

A statement for the purposes of approved conservation advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
***Melaleuca biconvexa* (Biconvex Paperbark)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Melaleuca biconvexa, Family Myrtaceae, also known as Biconvex Paperbark, is a paperbark shrub or small tree generally growing to 10 m and on occasion, reaching heights of 20 m. Its white flowers are usually clustered in dense heads and the fruit is urn-shaped. Flowering occurs over 3–4 weeks in September and October (DEC, 2005a).

Conservation Status

Biconvex Paperbark is listed as **vulnerable**. The species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). This species is also listed as vulnerable under the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Biconvex Paperbark occurs within the Hawkesbury–Nepean, Northern Rivers, Hunter–Central Rivers and Southern Rivers (NSW) Natural Resource Management Regions. Populations are scattered and disjunct. Within the Gosford and Wyong area most populations occur on private land or on road reserves (NSW Scientific Committee, 2002).

The species occurs in damp places, often near streams and rivers or low-lying areas on alluvial soils of low slopes or sheltered aspects. It occurs in coastal districts and adjacent tablelands. Biconvex Paperbark may occur in dense stands forming a narrow strip adjacent to watercourses, in association with other *Melaleuca* species or as an understorey species in wet forest types. Multiple stems may arise from single rootstocks so that an estimate of population size is not possible from visual inspection of stands (NSW Scientific Committee, 2002; Biolink, 2006).

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

Threats

The main identified threats to Biconvex Paperbark are land clearing; alteration to water tables; too-frequent fire; and grazing or trampling by stock. Most populations are on private land and there is poor knowledge about the Biconvex Paperbark and its management requirements (NSW Scientific Committee, 2002).

Research Priorities

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

- Design and implement a monitoring program,
- Research on life history, clonality and ecological requirements of the species, and
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of the Biconvex Paperbark.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage threats to areas of vegetation that contain populations/occurrences of Biconvex Paperbark.
- Ensure construction and development activities in areas where Biconvex Paperbark occurs do not have a significant adverse impact on known populations.
- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Trampling, Browsing or Grazing

- Develop and implement a stock management plan for roadside verges and travelling stock routes.

Fire

- Develop and implement a suitable fire management strategy for the Biconvex Paperbark.
- Identify appropriate intensity and interval of fire to promote seed germination.
- Provide maps of known occurrences to local and state rural fire services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of Biconvex Paperbark within the local community, particularly among landholders and local land managers who have the species on their properties.

Enable Recovery of Additional Sites and/or Populations

- 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.
- Undertake appropriate seed collection and storage.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of the Biconvex Paperbark.

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.
- Protect populations on private land through the development of conservation agreements and/or covenants.

Trampling, Browsing or Grazing

- Prevent grazing pressure at known sites on private property and leased crown land through exclusion fencing or other barriers.

Fire

- Implement an appropriate fire management strategy for local populations.

This list does not necessarily encompass all actions that may be of benefit to the Biconvex Paperbark, 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

- NSW Priority Action Statement for the Biconvex Paperbark (DEC, 2005b).

Information Sources:

Biolink 2006, *Area 13 Urban Investigation Area Local Environmental Study (Ecological Constraints)*, Biolink Pty Ltd Ecological Consultants, Uki, New South Wales.

Department of Environment and Conservation New South Wales (DEC) 2005a, *Biconvex Paperbark (Melaleuca biconvex) – Profile*, viewed 11 March 2008, <<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10514>>.

Department of Environment and Conservation New South Wales (DEC) 2005b, *Biconvex Paperbark (Melaleuca biconvex) – New South Wales Threatened Species Priority Action Statement*, viewed 11 March 2008, <http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas_profile.aspx?id=10514>.

New South Wales Scientific Committee 2002, *Final Determinations of the New South Wales Scientific Committee 1999-2002*, viewed 11 March 2008, <<http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Melaleuca+biconvexa+a+small+tree+-+vulnerable+species+listing>>.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia - Second Edition*, Australian Network for Plant Conservation, Canberra.