

Acacia ataxiphylla

NT

Taxonomic Authority: Benth.

 Global Assessment Regional Assessment

Region: Global

 Endemic to region

Synonyms

Common Names

LARGE-FRUITED TAMMIN English

Upper Level Taxonomy

Kingdom: PLANTAE

Phylum: TRACHEOPHYTA

Class: MAGNOLIOPSIDA

Order: FABALES

Family: LEGUMINOSAE

Lower Level Taxonomy

Rank:

Infra-rank name:

 Plant Hybrid

Subpopulation:

Authority:

General Information

Distribution

Acacia ataxiphylla is endemic to Australia, scattered and infrequent in south-western Western Australia. Subsp. *magna* is seemingly restricted to the Tammin area while subsp. *ataxiphylla* occurs from Darkan south to Albany.

Range Size

Area of Occupancy:

Extent of Occurrence: 45000

Map Status:

Elevation

Upper limit: 300

Lower limit: 50

Depth

Upper limit:

Lower limit:

Depth Zones

 Shallow photic Bathyl Hadal Photic Abyssal

Biogeographic Realm

 Afrotropical Antarctic Australasian Neotropical Oceanian Palearctic Indomalayan Nearctic

Population

A. ataxiphylla subsp. *magna* was first collected in 1889. Surveys since that time have located 14 populations and a total of 204 mature plants on road verges and private property over a range of 15 km south of Tammin and Cunderdin. The largest population contains 56 plants, however, nine of the remaining 13 populations contain less than 10 plants in mostly disturbed, degraded habitats. The total population size of subsp. *ataxiphylla* is unknown but the species is infrequent.

Total Population Size

Minimum Population Size:

Maximum Population Size:

Habitat and Ecology

A small subshrub that grows in sand over laterite in low heath, shrub mallee and low Eucalyptus woodland. subsp. *magna* is associated species with *Allocasuarina campestris*, *Xanthorrhoea preissii*, *Eucalyptus macrocarpa* and several species of *Dryandra*, *Hakea* and *Acacia* within the habitat. Two other species of Declared Rare Flora - *Hakea aculeata* and *Acacia subflexuosa* subsp. *capillata*, ranked as Endangered and Critically Endangered respectively, are found in the area of some populations of *A. ataxiphylla* subsp. *magna*.

| System | | Movement pattern | | Crop Wild Relative |
|---|-------------------------------------|------------------------------------|--|--|
| <input checked="" type="checkbox"/> Terrestrial | <input type="checkbox"/> Freshwater | <input type="checkbox"/> Nomadic | <input type="checkbox"/> Congregatory/Dispersive | <input type="checkbox"/> Is the species a wild relative of a crop? |
| | <input type="checkbox"/> Marine | <input type="checkbox"/> Migratory | <input type="checkbox"/> Altitudinally migrant | |

| Growth Form | Definition |
|---------------|---|
| Forb or Herb | Biennial or perennial herbaceous plant, also termed a Hemicryptophyte |
| Shrub - small | Perennial shrub small (<1m) or dwarf shrub, also termed a Chamaephyte (<1m) |

Threats

Overall, in the Avon Wheatbelt and the Jarrah Forest regions where this species occurs extensive clearing of native vegetation has led to extensive salinity problems (expected to affect up to 30% of the region's area) and a highly fragmented habitat. The main threatening processes include weed invasion, changed in fire regimes, pathogens (dieback), grazing pressure and continuing clearing of native vegetation (Australian Natural Resources Atlas 2009). The main threats to subsp. magna are road maintenance, weed invasion, restricted habitat, poor recruitment, inappropriate fire regimes and grazing. The majority of this subspecies populations occur on linear road reserves that contain limited potential for habitat expansion and are not buffered from climatic extremes such as drought, increased wind velocity, inundation and frost. Recruitment levels are extremely low with just five seedlings recorded in the vicinity of 204 mature plants. No fruit was found on plants visited in 1997 and 222 seeds were collected in 1998 from one population. Heavy predation of fruits was observed in two of the three populations visited in 2001 with low or variable fruit production noted. No specific information is available about the response of *Acacia ataxiphylla* to fire.

| | Past | Present | Future |
|--|-------------------------------------|-------------------------------------|--------------------------|
| 1 Habitat Loss/Degradation (human induced) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.1 Agriculture | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.5 Invasive alien species (directly impacting habitat) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.6 Change in native species dynamics (directly impacting habitat) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.7 Fires | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2 Invasive alien species (directly affecting the species) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2.1 Competitors | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2.2 Predators | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7 Natural disasters | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7.4 Wildfire | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8 Changes in native species dynamics | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8.1 Competitors | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8.3 Prey/food base | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9 Intrinsic factors | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9.2 Poor recruitment/reproduction/regeneration | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9.9 Restricted range | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10 Human disturbance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10.5 Fire | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Conservation Measures

The species is not known to occur within a protected area. The subsp. magna was not found at previous recorded sites within Charles Gardner Nature Reserve. subsp. ataxiphylla is listed as 3KC- in Briggs and Leigh (1995) a poorly known taxon with a geographic range more than 100 km² that is known to occur within a reserved but the population size is not known. It is also listed as Priority 3 in Smith (2010) taxa which are known from several populations, at least some of which are not believed to be under immediate threat. Subsp. magna is listed as Endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). It is also listed as 2KC- in Briggs and Leigh (1995) a poorly known species with a geographic range less than 100 km² that is known to occur within a reserved but the population size is not known. It is listed as Priority 2 in Smith (2010), taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat. It currently meets World Conservation Union Red List Category Endangered under criteria B1ab(iii,iv,v)+B2ab(iii,iv,v); C2a(i); D (Harris and Brown 2003). Recovery plans for this subspecies are set in place. Private property owners have been notified about the populations of this subsp. in their land. Populations have been fenced and seeds have been collected and are stored at CALM's Threatened Flora Seed Centre (TFSC) and Wakehurst Place, Royal Botanic Gardens, Kew (UK); and seeds have successfully germinated. Mapping of the critical habitat, notification to land owners of new populations develop and implement rabbit, fire and weed control strategies, monitor populations (Harris and Brown 2003). It is recommended that seeds from the other subspecies are also collected as an ex situ conservation measure.

| | In Place | Needed |
|----------------------------------|-------------------------------------|-------------------------------------|
| 1 Policy-based actions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1.1 Management plans | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1.1.1 Development | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1.1.2 Implementation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 Research actions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3.2 Population numbers and range | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3.3 Biology and Ecology | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3.4 Habitat status | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3.5 Threats | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4 Habitat and site-based actions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.1 Maintenance/Conservation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4.4 Protected areas | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5 Species-based actions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5.4 Recovery management | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5.7 Ex situ conservation actions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5.7.2 Genome resource bank | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Countries of Occurrence

| | PRESENCE | | | | | | ORIGIN | | | | | |
|-------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Year Round | Breeding Season only | Non-breeding season only | Passage migrant | Possibly extinct | Extinct | Presence uncertain | Native | Introduced | Re-Introduced | Vagrant | Origin uncertain |
| Australia | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Western Australia | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

General Habitats

| | Score | Description | Major Importance |
|---|-------|-------------|------------------|
| 2 Savanna | 1 | Suitable | Unset |
| 2.1 Savanna - Dry | 1 | Suitable | Unset |
| 3 Shrubland | 1 | Suitable | Unset |
| 3.8 Shrubland - Mediterranean-type Shrubby Vegetation | 1 | Suitable | Unset |

Species Utilisation

Species is not utilised at all

Trend in the level of wild offtake/harvest in relation to total wild population numbers over the last five years:

Trend in the amount of offtake/harvest produced through domestication/cultivation over the last five years:

CITES status: Not listed

IUCN Red Listing

Red List Assessment: (using 2001 IUCN system) Near Threatened (NT)

Red List Criteria:

Date Last Seen (only for EX, EW or Possibly EX species):

Is the species Possibly Extinct? Possibly Extinct Candidate?

Rationale for the Red List Assessment

A. ataxiphylla is a small subshrub that has a disjunct distribution in the Eucalyptus woodlands and heath of south-west Western Australia. There are two known subspecies, subsp. *magna* in the north and subsp. *ataxiphylla* in the south. The former is listed and Endangered only with 204 mature plants known and in decline. The latter is classified as poorly known and the extent of occurrence for this subspecies will classify it as Vulnerable (EOO ~6,300 km²). There are threats to the species with reports from a declining habitat quality and number of subpopulations and the habitat where this species occurs is highly fragmented. However, the EOO for the whole species does not warrant the listing of in a threatened category. Therefore, this species is rated as Near Threatened. It is possible that with more information on total population numbers, that this species may warrant a Threatened category.

Reason(s) for Change in Red List Category from the Previous Assessment:

- Genuine Change
 - Genuine (recent)
 - Genuine (since first assessment)
- Nongenuine Change
 - New information
 - Knowledge of Criteria
 - Incorrect data used previously
- Taxonomy
- Criteria Revisio
- Other
- No Change
 - Same category and criteria
 - Same category but change in criteria

Current Population Trend: Decreasing

Date of Assessment: 08/09/2010

Name(s) of the Assessor(s): Malcolm, P.

Evaluator(s):

Notes:

% population decline in the past:

Time period over which the past decline has been measured for applying Criterion A or C1 (in years or generations):

% population decline in the future:

Time period over which the future decline has been measured for applying Criterion A or C1 (in years or generations):

Number of Locations:

Severely Fragmented:

Number of Mature Individuals:

Bibliography

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