

Approved Conservation Advice  
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

**Approved Conservation Advice for**  
***Acacia forrestiana* (Forest's Wattle)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved; this includes existing plans, records or management prescriptions for this species.

**Description**

*Acacia forrestiana*, Family Mimosaceae, also known as Forest's Wattle or Forrest's Wattle, is a stiff, spiky, erect shrub and grows from 0.4–1 m high (Brown et al., 1998; Orchard & Wilson, 2001; Western Australian Herbarium, 2007). The leaf-like phyllodes are triangular in shape, 10–20 mm long, 5–10 mm wide, and are sharply pointed (Orchard and Wilson, 2001). The species produces yellow globular flower-heads (Maslin, 2001), which are borne from October to December (Hopper et al., 1990; Brown et al., 1998). Plants are killed by fire and regeneration occurs from seed (Patrick & Brown, 2001).

The species is closely allied to *Acacia huegelii*, which has a more southerly distribution and a different phyllode shape (Patrick & Brown, 2001).

**Conservation Status**

Forest's Wattle is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The species is also listed as rare (declared rare flora – extant) under the *Wildlife Conservation Act 1950* (Western Australia) (Western Australian Herbarium, 2007).

**Distribution and Habitat**

Forest's Wattle is endemic to Western Australia, and is known from two localities north of Perth. It occurs near Dandaragan and near Jurien Bay (Hopper et al., 1990; Brown et al., 1998; Orchard & Wilson, 2001; Western Australian Herbarium, 2007), over a range of about 80 km (Brown et al., 1998). Precise localities in the Hill River district are withheld for conservation reasons (Orchard and Wilson, 2001). Many populations are conserved in Lesueur National Park (Patrick & Brown, 2001). This species occurs within the Northern Agricultural and Swan (Western Australia) Natural Resource Management Regions.

Forest's Wattle grows in rocky or lateritic clay loams (Brown et al., 1998; Paczkowska & Chapman, 2000; Orchard & Wilson, 2001) or in gravelly soils over sandstone (Paczkowska & Chapman, 2000). The species inhabits gullies and slopes of lateritic hills (Hopper et al., 1990; Brown et al., 1998; Paczkowska & Chapman, 2000). Associated vegetation is heath or low woodland (Brown et al., 1998; Orchard & Wilson, 2001) of Wandoo (*Eucalyptus wandoo*) and Marri (*E. calophylla*), with shrubs such as Honey bush (*Hakea lissocarpha*), *Grevillea* spp., *Acacia* spp., *Isopogon* spp., *Calothamnus* spp., and *Melaleuca* spp. (Brown et al., 1998; Patrick & Brown, 2001).

In 2001, there were a total of 14 known populations of Forest's Wattle, supporting between 10 and 500 plants each (Patrick & Brown, 2001). Ten of the known populations occur in a National Park, with the rest occurring on private property or in road reserves (Patrick & Brown, 2001). Eleven of the known populations were considered to be in an undisturbed/good condition, with the remaining three being disturbed by fire, track creation, or weed infestation (Patrick & Brown, 2001).

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological communities.

### **Threats**

Current threats to some populations include fire, track creation, or weed infestation (Patrick & Brown, 2001).

The main potential threats to Forest's Wattle include inappropriate fire regimes; broad scale vegetation clearing; increasing fragmentation and loss of remnants; pathogens; and dieback caused by *Phytophthora cinnamomi* (DEWHA, 2007).

### **Research Priorities**

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- More precisely assess life history requirements, as current knowledge is very limited and needs additional research (Desmond & Chant, 2001).

### **Regional and Local Priority Actions**

The following priority recovery and threat abatement actions can be done to support the recovery of Forest's Wattle.

#### **Habitat Loss, Disturbance and Modification**

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Identify populations of high conservation priority.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where Forest's Wattle occurs do not adversely impact on known populations.
- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.
- Minimise adverse impacts from land use at known sites.
- Protect further populations of the listed species through the development of conservation agreements and/or covenants.

#### **Invasive Weeds**

- Identify and remove weeds in the local area, which could become a threat to Forest's Wattle, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to Forest's Wattle, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Forest's Wattle.

#### **Fire**

- Develop and implement a suitable fire management strategy for Forest's Wattle. Protect from frequent fire, where possible, until research has been conducted on the fire response of the species (Patrick & Brown, 2001).

- Identify appropriate intensity and interval of fire to promote seed germination.
- Provide maps of known occurrences to local and state Rural Fire Services and land managers and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

#### Diseases, Fungi and Parasites

- Implement hygiene procedures at all populations to protect known sites from further outbreaks of dieback caused by the root-rot fungus (*Phytophthora cinnamomi*) (Brown et al., 1998; Patrick & Brown, 2001).

#### Conservation Information

- Raise awareness of Forest's Wattle within the local community.

#### Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage according to the protocols of the Threatened Flora Seed Centre at the Western Australian Herbarium (Patrick & Brown, 2001).
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to Forest's Wattle, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

#### **Existing Plans/Management Prescriptions that are Relevant to the Species**

- Management Plan for Lesueur National Park and Coomallo Nature Reserve (CALM, 1995),
- Declared rare and poorly known flora in the Moora district (Patrick & Brown, 2001), and
- Threat abatement plan for dieback caused by the Root-rot Fungus *Phytophthora cinnamomi* (Environment Australia, 2001).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

#### **Information Sources:**

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Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2<sup>nd</sup> ed.), Australian Network for Plant Conservation, Canberra.

Western Australian Herbarium 2007, *Florabase*, viewed 22 May, 2008, <<http://florabase.calm.wa.gov.au/browse/profile/3341>>.