



New South Wales

## THREATENED SPECIES CONSERVATION ACT 1995 No 101

### Notice of Final Determination and Amendment of Schedule 1 to Act

The Scientific Committee established under the *Threatened Species Conservation Act 1995* has, in pursuance of Division 3 of Part 2 of that Act, made a final determination to insert the following community in Part 3 of Schedule 1 to that Act (Endangered ecological communities) and, accordingly, that Schedule is amended as set out in Annexure "A" to this Notice:

#### Part 3 Endangered ecological communities

*Cadellia pentastylis* (Ooline) community in the Nandewar and Brigalow Belt South bioregion (as described in the final determination of the Scientific Committee to list the ecological community)

The final determination to insert this community in Schedule 1 has been made because the Scientific Committee is of the opinion that this community is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate.

Copies of the final determination may be inspected at:

The Information Centre (Level 1)  
National Parks & Wildlife Service  
43 Bridge Street  
HURSTVILLE NSW 2220

and at all District Offices of the National Parks and Wildlife Service during business hours.

Signed at Sydney, this 28th day of August 1998.

Dr Chris Dickman  
Chairperson  
Scientific Committee

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#### Annexure "A"

Schedule 1 to the *Threatened Species Conservation Act 1995* is amended by inserting in Part 3 in alphabetical order the matter:

*Cadellia pentastylis* (Ooline) community in the Nandewar and Brigalow Belt South bioregion (as described in the final determination of the Scientific Committee to list the ecological community)

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## NSW SCIENTIFIC COMMITTEE

### Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the *Cadellia pentastylis* (Ooline) community in the Nandewar and Brigalow Belt South IBRA regions as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Threatened Species Conservation Act. Listing of Ecological Communities is provided for in Division 2 of Part 2 of that Act.

The Scientific Committee has found that:

1. The *Cadellia pentastylis* community is a forest community with the canopy dominated or co-dominated by the tree *Cadellia pentastylis* (Ooline). Other canopy species include *Eucalyptus albens*, *Eucalyptus beyeriana*, *Eucalyptus chloroclada*, *Eucalyptus melanophloia*, *Eucalyptus pilligaensis*, *Eucalyptus viridis* and *Callitris glaucophylla*.

Understorey species include *Alstonia constricta*, *Beyeria viscosa*, *Carissa ovata*, *Einadia hastata*, *Geijera paraviflora*, *Notelaea microcarpa* and *Aristida* and *Stipa* species.

Details of the species composition of individual stands is provided in Benson J.S. (1993) *The Biology and Management of Ooline (Cadellia pentastylis) in NSW*. Species Management Report No. 2 (NSW National Parks and Wildlife Service).

The species composition of stands varies, with stands on claystone having a more herbaceous understorey than those on sandstone or conglomerate. However, all stands are similar in having *Cadellia pentastylis* as a dominant overstorey species.

2. Stands of *Cadellia pentastylis* occur in northern NSW on undulating terrain on a variety of soil types, usually between 300-450 masl. The distribution of the community falls within the Nandewar and Brigalow Belt South bioregions in the IBRA scheme. The *Cadellia* community also occurs in Queensland, where it has been extensively cleared.
3. *Cadellia pentastylis* is the only species in the genus and has affinities with rainforest species. The community may provide links to the more extensive rainforest cover of Australia which was present until the late Tertiary development of widespread aridity.

*Cadellia pentastylis* exhibits the capacity to resprout and coppice—the number of genetic individuals in some stands may be much less than the number of stems present.

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*Cadellia pentastylis* is listed on Schedule 2 of the Threatened Species Conservation Act, and is coded 3R Ca by Briggs, J.D. and Leigh, J.H. (1996) *Rare or Threatened Australian Plants* CSIRO Publications, Melbourne.

4. The total area of the *Cadellia pentastylis* community in NSW is c 1200 ha. in 8 major locations (locations 1–7 in Fig. 1 of Benson 1993, plus an additional location at Mosquito Creek. Location 8 in Benson's Fig. 1 is in Queensland).
5. At all locations there has been a substantial reduction in the area of the community over the last 200 years (see Fig. 2–8 in Benson 1993).
6. Stands of the community occur under a variety of tenures. Some areas are conserved in the Scrub Myrtle Flora Reserve, Gamilaraay Nature Reserve and under a voluntary conservation agreement.
7. Threats to the community include grazing and accompanying compaction of soil leading to poor recruitment of seedlings. The response of *Cadellia pentastylis* to fire is unknown so that impact of changed fire regimes on the community is uncertain.

Historically the major threat to the community has been from clearing, which has caused the dramatic reduction in extent of the community. Further clearing would be a major danger to the survival of the community.

Fragmentation of formerly more extensive stands, and the possibility of low genetic diversity within stands (because of the prevalence of vegetative reproduction) may pose long term threats to the survival of the community.
8. In view of 4, 5 and 7 above, the Scientific Committee is of the opinion that the *Cadellia pentastylis* community is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary development cease to operate.

Associate Professor Paul Adam  
Deputy Chairperson  
Scientific Committee