
Mimosa macrostachya , Poir.
Phyllodoce longifolia , (Andr.) Link
Racosperma longifolium , (Andr.) C .Mart.
Acacia longifolia , var. *typica* Benth.

Similar species *Acacia floribunda, Acacia longifolia sophorae*

Summary Acacia longifolia is a shrub or small tree that is part of the nitrogen-fixing Acacia family. Native to the South-eastern coast of Australia, it has naturalised in many other places and has become invasive in other parts of Australia (Victoria, New South Wales), in New Zealand, South Africa, Spain, Portugal and Brazil. It was primarily introduced into these areas to stabilise sand dunes and as an ornamental. Acacia longifolia is fast growing, and a large part of its invasiveness has been attributed to long-lived seeds. In new locations it displaces native vegetation and modifies ecosystems and habitats.

view this species on IUCN Red List

Species Description
Acacia longifolia is a bushy shrub or small tree, which may form thickets. It grows up to 7-8 m tall. Phyllodes are typically thin and pliable and range from 5 to 20 cm long and 5 – 15 mm wide. Usually broadest near the middle or just below, and gradually narrows towards the apex. Pods are generally straight or (very) slightly curved. Twigs are sharply angled and either sparsely hairy or smooth. Inflorescence consists of a spike of pale- to golden-yellow flowers.\r\n
The related acacia species *A. sophorae* is often mistaken for *A. longifolia*, as they appear similar. However, there are a few major differences between them. *Acacia sophorae* typically has coiled or contorted pods, while the phyllodes are usually thick and often fleshy. The widest point of the phyllodes also differs - *A. sophorae* phyllodes are usually broadest near or above the middle. (Hill 2005, NZPCN 2010).

Notes
Acacia longifolia used to be classified as part of the pea family (Fabaceae), subfamily Mimosoideae, but is now classified as part of Mimosaceae (Hill, 2005).

Lifecycle Stages
Acacia longifolia propagates from seed. It reaches sexual maturity in two to three years. Flowering occurs in July to August in its native range and in New Zealand (NZPCN, 2010). In Portugal most trees flower during February to March; pods are formed between March and July and buds between July and March (Morais & Freitas 2008).

Uses
Acacia longifolia is primarily introduced as an ornamental, and to stabilise sand dunes in coastal areas.

Habitat Description
Acacia longifolia flourishes in coastal areas, particularly those that were disturbed by fire. It is also found in riparian zones, scrub area, grassland and woodland. *Acacia longifolia* grows in a variety of habitats, including nutrient-poor ecosystems - this is thought to be due, in part, to its ability to fix nitrogen (Werner *et al*. 2009). While tolerant to dry periods, frost and sea spray, a major limiting factor is thought to be rainfall as *A. longifolia* generally propagates in areas that receive at least 550 mm rainfall annually (Department of Primary Industries 2009a). Disturbance by fire may cause mass germination.

Reproduction
Acacia longifolia produces large quantities of seeds annually (up to 11,500 per tree), which are thought to be viable for 50 years. In Portugal often more than 90% of the seeds are viable (E. Marchante, pers. comm.).

General Impacts
Impacts include reduction in native biodiversity, ecosystem change, habitat alteration and changes in hydrology and fire regimes (le Maitre *et al*. 2002; van Wilgen *et al*. 2004, Marchante *et al*. 2003). Many of the impacts are due to changes in habitat and ecosystem that *A. longifolia* causes. Examples include modification of soil microbiota and soil chemistry, and modification of shade in riparian habitats (Marchante *et al*. 2009; Samways & Taylor 2004). *Acacia longifolia* may also provide stabilisation to sediment in areas which are traditionally free-flowing, modifying riparian zones and coastal sediment flow (Galatowitsch & Richardson 2005). In terms of changes in fire regimes, the presence of *A. longifolia* (especially thickets) increases the risk and intensity of fires. However, due to the nature of *A. longifolia* seed and high growth rate, *A. longifolia* also hinders regeneration of native flora after fire. Some of these impacts can be long-lasting, even after the removal of the invasive species (Marchante *et al*. 2004, Marchante *et al*. 2009).

Management Info
A variety of management techniques have been used to manage the spread of *A. longifolia*, including biological control, and physical methods.\r\n
Biological: Biological control agents used are the gall wasp, *Trichilogaster acaciaelongifoliae*, and the seed-feeding weevil, *Melanterius ventralis* (Dennill & Donnelly 1991). Both of these insects control *A. longifolia* at seed level - *T. acaciaelongifoliae* affects floral buds and occasionally vegetative buds, causing gall formation that halts normal development of buds, while *M. ventralis* preys on seeds that are unaffected by *T. acaciaelongifoliae* (Dennill & Donnelly 1991). Together these two organisms have decreased *A. longifolia* reproductive potential by >90% in South Africa (Dennill *et al.* 1999). Similar biological control agents are being investigated for New Zealand and Portugal (Hill 2005; Marchante *et al.* 2005).\r\n
Physical and Other: Physical management techniques used on *A. longifolia* include felling, felling followed by herbicide application on stumps, felling, ringbarking and prescribed burning. As resprouting can occur after felling (although not always), a combination of these techniques is sometimes used (Galatowitsch & Richardson 2005; Hicks *et al.* 2001; Marchante *et al.* 2005.)

Pathway
Introduced to dune-based coastlands for dune management.*Acacia longifolia* is sold for ornamental purposes. Seeds for sale online, for eg in New Zealand on the TradeMe website (http://www.trademe.co.nz).

Principal source:

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Review: Elizabete Marchante, Centre for Functional Ecology, Department of Life Sciences, University of Coimbra, Portugal

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ALIEN RANGE

[2] ARGENTINA
[1] BRAZIL
[1] DOMINICAN REPUBLIC
[1] INDIA
[1] ISRAEL
[1] KENYA
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[5] PORTUGAL
[6] SOUTH AFRICA
[1] SRI LANKA
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[3] AUSTRALIA
[1] COLOMBIA
[1] IBERIAN PENINSULA
[1] INDONESIA
[1] ITALY
[1] MAURITIUS
[2] NEW ZEALAND
[1] REUNION
[1] SPAIN
[1] UNITED STATES

Red List assessed species 36: NT = 3; LC = 33;

Agrostis stolonifera **LC**
Baccharis salicifolia **LC**
Chlorolestes umbratus **LC**
Cytisus striatus **LC**
Equisetum giganteum **LC**
Helichrysum italicum subsp. picardi **LC**
Juncus acutus **LC**
Juncus capitatus **LC**
Juniperus navicularis **NT**
Lupinus angustifolius **LC**
Medicago marina **LC**
Osyris quadripartita **LC**
Pieris rapae **LC**
Pistacia lentiscus **LC**
Rosmarinus officinalis **LC**
Scirpoides holoschoenus **LC**
Thymus capitellatus **NT**
Typha latifolia **LC**
Artemisia campestris subsp. maritima **LC**
Calluna vulgaris **LC**
Cyperus capitatus **LC**
Ecchlorolestes peringueyi **NT**
Eryngium maritimum **LC**
Hydrocotyle bonariensis **LC**
Juncus bufonius **LC**
Juncus pygmaeus **LC**
Luciola lusitanica **LC**
Medicago littoralis **LC**
Myrica faya **LC**
Pancratium maritimum **LC**
Pinus pinaster **LC**
Quercus coccifera **LC**
Santolina impressa **LC**
Tetrix undulata **LC**
Trifolium arvense var. arvense **LC**
Ulex europaeus subsp. latebracteatus **LC**

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