

# Elephant ear vine

*Argyrea ervosa*



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# Taxonomy

- Species:** *Argyreia nervosa* (Burm. f.) Bojer
- Synonyms:** *Argyreia speciosa* (L. f.) Sweet  
*Convolvulus speciosus* L.f.  
*C. nervosus* Burm. f.
- Cultivars:** Not known
- Common names:** Elephant ear vine, elephant creeper, woolly morning glory, Hawaiian baby woodrose, silver morning glory
- Family:** Convolvulaceae
- Related species:** The *Argyreia* genus comprises some 30 species from India, Malaysia and Africa (single species from Africa) (Hooker 1885)

# Description

A perennial woody vine growing up to 9 m. Leaves are heart-shaped (ovate-cordate, acute), glabrous (hairless) above and persistently white-tomentose (silver, hairy) underneath. Leaves are quite distinctive and can be more than 30 cm across. Flower colour varies from pale pink/white to dark pink/violet, generally with a much darker centre. Flowers are 5 cm in diameter.

The pod is a dry capsule, c. 2 cm diameter, surrounded by a calyx that is divided into five sections. The structure has been likened to a carved rose (hence the Hawaiian common name of 'woodrose'). Each pod contains 4–6 seeds.

## Biology/ecology

This study was unable to find any published information on the plant's biology. The majority of references discuss the plant's cultivation and use as a drug.

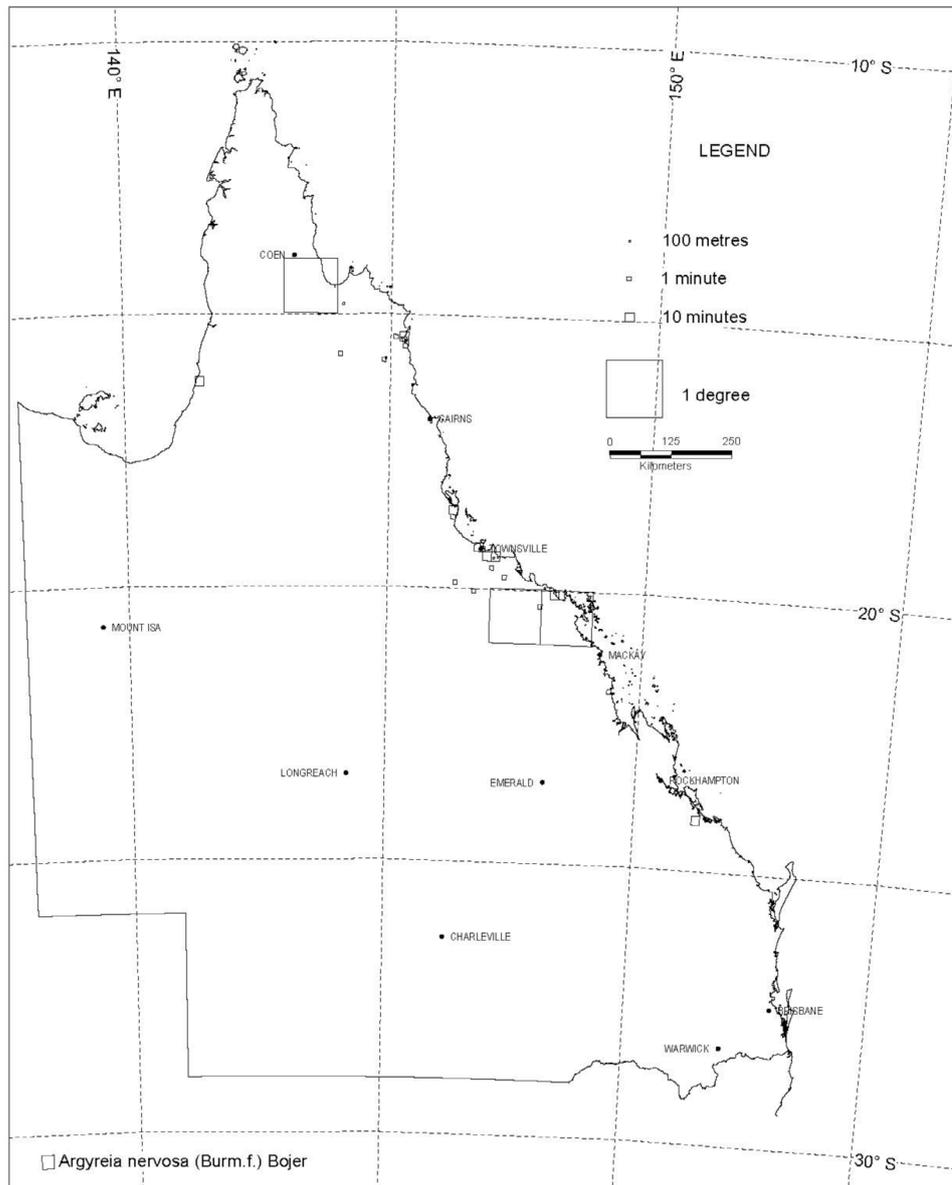
## Dispersal and seed longevity

*A. nervosa* has been transported across the world for use as a garden ornamental and as a source of LCD-like drugs (from its seeds). Various books on home gardening state that it can be propagated from scarified seeds or from cuttings (e.g. Ellison 1995). PIER (1999) states that the species' berries are dispersed by frugivorous birds. This study was unable to find any information on seed longevity.



# Distribution in Queensland

Specimens have been recorded at numerous locations across coastal north and central Queensland, including Mt Elliot (near Townsville), the Townsville Town Common, parts of Cape York, Cooktown, Ingham, Bowen and Calliope areas. It is particularly abundant around the Peter Faust Dam near Bowen (B Whyte, pers. comm.). Currently, its distribution can be described as being ‘scattered’ across a very large area of coastal, north and central Queensland (Figure 1).



Simple conic projection (central Longitude 143°E). Scale 1:1,250,000

mapwiz.exe: Tuesday, 6 July 2004 (© Peter Bostock 2001)

Figure 1. Locations where specimens of *Argyreia nervosa* have been lodged with the Queensland herbarium (data courtesy Queensland Herbarium, EPA).

## Origin and worldwide distribution

Hooker (1885) states that *A. nervosa* is native to India, from Assam to Belgaum and Mysore. It is common on the Bengal plain. Specimens have been recorded from Java, China and Mauritius, although it is unclear whether these latter locations have included cultivated specimens. Similarly, Stewart and Brandis (1874) note that this species exists in south and north-west India, as well as Bengal. The authors comment that *A. nervosa* is a 'large, woody climber running up the highest trees.' As such, it is unclear whether *A. nervosa* exists naturally outside India. Hoogland (1952) notes that *A. nervosa* is cultivated on the Malay Peninsula (not native). VanOostroom (1943) notes that *A. nervosa* is 'originally in British India, from Assam and Bengal to Belgaum and Mysore, cultivated in other tropical countries; occasionally escaped from culture.'

*A. nervosa* has been erroneously listed as native to Australia in Hnatiuk (1990) and DEH (1993). The Queensland Herbarium has confirmed that it considers that *A. nervosa* is a naturalised species in Australia (Batianoff, pers. comm.). While most references state that *A. nervosa* is native to India, Hawaiian and Polynesian people are reported to have used this species as a drug over hundreds of years (Anon. 2004) and it could be speculated that other Indigenous communities in Australia and elsewhere in the Pacific have used and transported seeds from this plant for some time. Other species such as *Abrus precatorius* L. (gidee gidee), which was used by aboriginals—and no doubt many other Indigenous populations in the Australasian region—as an abortion drug, also have curious multi-national distributions. DNA analysis of Australian and overseas populations of *A. nervosa* is required to clarify the origin of this species in Queensland.

*A. nervosa* is commonly grown as a source of drugs and as a garden ornamental. It features in many popular gardening books (e.g. Ellison 1995) and most internet sites dealing with the species focus on its use as a drug. *A. nervosa* has been recorded from numerous countries, including India, Asia, Africa, Central America, United States, Hawaii and New Zealand. The Missouri Botanical Gardens' [w3 TROPICOS](#) database lists specimens collected from Central America and Africa (Figures 2 and 3). These are likely to be either naturalised or cultivated specimens.

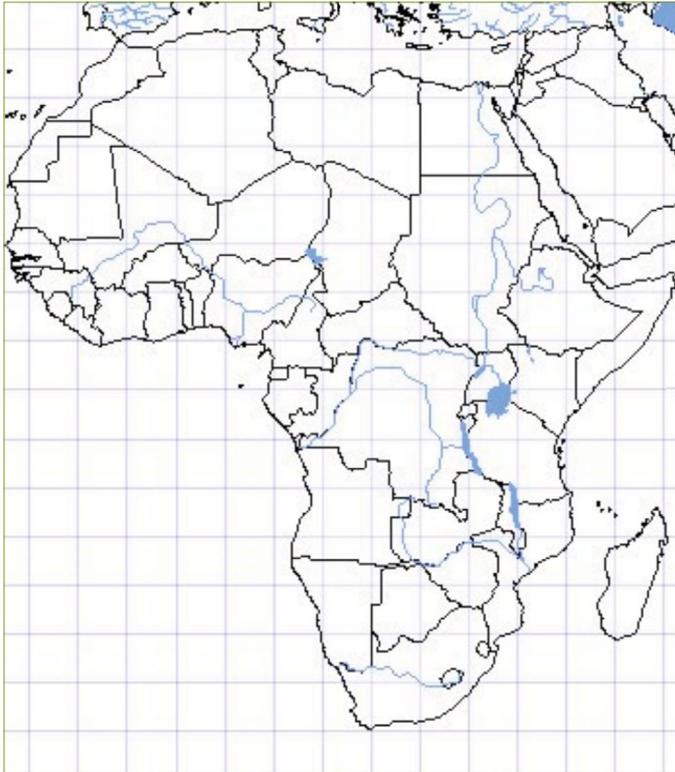


Figure 2. Distribution of *A. nervosa* in Africa (Missouri Botanical Gardens w3 TROPICOS database).

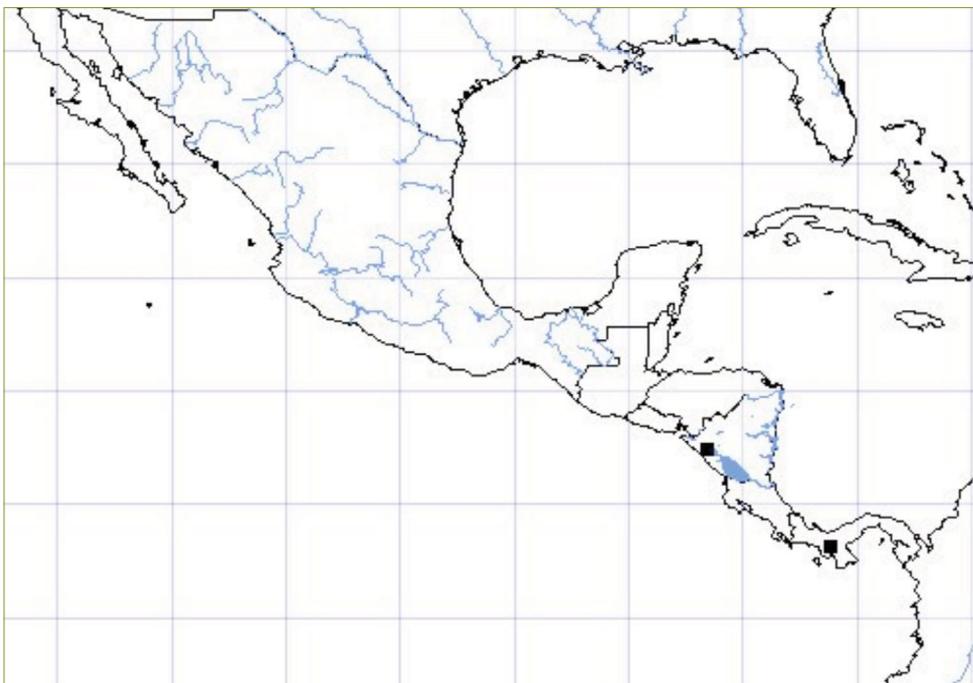


Figure 3. Distribution of *A. nervosa* in Central America (Missouri Botanical Gardens w3 TROPICOS database).

## Preferred habitat and climate

*A. nervosa* prefers tropical and sub-tropical climates. References that discuss the cultivation of *A. nervosa* state that the plant prefers fertile, moist soil in a protected sunny position (e.g. Ellison 1995). Anecdotal information from Queensland National Parks and Wildlife staff suggests that the plant can germinate quite readily in seemingly undisturbed sites, including under rainforest canopies and among dense grass cover in eucalypt woodland (P Williams, pers comm. 2004).

## Status as a weed in other Australian states

*A. nervosa* does not appear to be a weed in other Australian states.

## History as a weed overseas

*A. nervosa* is recorded as a weed in Hawaii (Wagner et al. 1998). It has also naturalised in French Polynesia (Raiatea Island and Tahiti) (Welsh 1998), Tonga (Eua Island) (Yuncker 1959), Florida (USDA undated), Panama, Belize, Nicaragua, Ghana (MBG undated) and Puerto Rico (USDA undated). This study was unable to find any information on its impact.

## Pest potential in Queensland

*A. nervosa* has been observed to smother trees, much like rubber vine, in some parts of North Queensland (P Williams, QNPWS, pers. comm. 2004). It has a number of attributes that confer invasive potential in Queensland (see attachment). Perhaps most importantly, it has a history as a weed overseas in tropical and sub-tropical climates.

Climatically, the plant is well suited to tropical and sub-tropical regions of Queensland.

Habitats at risk of invasion include rainforest and open eucalypt woodland.

## Control

There is no information available on chemical control. Small specimens can be removed by hand.

# References

- Anon. (2004). '*Argyreia nervosa*: Hawaiian baby woodrose', [www.shaman-australis.com](http://www.shaman-australis.com)
- Ellison, D (1995). *Cultivated plants of the world*, Flora Publications International, Brisbane, p. 44.
- Holm, LG, Pancho, JV, Herberger, JP and Plucknett, DL (1979). *A geographical atlas of world weeds*, Krieger Publishing Company, Florida.
- Hoogland, RD (1952). 'The Convolvulaceae of Malaysia VIII—the genus *Argyreia* in the Malay Peninsula', *Blumea* 7(1): 171–182.
- Hooker, JD (1885). *The flora of British India*, vol. IV, Secretary of State for India Council, London, p. 185.
- MBG (undated). Missouri Botanical Gardens w3 TROPICOS database, [http://mobot.org/cgi-bin/search\\_vast?name=Argyreia+nervosa](http://mobot.org/cgi-bin/search_vast?name=Argyreia+nervosa)
- PIER (1999). *Argyreia nervosa*, Pacific Island Ecosystems at Risk database, [www.hear.org/pier/species/argyreia\\_nervosa.htm](http://www.hear.org/pier/species/argyreia_nervosa.htm)
- Stewart, JL and Brandis, D (1874). *The forest flora of north-west and central India*, Secretary of State for India in Council, London, p. 343.
- USDA (undated). *Argyreia nervosa*—Plants Profile, USDA Natural Resources Conservation Service, [http://plants.usda.gov/cgi\\_bin/plant\\_search.cgi](http://plants.usda.gov/cgi_bin/plant_search.cgi)
- Van Oostroom, SJ (1943). 'The Convolvulaceae of Malaysia IV—the genera *Mina*, *Lepistemon*, *Stictocardia* and *Argyreia*', *Blumea* 5(2): 364–65.
- Wagner, WL, Herbst, DR and Sohmer, SH (1999). *Manual of the flowering plants of Hawaii*, Revised edition, University of Hawaii Press, Honolulu, p. 549.
- Welsh, SL (1998). *Flora Societensis: a summary revision of the flowering plants of the Society Islands*, E.P.S. Inc., Orem, Utah, p. 137.
- Yuncker, TG (1959). Plants of Tonga, B.P. *Bishop Museum Bulletin*, p. 220–228.