

Final Determinations

1997

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ns, ecological communities and key threatening processes
edules of the *Threatened Species Conservation Act, 1995*

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NSW SCIENTIFIC COMMITTEE
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NSW SCIENTIFIC COMMITTEE

FOREWORD

The NSW Scientific Committee was established in 1996 following the enactment of the Threatened Species Conservation Act (the Act).

The Scientific Committee is an independent committee and consists of 10 members appointed by the Minister for the Environment. The current members of the Committee are scientists from the following organisations:

Australian Museum

CSIRO

NSW Agriculture

Ecological Society of Australia

Entomological Society of Australia

National Parks and Wildlife Service

Royal Botanic Gardens

State Forests of NSW

University of NSW

The Threatened Species Conservation Act includes in Schedules 1, 2 and 3 lists of endangered, vulnerable and extinct species, endangered populations, endangered ecological communities and key threatening processes. One of the Committee's functions is to consider nominations or proposals:

- to list or remove species as endangered, vulnerable or extinct;
- to consider changes to the status of species listed as endangered, vulnerable or extinct;
- to list or remove populations and ecological communities as endangered;
- to list or remove key threatening processes.

The Act details the criteria for listing species, populations, communities and key threatening processes as well as the procedure for listing, delisting or amending the Schedules.

Nominations for listing, delisting or amendments to the Schedules may be made by any person, or the Committee may act on its own initiative. Following receipt and review of a nomination, the Committee considers whether additional information is required from the nominator or other sources such as research scientists, Government agencies and other organisations. The Committee may seek comment or further information from these sources.

When the Committee decides to accept a nomination, the Committee makes a Preliminary Determination either to support or not to support the nomination. This Determination is placed on public exhibition for comment. Notices regarding the Preliminary Determination and its public display are placed in the Government Notices section of the Sydney Morning Herald (Friday edition) and, where appropriate, local newspapers. The Preliminary Determination is placed on display at the Head Office and District Offices of the National Parks and Wildlife Service. Copies of Determinations on public display may also be obtained from the Committee's Executive Officer.

Following consideration of all submissions received during the exhibition period, the Committee makes a Final Determination on whether to accept or reject the nomination. When the Committee decides to accept and support a nomination a Notice is placed in the Government Gazette advising of the Committee's Determination and the amendment of the

NSW SCIENTIFIC COMMITTEE

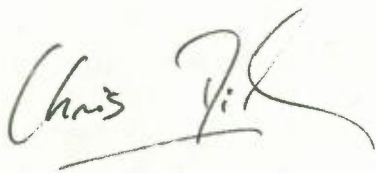
Schedules of the Threatened Species Conservation Act. A Notice advising of the Committee's Final Determination is also placed in newspapers and the Final Determination is placed on public display for information. Similarly, where the Committee rejects a nomination, Notices are also placed in the Government Gazette and newspapers.

The Act also provides for the Provisional Listing of Endangered Species on an Emergency Basis. Upon the publication of a Notice advising that a species be provisionally listed, the Schedule is taken to have been amended by the insertion of that species. As soon as practicable thereafter, the Committee must review the status of a provisionally listed species. Where the Committee determines that the provisionally listed species should be listed in the Schedules of the Act, the public exhibition and assessment process, as outlined above for other nominations, is undertaken.

The Act also contains provision for the Committee to reject nominations if relevant information is not provided or if they fall outside the Committee's terms of reference. In this case there is no public notification of the rejection. A number of nominations received by the Committee were rejected for these reasons.

This document contains the Final Determinations and Provisional Listing Determinations made by the Committee in 1997 and includes the gazettal date on which the species, population, community or key threatening process was added to the Schedules of the Act. Where a species was previously provisionally listed, a statement indicating the date of the Provisional Listing Determination is included at the bottom of the Final Determination for the species. Final Determinations in which the Scientific Committee rejected a proposal are also included with the exception of those Determinations which have been superseded by another Final Determination.

If you would like further information regarding the Committee and its Determinations, please contact the Committee's Executive Officer, Sue Chate on (02) 9585 6940.



Dr Chris Dickman
Chairperson

NSW SCIENTIFIC COMMITTEE

CONTENTS

<u>Species</u>	<u>Page</u>
<i>Acacia gordonii</i> a wattle.....	7
<i>Caladenia arenaria</i> a terrestrial orchid.....	8
<i>Caladenia concolor</i> a terrestrial orchid.....	9
<i>Cercartetus concinnus</i> Western Pygmy Possum.....	10
<i>Dasyornis brachypterus</i> Eastern Bristlebird.....	11
<i>Diomedea cauta</i> Shy Albatross.....	12
<i>Diomedea melanophrys</i> Black-Browed Albatross.....	13
<i>Drynaria rigidula</i> a fern.....	14
<i>Egernia margaretae</i> a skink.....	15
<i>Elseya</i> sp. (Namoi and Gwydir Rivers)..... a turtle.....	16
<i>Emydura macquarii</i> (Bellinger River form). Bellinger River Turtle.....	17
<i>Genoplesium plumosum</i> a terrestrial orchid.....	18
<i>Lasiorhinus latifrons</i> Southern Hairy-nosed Wombat.....	19
<i>Meridolum corneovirens</i> a large land snail.....	20
<i>Micromyrtus grandis</i> a large shrub.....	21
<i>Microtis angusii</i> a terrestrial orchid.....	22
<i>Neobatrachus pictus</i> Painted Burrowing Frog.....	23
<i>Phoebetria fusca</i> Sooty Albatross.....	24
<i>Placostylus bivaricosus</i> a large land snail.....	25
<i>Pterostylis saxicola</i> Sydney Plains Greenhood orchid.....	26
<i>Ramphotyphlops endoterus</i> a blind snake.....	28
<i>Rapanea</i> sp. A a shrub/tree.....	29
<i>Thersites mitchellae</i> a large land snail.....	30
<i>Triplarina nowraensis</i> a shrub.....	31

NSW SCIENTIFIC COMMITTEE

<u>Population</u>	<u>Page</u>
<i>Dillwynia tenuifolia</i> a shrub, Kemps Creek.....	35
<i>Eudiptula minor</i> Little Penguin, Manly Point	36
<i>Hibbertia incana</i> a shrub, Baulkham Hills Shire.....	37
<i>Perameles nasuta</i> Long-nosed Bandicoot, North Head.....	38
<i>Persoonia hirsuta</i> a shrub, Baulkham Hills Shire.....	41
<i>Petrogale penicillata</i> Brush-tailed Rock-wallaby, Warrumbungles	42
<i>Wahlenbergia multicaulis</i> Tadgell's Bluebell, Auburn/ Bankstown/ Strathfield/ Canterbury LGAs	43

Ecological Community

Blue Gum High Forest	47
Cooks River Clay Plain Scrub Forest.....	49
Cumberland Plain Woodland	51
Eastern Suburbs Banksia Scrub.....	53
Maroota Sands Swamp Forest.....	55

Key Threatening Process

Incidental catch (or bycatch) of seabirds during longline fishing operations (rejected)	59
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SPECIES

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Acacia gordonii* (Tind.) Pedley, an erect or spreading shrubby wattle, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Acacia gordonii* is an erect or spreading shrub (0.5-1.5 m high) with smooth grey bark and densely hairy branchlets. The leaves (phyllodes) are generally alternate, straight or subfalcate and up to 1.5 cm long by c. 1 mm wide. Flowers are in golden yellow heads arising singly in the phyllode axils. Flowering is from August to September.
2. It occurs in dry sclerophyll forest and heaths amongst or within rock platforms on sandstone outcrops.
3. It is known from only a few locations, and less than 1500 plants in the Bilpin/Faulconbridge/Maroota/Hornsby Heights areas, with some plants within the Blue Mountains National Park.
4. The species is threatened by clearing, urban development, road maintenance, recreational use of its habitat and bush rock removal.
5. In view of 3 and 4 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 6/6/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Caladenia arenaria* Fitzg., a terrestrial orchid, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. The spider orchid *Caladenia arenaria* was first described in 1882 by Fitzgerald, from the south western slopes and plains region of NSW.
2. *Caladenia arenaria* has a linear to lanceolate leaf to 15 cm long and 18 mm wide. The leaf is densely hairy and reddish at the base. The flower stem is up to 40 cm high and usually consists of 1 flower up to 8 cm across. The sepals and petals are a pale straw colour with red-brown tips. The labellum is ovate to cordate, c. 18 mm long and 10 mm wide with margins of linear teeth. *C. arenaria* flowers in September to November and grows in sclerophyll forests on sandhills, often in association with *Callitris*.
3. The species is found only in NSW and is currently known from only 2 populations, north of Narrandera, on the south-western slopes of NSW, and near Lake Urana, on the south western plains of NSW. It has previously been found in the Narrandera - Griffith region and near Adelong, although recent searches have failed to find any extant populations in these areas.
4. Only a total of approximately 25 plants are known and none occur in a reserve.
5. The species is threatened by grazing, collecting of plants, and disturbance from quarrying.
6. In view of 3, 4 & 5 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 18/7/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination for a change of status of *Caladenia concolor* Fitzg., a terrestrial orchid, from a VULNERABLE SPECIES on Schedule 2 of the Threatened Species Conservation Act to an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Act.

The Scientific Committee has found that:

1. The crimson spider orchid *Caladenia concolor* was first described in 1882 by Fitzgerald, and occurs on the south western slopes of NSW, with a record from last century from the southern tablelands.
2. The leaf of *Caladenia concolor* is up to 15 cm by 1.3 cm and is sparsely hairy. The flower stem is to 25 cm tall and dark purplish red in colour bearing 1 or 2 large flowers. The flowers are also purple/red with sepals and petals 4.5 cm long, and a purple labellum with curving marginal teeth to 3 mm long. *C. concolor* flowers in October to November and grows in sclerophyll forest on clay loams or gravelly soils.
3. The species is currently known from 3 populations in the vicinity of Cootamundra, Lake Burrinjuck and Albury. The species was recorded from the Tumbarumba area in 1899 but has not been collected there since. A total of only 131 plants are known.
4. None of the known populations are in a reserve.
5. The species is threatened by clearing, stock grazing, weeds, rabbits, rubbish dumping and arson.
6. In view of 3, 4 & 5 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 18/7/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Cercartetus concinnus* (Gould, 1845), the Western Pygmy Possum as an ENDANGERED SPECIES on Part 1 of Schedule 1 of that Act.

The Scientific Committee has found that:

1. Western Pygmy Possum *Cercartetus concinnus* is an extremely small possum, fawn or reddish brown above, white below.
2. Western Pygmy Possum *Cercartetus concinnus* was not previously known to have existed in NSW.
3. A single young male has recently been trapped in south western NSW. This indicates the possibility of an actively breeding group in the area. An older specimen (from 1958), collected in the same general area, has been located in the National Museum of Victoria.
4. The size and extent of the current NSW population is unknown. The Western Pygmy Possum was found in habitat that is threatened by clearing for cropping, inappropriate fire regimes and contains introduced predators.
5. In view of 2, 3 & 4 above the Scientific Committee is of the opinion that the Western Pygmy Possum *Cercartetus concinnus* is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on: 30/8/96*

Gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to change the status of the Eastern Bristlebird, *Dasyornis brachypterus*, (Latham) from VULNERABLE on Schedule 2 of the Act to ENDANGERED on Part 1 of Schedule 1 of the Act.

The Scientific Committee has found that:

1. The Eastern Bristlebird is a passerine bird approximately 200 millimetres in length, weighing 40 grams. It is terrestrial, camouflaged, shy and cryptic. It is capable of only very short flights. The species is generally detected singly or in pairs at densities up to 25 birds per 100 hectares. It is currently categorised as Vulnerable on Schedule 2 of the Threatened Species Conservation Act.
2. The Eastern Bristlebird lays a clutch of two eggs and raises only one fledgling per nest. Nests are deserted after only slight disturbance.
3. The Eastern Bristlebird is rarely seen but may be detected by its distinctive, loud calls.
4. Eastern Bristlebirds are currently confined to three disjoint areas of south-eastern Australia:
 - the NSW/Queensland border region
 - the Illawarra region
 - the NSW/Victorian border region

The total population is estimated at less than 2000 individual birds.

5. The evidence from recent surveys is that the total population has declined. The northern populations declined by approximately 50% between 1989 and 1992. Only two populations, both within the Illawarra region, are likely to exceed 500 birds. These populations occur on the Budderoo Plateau and the Bherwerre Peninsula.
6. The habitat of the Eastern Bristlebird is characterised by low dense vegetation. Fire is a feature of all areas where known populations occur. Given the poor flight ability of the species it is thought that few individuals survive the passage of fire, survival is dependant on the availability of fire refuges and recolonisation may be relatively slow.
7. The nature of the fire regime is therefore crucial to the survival of the species and changes to the fire regime have been implicated as a cause of population decline.
8. Given the evidence of the decline in the numbers of the species, the fragmented distribution of the populations, the impacts of disturbance on nesting success and the effects of fire the Scientific Committee is of the opinion that the Eastern Bristlebird is likely to become extinct in nature in New South Wales unless the factors threatening its survival cease to operate.
9. Accordingly the Scientific Committee proposes that the Eastern Bristlebird be included on Part 1, Schedule 1 of the Threatened Species Conservation Act.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 31/1/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Shy Albatross, *Diomedea cauta*, Gould 1841 as a VULNERABLE SPECIES on Schedule 2 of the Threatened Species Conservation Act.

Listing of Vulnerable Species is provided for by Schedule 14 of the Act.

The Scientific Committee has found that:

1. *Diomedea cauta* is a large albatross with a wide distribution in the southern hemisphere. In Australia it breeds on islands off Tasmania, but is a visitor to New South Wales waters. Birds in NSW waters may include individuals from New Zealand Colonies.
2. There is evidence for a decline in the population of *D. cauta*.
3. There is evidence that *D. cauta* is one of the albatross species which may be part of the bycatch in long-line fishing.
4. Pollution from plastics, oil and other chemicals is known to have adverse impacts on albatross species.
5. In light of the evidence of population decline, and the evidence of actual and potential threats to *D. cauta* the Scientific Committee is of the opinion that the species is likely to become endangered unless the circumstances and factors threatening its survival cease to operate, and that therefore the species qualifies for inclusion on Schedule 2 of the Threatened Species Conservation Act as a VULNERABLE SPECIES.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 31/1/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Black-Browed Albatross, *Diomedea melanophris*, Temminck 1828 as a VULNERABLE SPECIES on Schedule 2 of the Threatened Species Conservation Act.

Listing of Vulnerable Species is provided for by Section 14 of the Act.

The Scientific Committee has found that:

1. *Diomedea melanophris* is an albatross which does not breed in New South Wales but which is recorded as a visitor to New South Wales waters.
2. There is evidence of a decline in the population of *D. melanophris* globally, although the status of the Falkland Islands colonies (which represent the majority of the world population) is uncertain.
3. *D. melanophris* has been reported to be the most commonly occurring albatross species being killed as bycatch in long-line fishing operations in Australian waters.
4. In view of the evidence of population decline and the threat from long-line fishing the Scientific Committee is of the opinion that the species is likely to become endangered unless the circumstances and factors threatening its survival cease to operate and that therefore the species qualifies for inclusion on Schedule 2 of the Threatened Species Conservation Act as a VULNERABLE SPECIES.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 31/1/97

NSW SCIENTIFIC COMMITTEE

Determination for provisional listing of an endangered species on an emergency basis

The Scientific Committee, established under the Threatened Species Conservation Act, has made a determination for the provisional listing of *Drynaria rigidula* (Sw.) Beddome, a fern, on an emergency basis as an ENDANGERED SPECIES. Provisional listing is provided for by Section 28 of the Act.

Drynaria rigidula (Sw.) Beddome is currently listed as presumed extinct on Part 4 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Drynaria rigidula* was presumed extinct in New South Wales and has been rediscovered.
2. It is a fern (family Polypodiaceae) that grows on rocks or as an epiphyte from rainforests north from the Clarence River in northern coastal N.S.W. This species is described in the Flora of New South Wales (Volume 1, Harden 1990) as:
"Rhizome densely covered with long, reddish brown, ciliate scales. Both kinds of fronds covered, at least in part, with narrow ciliate scales and stellate hairs; the sterile ('nest') fronds long and narrow, 12-36 cm long and 6-8 cm wide, slightly lobed to pinnatifid; the fertile fronds pinnate, to 150 cm long including the stipe. Sori in regular rows on either side of the midvein of the pinnae. Creeping or clump-forming species found in rainforest, rare in N.S.W., north from the Clarence River."
3. The species is currently known from only 3 locations in N.S.W., although it is common in Queensland. Only one plant is known from each of the known locations in N.S.W.
4. The species is threatened by loss of habitat and low population numbers.
5. In view of 1, 3 & 4 above the Scientific Committee is of the opinion that the species is likely to be endangered in nature in NSW and is eligible for Provisional Listing on an emergency basis.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 19/12/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Egernia margaretae* Storr, 1968 a skink as an ENDANGERED SPECIES on Part 1 of Schedule 1 of that Act.

The Scientific Committee has found that:

1. *Egernia margaretae* is a skink, brown above with grey or grey-brown on the sides, usually with a series of dark brown or black spots on the back. Ear lobules are white or cream.
2. *Egernia margaretae* was not previously known to have existed in New South Wales.
3. Two individuals have been trapped in NSW within Mootwingee National Park. Identifications have been confirmed by the Australian Museum.
4. *Egernia margaretae* has a disjunct distribution, being recorded in north-western South Australia, south-western Northern Territory and central-eastern Western Australia. The individuals trapped in NSW are of sub-species *Egernia margaretae personata*, previously only recorded from the Flinders Ranges.
5. In view of 2,3 & 4 above the Scientific Committee is of the opinion that the skink *Egernia margaretae* is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on: 30/8/96*

Final Determination gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established under the Threatened Species Conservation Act, has made a Final Determination to list the turtle, *Elseya sp.* (Namoi and Gwydir Rivers), the Namoi River Elseya, as a VULNERABLE SPECIES on Schedule 2 of the Act. Listing of Vulnerable Species is provided for by Section 14 of the Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

The Scientific Committee has found that:

1. *Elseya sp.* (Namoi and Gwydir Rivers), although not formally described, is a clearly distinctive species that occurs in the headwaters of the Namoi and Gwydir Rivers and possibly also in the Macquarie Marshes.
2. The species is found in shallow to deep pools flowing through the granitic bedrock of the Namoi and Gwydir Rivers. It has been found at only half a dozen sites, and where it occurs it is reasonably abundant.
3. *Elseya sp.* (Namoi and Gwydir Rivers) is potentially at risk from increased runoff, siltation and pollution, where land adjacent to streams has been modified by farming activities resulting in disturbance to stream banks and associated vegetation. Changes in water quality are implicated in a high incidence of eye disease in populations of the Namoi River Elseya. The disease causes blindness. If the species is confirmed to occur in the Macquarie Marshes, altered water flow regimes would be an additional threat.
4. Given the restricted geographical range, the absence of the species from any, conservation reserves, and evidence of threats to the species in 3, above, the Scientific Committee is of the opinion that the species is likely to become endangered.

Dr C Dickman
Chairperson
Scientific Committee

Gazetted: 10/1/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the turtle, *Emydura macquarii* (Bellinger River form), the Bellinger River Emydura, as a VULNERABLE SPECIES on Schedule 2 of that Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

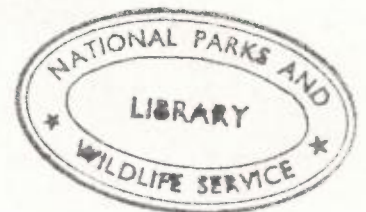
Listing of Vulnerable Species is provided for by Section 14 of the Act.

The definition of species for the purposes of the Act permits the listing, as species, of distinctive forms regardless of formal taxonomic status.

The Scientific Committee has found that:

1. *Emydura macquarii* (Bellinger River form), although not formally described, is a morphologically distinct entity that is known only from a single locality near Thora on the Bellinger River. This form is characterised by the carapace being considerably more flared toward the rear than other forms and the iris is a golden-yellow, with a yellowish inner ring. Two specimens are held at the Australian Museum.
2. The taxon occupies several long, deep pools in moderately broad reaches of the Bellinger River. It is found only in small, isolated populations, and where it occurs it is quite uncommon.
3. The low numbers and small populations of the taxon may be the result of competition between it and *Elseya* species present in the same sites. Threats to *Emydura macquarii* (Bellinger River form), include extraction of river sand and gravel, construction of bridge and ford crossings upstream of the species location, low intensity grazing and agricultural activities in downstream reaches of the Bellinger River, logging of native forests leading to water pollution and soil degradation, and line fishing as a possible minor threat.
4. Given the restricted geographical range and evidence of threats to the taxon in 3, above, the Scientific Committee is of the opinion that the taxon is likely to become endangered unless the factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee



Gazetted: 21/2/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Genoplesium plumosum* (Rupp) D.L. Jones & M.A. Clem., a terrestrial orchid, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. The orchid *Genoplesium plumosum* was originally published as *Prasophyllum plumosum*, and changed to *Genoplesium plumosum* by D.L. Jones and M.A. Clements in 1989.
2. *Genoplesium plumosum* grows to 10-20 cm high with up to 8 flowers, each one around 5 mm across. The flowers are green with reddish markings and a reddish purple labellum, which is fringed with long hairs. It grows in dry sclerophyll forest over sandstone, and flowers from December to March.
3. The species is currently known from only 1 population near Tallong, east of Marulan on the southern boundary of the NSW central tablelands.
4. *Genoplesium plumosum* was first described from a collection at Kurnell in 1947 but has not been collected there since, even though searches have been made. Other early records in NSW are from Asquith and Wahrenonga and it has also been collected from Stanthorpe in Qld. There have been no further collections at these locations, and it is considered the Tallong population is the only current extant population of the species.
5. It is presently only known from 2 small colonies located 400m apart in remnant bushland. These 2 colonies are considered as the one population and contain a total of 20-30 plants.
6. The species is threatened by clearing.
7. In view of 3, 4, 5 & 6 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 18/7/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Lasiorhinus latifrons*, (Owen, 1845), the Southern Hairy-nosed Wombat as an ENDANGERED SPECIES on Part 1 of Schedule 1 of that Act.

The Scientific Committee has found that:

1. The Southern Hairy-nosed Wombat *Lasiorhinus latifrons* has been newly discovered in New South Wales. As a result of this discovery, the identity of subfossil material from south-western New South Wales may need to be reassessed.
2. There are reliable records of the occurrence of the Southern Hairy-nosed Wombat, *Lasiorhinus latifrons* from the south-western corner of New South Wales between the Anabranche and the South Australian border.
3. The populations are small, consisting of two localities each with between 2 and 10 individuals.
4. Very little is known about the Southern Hairy-nosed Wombat in New South Wales.
5. The populations are threatened by grazing by introduced and natural herbivores, and activities which result in the destruction of burrows.
6. In view of 3, 4 & 5 above the Scientific Committee is of the opinion that the Southern Hairy-nosed Wombat *Lasiorhinus latifrons* is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on: 30/8/96*

Final Determination gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Meridolum corneovirens* (Pfeiffer, 1851), a large land snail, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Meridolum corneovirens* is a large land snail, found on the Cumberland Plain in remnant pockets of urban bushland, in areas associated with Wianamatta Shale and old Nepean river gravels.
2. *Meridolum corneovirens* occurs in eucalypt woodland under logs and debris and around bases of trees or clumps of grass, burrowing into loose soil.
3. Collections in the Australian and Queensland Museum indicate that the species was formerly common throughout the Cumberland Plain, but recent records indicate that only small remnant disjunct populations remain.
4. Within the present remnant disjunct populations, several morphotypes exist suggesting that there might be considerable genetic differences between extant populations.
5. The habitat of *Meridolum corneovirens* has been drastically reduced with clearing of bush and is subjected to major current development pressures, which further threaten the remaining populations.
6. In view of 3, 4 and 5 above, the Scientific Committee is of the opinion that the numbers of *Meridolum corneovirens* have been reduced to such a critical level and its habitats have been so drastically reduced that it is in immediate danger of extinction and that *M. corneovirens* is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Micromyrtus grandis* J.T. Hunter (Myrtaceae), a large shrub, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Micromyrtus grandis* has been recently described by Hunter, Quinn and Bruhl (*Micromyrtus grandis* (Myrtaceae), a new species from New South Wales. *Telopea* 7(1):77-81). The species is restricted to a small area, NNE of Inverell, on the north-western slopes of New South Wales.
2. It is a large shrub (1-6m tall) in the Myrtaceae family with stringy orange-brown bark curling off in linear strips. Leaves are opposite, strongly keeled in cross section and obovate, elliptic to oblong with conspicuous oil glands in 2 distinct rows. Flowering is from July to September with indehiscent dry nuts produced from August onwards.
3. It occurs in open and exposed situations in heath and low woodland on porphyritic outcrops between 600-750 m elevation. It grows among rocks in shallow soils.
4. It is known only from a single location in Inverell Local Government Area.
5. The species is threatened by goat grazing, land clearing, road widening and possibly an inappropriate fire regime.
6. In view of 4 and 5 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 6/6/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee established by the Threatened Species Conservation Act, has made a Final Determination to list *Microtis angusii* D.L. Jones, a terrestrial orchid, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

Microtis angusii D.L. Jones was listed as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act as a Provisional Listing on an Emergency Basis.

The Scientific Committee has found that:

1. The orchid *Microtis angusii* was discovered in 1991 and has recently been described by D L Jones (*Microtis angusii*, a new species of Orchidaceae from Australia, *The Orchadian* Volume 12 Number 1, pages 10-12, September 1996).
2. It is a terrestrial orchid with affinities to *M. parviflorae* and *M. unifoliae* but more robust and having an ovate oblong labellum with shallowly emarginate apex, numerous marginal labellum excrescences and united basal labellum calli. It is about 25-60 cm tall, flowering between May and October.
3. The species is currently known from only a single population of about 100 individual plants in the Warringah/Pittwater area in the north of Sydney.
4. The known site is close to a major road and has suffered considerable disturbance and degradation.
5. The species is threatened by disturbance by vehicle parking, laying of cables and collection by orchid enthusiasts.
6. In view of 3, 4 & 5 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on:* 30/8/96

Final Determination gazetted: 6/6/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Neobatrachus pictus* Peters, 1863 the Painted Burrowing Frog as an ENDANGERED SPECIES on Part 1 of Schedule 1 of that Act.

The Scientific Committee has found that:

1. The Painted Burrowing Frog *Neobatrachus pictus* is a burrowing frog, grey, light brown or yellow above with large, irregular dark-brown or olive green patches and usually a thin light yellowish vertebral stripe.
2. The Painted Burrowing Frog *Neobatrachus pictus* was previously known only from south-eastern South Australia and far western Victoria. It was not previously known to have existed in New South Wales.
3. A single individual has been captured in south-western NSW; the identity of the specimen has been confirmed by the South Australian Museum.
4. In view of 2 & 3 above the Scientific Committee is of the opinion that the Painted Burrowing Frog *Neobatrachus pictus* is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on: 30/8/96*

Final Determination gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Sooty Albatross, *Phoebetria fusca* (Hilsenberg 1822) as a VULNERABLE SPECIES on Schedule 2 of the Threatened Species Conservation Act.

Listing of Vulnerable Species is provided for by Section 14 of the Act.

The Scientific Committee has found that:

1. *Phoebetria fusca* is a species of albatross which is an uncommon visitor to New South Wales waters.
2. Although *P. fusca* is a poorly known species there is evidence that the population is currently declining.
3. There is evidence that *P. fusca* is one of the species of albatross included in bycatch of long-line fishing operations.
4. In view of the evidence of population decline and the threat from long-line fishing the Scientific Committee is of the opinion that the species is likely to become endangered unless the circumstances and factors threatening its survival cease to operate and that therefore the species qualifies for inclusion on Schedule 2 of the Threatened Species Conservation Act as a VULNERABLE SPECIES.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 31/1/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Placostylus bivaricosus* (Gaskoin, 1855), a large land snail from Lord Howe Island, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Placostylus bivaricosus* is endemic to Lord Howe Island and Rabbit Island (= Blackburn Island) in the lagoon.
2. The subspecies *Placostylus bivaricosus bivaricosus* (Gascoin, 1885) was formerly common over the northern, lower end of Lord Howe Island from sea level to approximately 200 metres (the top of Malabar Hill). The subspecies *P. b. cuniculinsulae* (Cox, 1872) occurred formerly on Rabbit Island. The subspecies *P. b. etheridgei* (Brazier, 1889) occurred in the mountains at the southern end of Lord Howe Island, including the Erskine Valley, to an altitude of 550 metres.
3. The subspecies *P. b. bivaricosus* now occurs as three disjunct populations, at Windy Point behind dunes, the east end of North Bay at 3-6 metres altitude, and the east end of Neds Beach at 30 metres altitude. The last specimens of *P. b. bivaricosus* were collected in 1971. The subspecies *P. b. cuniculinsulae* and *P. b. etheridgei* are apparently extinct, the latter subspecies not having been collected alive since late last century.
4. The subspecies *P. b. bivaricosus* lives under litter on the forest floor. It faces threats in all extant populations from rat predation. The subspecies *P. b. etheridgei* probably declined due to predation from rats and pigs, the subspecies *P. b. cuniculinsulae* due to predation from feral animals and destruction of habitat.
5. In view of 3 and 4 (above), the Scientific Committee is of the opinion that *Placostylus bivaricosus* has been reduced in numbers to such a critical level that it is in immediate danger of extinction.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 4/4/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Pterostylis saxicola* D. L. Jones & M. A. Clem. (formerly known as *Pterostylis* sp E.), the Sydney Plains Greenhood orchid, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Pterostylis saxicola*, the Sydney Plains Greenhood, is a ground orchid which was first collected in 1803. It was previously regarded as a form of *Pterostylis gibbosa* but is now recognised as a distinct taxon.

2. *Pterostylis saxicola* is described in the Flora of New South Wales (volume 4) under the name *Pterostylis* sp E. as:

Terrestrial herb. Rosette leaves 5-8, obovate, 1-2.5 cm long, 7-11 mm wide, margins entire. Scape to 25 cm high, with 2-4 closely sheathing stem leaves. Flowers 2-10, c. 1.3 cm long, transparent with dark red-brown markings and suffusions, semi-erect. Dorsal sepal with an upcurved filiform point c. 3 mm long. Lateral sepals ovate in outline when flattened; joined part shallowly concave, margins strongly incurved, glabrous; free points filamentous, c. 5 mm long, curved forwards, divergent, 10 mm apart at the tips. Petals with a poorly developed proximal flange. Labellum broad-obovate, c. 5 mm long, c. 3 mm wide, dark red-brown, grooved; marginal trichomes 3-5 pairs, 2-3 mm long, white; basal lobe large, with 2 or 3 pairs of trichomes c. 0.7 mm long. Flowers Sept-Nov. Grows in shallow soil over sandstone sheets, often near streams; rare, from Picnic Point to Picton area.

3. *Pterostylis saxicola* is most commonly found growing in small pockets of shallow soil in depressions on sandstone rock shelves above cliff lines. The vegetation communities above the shelves where *Pterostylis saxicola* occurs are either shale/sandstone transitions or shale communities.

4. *Pterostylis saxicola* is known from only five current localities: Georges River National Park (near Yeramba Lagoon), Ingleburn, Holsworthy, Peter Meadows Creek and St Marys Towers near Douglas Park.

5. The total known population is approximately 500 individuals, and individual populations are small. Only the Georges River National Park population is within a conservation reserve; up to 40 individual plants have been recorded in this population, but in 1996 only a few plants were found.

6. The largest known population occupies an area of only 20 x 15 metres. The localised habitat requirements mean that entire populations could be eliminated by events such as track creation, treefall or a single inappropriate fire. Part of one population has been destroyed by a track created by horse riders.

NSW SCIENTIFIC COMMITTEE

7. Developmental pressures, and increased access and use of sites, are likely to result in habitat loss and degradation, directly threatening existing populations and reducing the area of available habitat.
8. In view of 5, 6 and 7 above the Scientific Committee is of the opinion that *Pterostylis saxicola* 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

Gazetted: 31/10/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Ramphotyphlops endoterus* (Waite, 1918), a blind snake as an ENDANGERED SPECIES on Part 1 of Schedule 1 of that Act.

The Scientific Committee has found that:

1. *Ramphotyphlops endoterus* is a blind snake of arid Australia. It is brown or reddish brown above and white or cream below.
2. *Ramphotyphlops endoterus* was not previously known to have existed in NSW but has been reliably identified from two individuals trapped in pit traps at Mootwingee National Park in October 1994. Identification has been confirmed by the Australian Museum.
3. *Ramphotyphlops endoterus* is a central Australian species, recorded from central-eastern Western Australia, southern Northern Territory, far south-western Queensland and the northern two-thirds of South Australia. The New South Wales records are at the eastern margin of the national range.
4. The threats to *Ramphotyphlops endoterus* are unknown, although habitat degradation by feral goats may impact on the species. The small size of this population also makes it vulnerable to genetic introgression and one-off catastrophic events.
5. In view of 2, 3 & 4 above the Scientific Committee is of the opinion that the blind snake *Ramphotyphlops endoterus* is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

*A Determination to provisionally list this species
as an endangered species was gazetted on:* 30/8/96

Final Determination gazetted: 8/8/97

NSW SCIENTIFIC COMMITTEE

Determination for provisional listing of an endangered species on an emergency basis

The Scientific Committee established under the Threatened Species Conservation Act, has made a determination for the provisional listing of *Rapanea* sp. A Richmond River (J.H. Maiden & J.L. Boorman NSW 26751), a shrub/small tree in the Myrsinaceae family, on an emergency basis as an ENDANGERED SPECIES. Provisional listing is provided for by Section 28 of the Act.

Rapanea sp. A Richmond River (J.H. Maiden & J.L. Boorman NSW 26751) is currently listed as presumed extinct on Part 4 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Rapanea* sp. A Richmond River (J.H. Maiden & J.L. Boorman NSW 26751) was presumed extinct in New South Wales and has been rediscovered.
2. It is an understorey shrub/small tree recorded from subtropical coastal areas on the north coast of NSW. This species is described in the Flora of New South Wales (Volume 1, Harden 1990) under the name of *Rapanea* sp. A as:
"Shrub or small tree. Leaves elliptic to oblanceolate, 5-14 cm long, 1.5-3 cm wide, strongly tapered to base and apex, the apex more or less pointed or rarely slightly notched, margins entire, lateral veins faint and dots often raised on dried material; petiole 4-7 mm long, grooved. Flowers 5-merous, calyx and corolla prominently glandular. Fruit 3-4 mm diam., blue; pedicel 2-4 mm, glabrous. Grows in subtropical rainforest in coastal areas, from Coraki on the Richmond R. north to Mt. Warning; very rare, possibly extinct."
3. The species is currently known from only 4 individual plants.
4. The species is threatened by disturbance from grazing/ trampling by cattle, weed invasion, loss of habitat from clearing and fire.
5. In view of 1, 3 & 4 above the Scientific Committee is of the opinion that the species is likely to be endangered in nature in NSW and is eligible for Provisional Listing on an emergency basis.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 19/12/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list *Thersites mitchellae* (Cox, 1864), a large land snail, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

The Scientific Committee has found that:

1. *Thersites mitchellae* is a large land snail that is known from coastal areas of northern NSW.
2. *Thersites mitchellae* occupies undisturbed moist forest. It is semi-arboreal, and is found under bark on tree trunks and in the base of palm fronds.
3. The species was formerly common in suitable habitat from the Tweed River south to Ballina, but recently has been reduced greatly in distribution and abundance to occupy two remnant, disjunct populations.
4. Four specimens of *Thersites mitchellae* were obtained from lowland rainforest on Stotts Island, Tweed River between 1977 and 1981, and a further specimen was obtained from wet sclerophyll at Cunbebin Wetland (or Cunbebin Swamp) behind Byron Bay in 1996. No other specimens have been collected in or seen in the last 70 years.
5. The habitat of *Thersites mitchellae* has been drastically reduced, and is still subject to threatening processes. The species appears also to be very vulnerable to predation from introduced mammals, such as rats, and birds.
6. In view of 3, 4 and 5 (above), the Scientific Committee is of the opinion that *Thersites mitchellae* meets the criteria under Sections 10(a) and 10(b) of the Threatened Species Conservation Act for listing as an endangered species.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted:14/3/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee established by the Threatened Species Conservation Act, has made a Final Determination to list *Triplarina nowraensis* A. R. Bean., a myrtaceous shrub, as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act.

Triplarina nowraensis was listed as an ENDANGERED SPECIES on Part 1 of Schedule 1 of the Threatened Species Conservation Act as a Provisional Listing on an Emergency Basis.

The Scientific Committee has found that:

1. The species *Triplarina nowraensis* was described by A. R. Bean 1995 (Reinstatement and revision of *Triplarina* Raf. (Myrtaceae) *Austrobaileya* 4(3) 353-367).
2. It is allied to *Triplarina imbricata* (formerly known as *Baeckea camphorata* R Br. ex Sims).
3. It is a shrub with grey scaly to subfibrous bark, with narrowly obovate leaves with oil glands in parallel lines. Flowers are similar to but larger than those in *Triplarina imbricata*.
4. It is known from only five small populations in the Nowra area. None is known from a conservation reserve.
5. Populations are threatened by urban development, sedimentation and roadwidening.
6. In view of 4 and 5 above the Scientific Committee is of the opinion that the species is likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee



*A Determination to provisionally list this species
as an endangered species was gazetted on:* 30/8/96

Final Determination gazetted: 6/6/97

POPULATION

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the population of *Dillwynia tenuifolia* Sieber ex D.C. at Kemps Creek as an ENDANGERED POPULATION on Part 2 of Schedule 1 of the Act.

Listing of Endangered Populations is provided for by Section 11 of the Act.

The Scientific Committee has found that:

1. The population proposed for listing is the population of *Dillwynia tenuifolia* Sieber ex D.C. which occurs in the area bounded by Western Road, Elizabeth Drive, Devonshire Road and Cross Street, Kemps Creek within Liverpool City Local Government Area.
2. *Dillwynia tenuifolia*, a member of the Fabaceae, is an erect shrub between 0.6 and 1.0 metre high. *Dillwynia tenuifolia* is listed as vulnerable on Schedule 2 of the Act, and thus the population is eligible for listing as an Endangered Population.
3. *Dillwynia tenuifolia* occurs mainly on the Cumberland Plain, but with a few outlying populations.
4. The area occupied by the Kemps Creek population is within a disjunct occurrence of Castlereagh Ironbark Forest and Castlereagh Woodland, and within the site is widespread through both communities.
5. The site of the population is a small and disjunct remnant of what was formerly a much more extensive area of Castlereagh Woodlands on the central Cumberland Plain, which would have previously provided habitat for *Dillwynia tenuifolia*. The area surviving represents about 7.5% of the original area of Castlereagh Woodlands between Kemps Creek and South Creeks.
6. The population is threatened by proposed development which would involve clearing of vegetation, and by rubbish dumping and weed invasion.
7. The population is near the southern limit of the distribution of *Dillwynia tenuifolia*, and is of significance because of its size, the high density of individuals in parts of the site and the generally good condition of the remnants in which it occurs.
8. In the light of 1, 5, 6, and 7 above the Scientific Committee is of the opinion that the habitat of the population has been so drastically reduced that it is in immediate danger of extinction and is of significant conservation value, and meets the criteria for listing as an endangered population, and thus has made a final determination to list the population as endangered.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 28/11/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the Manly Point population of the Little Penguin *Eudyptula minor* as an ENDANGERED POPULATION under Part 2 of Schedule 1 of the Threatened Species Conservation Act. Listing of Endangered Populations is provided for by Section 11 of the Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

The Scientific Committee has found that:

1. The Little Penguin, *Eudyptula minor* is not currently listed under either Schedule 1 or Schedule 2 of the Threatened Species Conservation Act. Individual populations of the Little Penguin may therefore be assessed against the criteria of Section 11 of the Act for inclusion on Part 2 of Schedule 1.
2. The Little Penguin colony in the Manly area was formerly more extensive, occurring at Manly Point, Spring Cove, Store Beach and Cabbage Tree Bay.
3. Currently the population is restricted to Manly Point, and may be as small as 35 birds.
4. The decline of Little Penguin populations in the Sydney region has been attributed to habitat destruction and predation from domestic and introduced animals. There is evidence that predation by dogs has been a significant factor in the decline of the Manly population.
5. The population is of significant conservation value given its disjunction from other populations and its occurrence in Sydney Harbour.
6. The Scientific Committee is of the opinion that the numbers of Little Penguins in the Manly Point population have been reduced to such a critical level that it is in immediate danger of extinction.
7. In the light of 5 and 6 above the Scientific Committee is of the opinion that the Manly Point population of the Little Penguin (*Eudyptula minor*) satisfies the requirements of Section 11 of the Threatened Species Conservation Act.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 31/1/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the population of the shrub *Hibbertia incana* (Lindley) Toelken, in Baulkham Hills Shire, as an ENDANGERED POPULATION on Part 2 of Schedule 1 of the Threatened Species Conservation Act.

Listing of Endangered Populations is allowed for by Section 11 of the Act.

The Scientific Committee has found that:

1. *Hibbertia incana* (Dilleniaceae) is not listed on Part 1 of Schedule 1 of the Act and thus populations of *H. incana* are eligible for inclusion on Part 2 of Schedule 1 of the Act.
2. *H. incana* is a much branched, spreading shrub to 1.5 m tall that grows in heath, woodland and forest and is often associated with granite outcrops. The species is found in New South Wales, Victoria and South Australia.
3. In New South Wales, *H. incana* is known from the following botanical subdivisions: Central Coast, Central Tablelands, Southern Tablelands, Central Western Slopes, South Western Slopes and South Western Plains. Within the Central Coast botanical subdivision, the species is only known from the Baulkham Hills Shire.
4. The population in the Baulkham Hills Shire is disjunct and at the northeastern limit of its geographical range. This population occurs on a laterite plateau, while in general *H. incana* is associated with granite outcrops.
5. The population in the Baulkham Hills Shire consists of approximately 50 plants and is threatened by clearing and disturbance by recreational use of trail bikes.
6. In view of 3, 4 and 5 above the Scientific Committee is of the opinion that the population of *H. incana* in the Baulkham Hills Shire:
 - is disjunct and at the limit of its geographical range;
 - is of significant conservation value as it occurs in habitat not associated with granite outcrops; and
 - has had its habitat so drastically reduced that it is in immediate danger of extinction.
7. The population of *H. incana* in the Baulkham Hills Shire satisfies the criteria specified in Section 11 of the Threatened Species Conservation Act and is therefore eligible to be listed as an Endangered Population on Part 2 of Schedule 1 of the Act.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 14/11/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the North Head population of the Long-nosed Bandicoot, *Perameles nasuta*, Geoffrey 1804, as an Endangered Population on Part 2 of Schedule 1 of the Act. The distribution of the population is defined on the map which forms part of this Final Determination.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

Listing of Endangered Populations is allowed for by Section 11 of the Act.

The Scientific Committee has found that:

1. *Perameles nasuta* is not listed on Part 1 of Schedule 1 of the Act and thus populations of *P. nasuta* are eligible for consideration for inclusion on Part 2 of Schedule 1 of the Act.
2. *P. nasuta* has been reliably reported as occurring on North Head, within the area defined on the accompanying map.
3. The population of *P. nasuta* at North Head is estimated to be about one hundred animals, with fluctuations around this number over time.
4. The Scientific Committee is of the opinion that the effective population size is much less than the census population, and that, on the basis of the scientific literature the best available estimate of the effective population size would be approximately 10-11% of the census population.
5. There is evidence that one cause of mortality of *P. nasuta* at North Head is as a result of attacks by introduced predators (foxes, dogs, cats). Road kills have also been reported.
6. *P. nasuta* was once widespread in the Sydney region but many formerly recorded populations have become extinct. The North Head population is now isolated and disjunct. The nearest surviving population to that at North Head known to the Committee is in Pittwater Local Government Area.
7. Population genetic theory would suggest that a population as small as that of the North Head *P. nasuta* population would suffer effects of inbreeding depression and loss of genetic variation, affecting population viability.
8. In addition to genetic consequences of small population size, a small population occupying a limited, discrete area is at risk from stochastic disturbance events.
9. In light of the above, and taking into account discussion in relevant international scientific literature, the Scientific Committee is of the opinion that the North Head population of *P. nasuta* is in immediate danger of extinction.

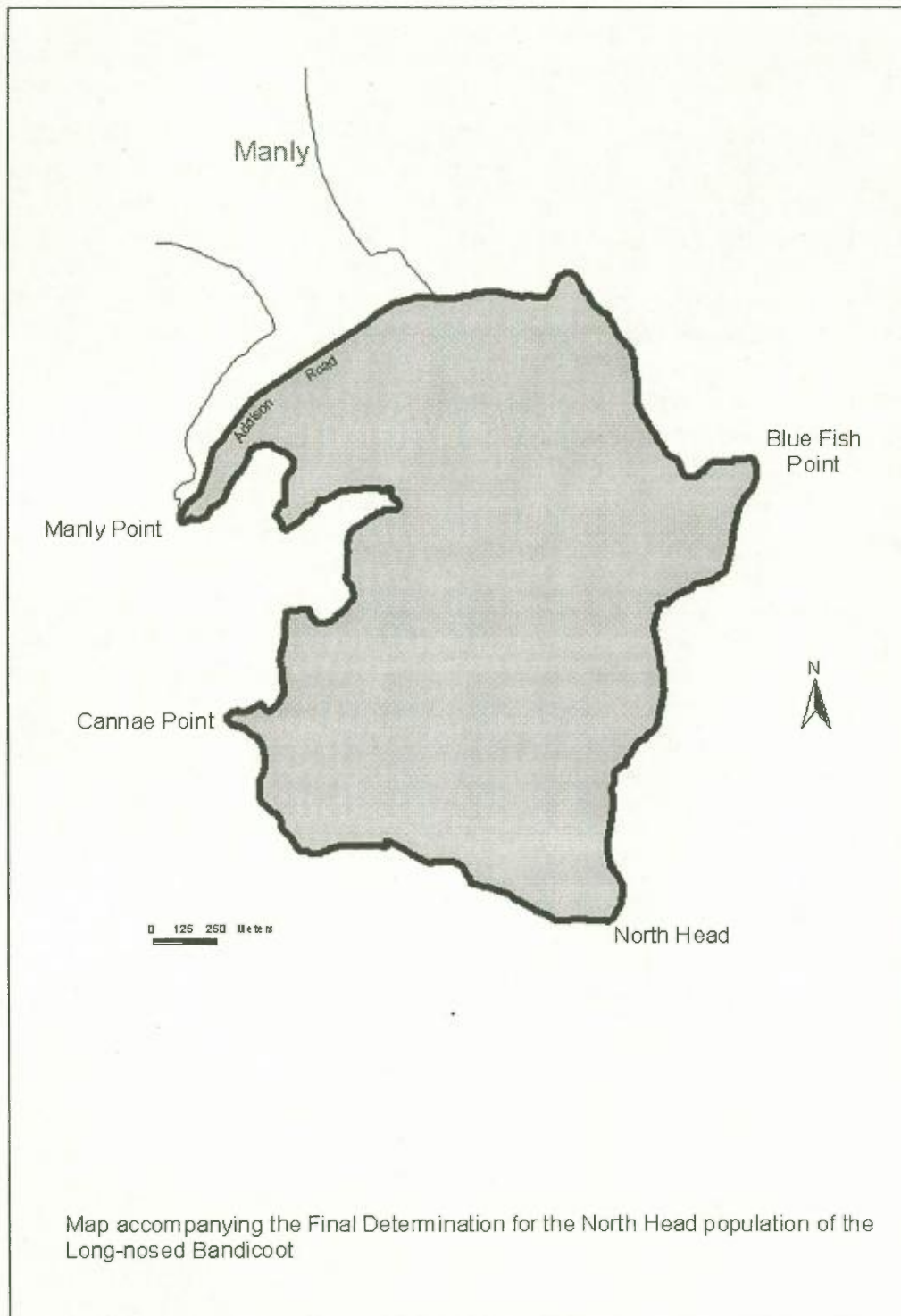
NSW SCIENTIFIC COMMITTEE

10. While the North Head population of *P. nasuta* is disjunct it is not situated at or near the limit of the geographic range of the species.
11. The Committee is not aware of any genetic studies of the North Head *P. nasuta* population. However, the effects of fragmentation and isolation may result in local populations possessing distinct genetic features. There is thus a likelihood that the population may be genetically distinct.
12. The Scientific Committee is of the opinion that the North Head *P. nasuta* population is of significant conservation value on the grounds that it is:
 - a disjunct population
 - one of the few surviving populations within the Sydney region
 - a population which has been the subject of a number of scientific studies, and is thus an important reference population
 - accorded considerable value by the local community, and thus serves to promote conservation more generally,
13. As a consequence of points 1, 9, 11 and 12 above the Scientific Committee is of the opinion that the criteria specified in Section 11 of the Act are met and that the North Head Population of *P. nasuta* should be listed as an Endangered Population on Part 2 of Schedule 1 of the Threatened Species Conservation Act.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 28/2/97

NSW SCIENTIFIC COMMITTEE



NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the population of the shrub *Persoonia hirsuta* Pers. (Proteaceae) within Baulkham Hills Shire as an ENDANGERED POPULATION on Part 2 of Schedule 1 of the Threatened Species Conservation Act.

Listing of Endangered Populations is allowed for by Section 11 of the Act.

The Scientific Committee has found that:

1. *Persoonia hirsuta* is not listed on Part 1 of Schedule 1 of the Act and thus populations of *P. hirsuta* are eligible for consideration for inclusion on Part 2 of Schedule 1 of the Act.
2. *P. hirsuta* is a spreading to decumbent shrub to 1.5 m tall that grows in woodland and dry sclerophyll forest on sandstone, from near sea level to 600 m altitude. The species is restricted to New South Wales and is found in an area bounded by the coast and Putty, Glen Davis and Gosford in the north and Hill Top in the south.
3. *P. hirsuta* is known from several irregularly scattered locations across its distribution, with most locations consisting of one to three plants.
4. The known population in the Baulkham Hills Shire is of significant conservation value. It contains a location at the Fred Catterson Reserve that consists of 17 plants and is the largest known number of plants of *P. hirsuta* at one location.
5. The population in the Baulkham Hills Shire has been reduced by clearing of habitat in the past. It is currently threatened by clearing and may also be threatened by a lack of recruitment.
6. In view of 5 above the Scientific Committee is of the opinion that the population of *P. hirsuta* in the Baulkham Hills Shire has had its habitat so drastically reduced, that it is in immediate danger of extinction, and in the light of 3 and 4 above, the Committee considers the population is of significant conservation value.
7. The population of *P. hirsuta* in the Baulkham Hills Shire satisfies the criteria specified in Section 11 of the Threatened Species Conservation Act and is therefore eligible to be listed as an Endangered Population on Part 2 of Schedule 1 of the Act.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 5/9/97

A Determination to list Persoonia hirsuta as an endangered species has subsequently been gazetted: 12/6/98
Refer to 1998 Final Determinations

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the Warrumbungles population of the Brush-tailed Rock-Wallaby, *Petrogale penicillata* (Gray, 1852) as an ENDANGERED POPULATION on Part 2 of Schedule 1 of the Act.

Listing of Endangered Populations is provided for by Section 11 of the Act.

The Scientific Committee has found that:

1. The Brush-tailed Rock-Wallaby previously ranged as far west as Bourke but has not been recorded in this area for many years. Therefore the Warrumbungles population occurs on the extreme western limit of the species' geographic range and represents the last remaining population of this species west of the Great Dividing Range.
2. The number of individual Rock-Wallabies remaining in known colonies in the Warrumbungles is considered to be not more than 30 in total.
3. The seven colonies are all separated by a minimum of two kilometres of cleared pastoral land, uncleared national park and private land. The threat of predation by foxes and cats is greater between the colonies.
4. Recent surveys indicate that five of the seven colonies appear to be extremely small and are therefore vulnerable to one-off catastrophic events and genetic inbreeding.
5. This Brush-tailed Rock-Wallaby population represents the last remaining small to medium-sized ground-dwelling mammal species within the Warrumbungles area.
6. Competition from goats for shelter sites and food constitute a major threat to this Brush-tailed Rock-Wallaby population. Competition is likely to increase during periods of drought.
7. In view of 3, 4, 5 & 6 above the Scientific Committee is of the opinion that the Warrumbungles population of the Brush-tailed Rock-Wallaby, *Petrogale penicillata* is eligible for listing as an endangered population because its numbers have been reduced to such a critical level that it is in immediate danger of extinction and it is disjunct and at or near the limit of its geographic range.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 5/12/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the population of Tadgell's Bluebell *Wahlenbergia multicaulis* Benth., in the local government areas of Auburn, Bankstown, Strathfield and Canterbury, as an ENDANGERED POPULATION on Part 2 of Schedule 1 of the Threatened Species Conservation Act.

Listing of Endangered Populations is allowed for by Section 11 of the Act.

The Scientific Committee has found that:

1. *Wahlenbergia multicaulis* Benth. (Campanulaceae) is not listed on Part 1 of Schedule 1 of the Act and thus populations of *W. multicaulis* are eligible for consideration for inclusion on Part 2 of Schedule 1 of the Act.
2. *W. multicaulis* is a perennial tufted herb, 10-75cm high, glabrous or sometimes sparsely hairy. The leaves are mostly linear 4-80mm long, 1-6mm wide, and entire or with small callus teeth. The flowers are blue, with the petals 2-10mm long and forming a tube 0.5-1.5mm long at the base. It grows in forest, woodland and grassland, and flowers throughout the year.
3. In New South Wales, *W. multicaulis* grows mainly in the coastal and tableland districts south from Sydney and the Blue Mountains, and west along the Murray River to Mathoura. This includes the following botanical subdivisions: the Central Coast, South Coast, Central Tablelands, Southern Tablelands, South Western Slopes, and South Western Plains. There are very few records from the Central Coast botanical subdivision. Early collections from Hornsby, Ashfield, and Punchbowl, may now be extinct. The occurrence in the local government areas of Auburn, Bankstown, Strathfield and Canterbury, is likely to be the only known population remaining in the Sydney area and in the Central Coast botanical subdivision.
4. The population in the local government areas of Auburn, Bankstown, Strathfield and Canterbury is disjunct and at the northeastern limit of its geographical range. The population is of significant conservation value as it is the only known remaining population in the Central Coast botanical subdivision.
5. The population in the local government areas of Auburn, Bankstown, Strathfield and Canterbury has been reduced by clearing of habitat in the past. It is currently thought to consist of approximately 40-50 plants and is threatened by clearing, intrusive ballast dumping, deposition of industrial refuse and excavated material.
6. In view of 3, 4 and 5 above the Scientific Committee is of the opinion that the population of *W. multicaulis* in the local government areas of Auburn, Bankstown, Strathfield and Canterbury,
- is disjunct and at the limit of its geographical range;

NSW SCIENTIFIC COMMITTEE

- is of significant conservation value as it is the only known remaining population in the Central Coast botanical subdivision;
 - and has had its habitat so drastically reduced that it is in immediate danger of extinction.
7. The population of *W. multicaulis* in the local government areas of Auburn, Bankstown, Strathfield and Canterbury satisfies the criteria specified in Section 11 of the Threatened Species Conservation Act and is therefore eligible to be listed as an Endangered Population on Part 2 of Schedule 1 of the Act.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 5/9/97

ECOLOGICAL COMMUNITY

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a final determination to list the Blue Gum High Forest occurring on the northshore and in the northern suburbs of Sydney as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. Listing of Endangered Ecological Communities is provided for by Section 12 of the Act.

The Ecological Community to be listed is:

1. The Blue Gum High Forest which is the accepted name for a plant community occurring on deep shale-derived soils with high rainfall in the northshore and northern suburbs of Sydney.
2. It has the structural form predominantly of tall open-forest to open forest.
3. The characteristic assemblage of vascular plant species in the community is:

<i>Acacia implexa</i>	<i>Adiantum aethiopicum</i>	<i>Allocasuarina torulosa</i>
<i>Angophora floribunda</i>	<i>Billardiera scandens</i>	<i>Blechnum cartilagineum</i>
<i>Brachycome angustifolia</i>	<i>Breynia oblongifolia</i>	<i>Calochlaena dubia</i>
<i>Clematis aristata</i>	<i>Clematis glycinoides</i>	<i>Clerodendrum tomentosum</i>
<i>Commelina cyanea</i>	<i>Dichondra repens</i>	<i>Echinopogon caespitosus</i>
<i>Elaeocarpus reticulatus</i>	<i>Entolasia marginata</i>	<i>Eucalyptus paniculata</i>
<i>Eucalyptus pilularis</i>	<i>Eucalyptus saligna</i>	<i>Eustrephus latifolius</i>
<i>Glochidion ferdinandi</i>	<i>Glycine clandestina</i>	<i>Goodenia heterophylla</i>
<i>Hardenbergia violacea</i>	<i>Helichrysum scorpioides</i>	<i>Hibbertia scandens</i>
<i>Imperata cylindrica</i>	<i>Indigofera australis</i>	<i>Kennedia rubicunda</i>
<i>Leucopogon juniperinus</i>	<i>Leucopogon lanceolatus</i>	<i>Lomandra longifolia</i>
<i>Microlaena stipoides</i>	<i>Notelaea longifolia</i>	<i>Omalanthus populifolius</i>
<i>Oplismenus aemulus</i>	<i>Oxalis exilis</i>	<i>Pandorea pandorana</i>
<i>Persoonia linearis</i>	<i>Pittosporum revolutum</i>	<i>Pittosporum undulatum</i>
<i>Playtlobium formosum</i>	<i>Poa affinis</i>	<i>Polyscias sambucifolius</i>
<i>Poranthera microphylla</i>	<i>Pratia purpurascens</i>	<i>Pseuderanthemum variabile</i>
<i>Pteridium esculentum</i>	<i>Rapanea variabilis</i>	<i>Rubus parvifolius</i>
<i>Smilax glycyphylla</i>	<i>Syncarpia glomulifera</i>	<i>Themeda australis</i>
<i>Tylophora barbata</i>	<i>Zieria smithii</i>	

4. The total species list of the community is considerably larger than that given in 3 (above), with many species present only in one or two sites or in very small quantity. In any particular site not all of the assemblage listed in 3 may be present at any one time (at least above ground), seeds of more species may be present in the soil seed bank. The species composition of a site will be influenced by the size of the site and by its recent disturbance history. For a number of years after a major disturbance, dominance by a few species may

NSW SCIENTIFIC COMMITTEE

occur, with gradual restoration of a more complex composition and vegetation structure over time. The balance between species will change over the fire cycle, and may also change in response to changes in fire frequency.

5. The Blue Gum High Forest is confined to soils derived from Wianamatta Shale, and is distinct from the open-forest that occurs in sandstone gullies or on alluvium which may include trees of *Eucalyptus deanei*, *Eucalyptus pilularis*, *Eucalyptus saligna* or *Syncarpia glomulifera*.
6. The community has been reported from areas of Wianamatta Shale in the Local Government Areas of Lane Cove, Willoughby, Ku-ring-gai, Hornsby, Baulkham Hills, Ryde, Parramatta.
7. The Scientific Committee noted that general information on the Blue Gum High Forest is contained in Benson, D. and Howell, J., 1990, *Taken for Granted; The bushland of Sydney and its suburbs*, Kangaroo Press, Kenthurst.

The Scientific Committee has found that:

8. The Community, as defined by the proposal, satisfies the definition of an ecological community under the Act; i.e., an assemblage of species occupying a particular area.
9. About 1% of the original area of the community currently exists in the form of a number of remnants.
10. Threats to the survival of the community include fragmentation, developments, increased nutrient status, inappropriate fire regimes, invasion by exotic plants, mowing and clearing.
11. Although a small part of the surviving Blue Gum High Forest is included within Dalrymple-Hay Nature Reserve, this in itself does not ensure the survival of the community unless the threats to the integrity of the community are ameliorated. In view of the substantial reduction in the area occupied by the community, its fragmentation and the numerous threats to the integrity of the community, the Scientific Committee is of the opinion that the Blue Gum High Forest is likely to become extinct in nature in New South Wales unless the factors threatening its survival cease to operate.
12. In view of 9, 10 and 11, the Scientific Committee is of the opinion that the community is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival cease to operate. Accordingly the Committee has made a Final Determination to support the listing of the Blue Gum High Forest on Part 3 of Schedule 1 of the Act.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 5/9/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a final determination to list the Cooks River Clay Plain Scrub Forest as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. Listing of Endangered Ecological Communities is provided for by Section 12 of the Act.

1. The Cooks River Clay Plain Scrub Forest is the accepted name for a plant community occurring on shale-derived soils of the upper Cooks River valley and associated shale lowlands in the Parramatta-Bankstown-Auburn-Strathfield-Canterbury area of Sydney.
2. It has the structural form predominantly of open-forest to low woodland, generally with a characteristic shrubby or scrubby understorey.
3. The characteristic assemblage of vascular plant species in the community is:

<i>Acacia binervia</i>	<i>Acacia falcata</i>	<i>Angophora bakeri</i>
<i>Angophora floribunda</i>	<i>Aristida ramosa</i>	<i>Aristida vagans</i>
<i>Astroloma humifusum</i>	<i>Boronia polygalifolia</i>	<i>Bursaria spinosa</i>
<i>Calotis cuneifolia</i>	<i>Cassinia arcuata</i>	<i>Danthonia setacea</i>
<i>Dianella revoluta</i>	<i>Dichelachne micrantha</i>	<i>Dillwynia parvifolia</i>
<i>Dillwynia sieberi</i>	<i>Einadia nutans</i>	<i>Einadia trigonos</i>
<i>Entolasia stricta</i>	<i>Eucalyptus capitellata</i>	<i>Eucalyptus fibrosa</i>
<i>Eucalyptus longifolia</i>	<i>Eucalyptus moluccana</i>	<i>Eucalyptus resinifera</i>
<i>Exocarpos cupressiformis</i>	<i>Goodenia bellidifolia</i>	<i>Goodenia hederacea</i>
<i>Goodenia paniculata</i>	<i>Hakea sericea</i>	<i>Hibbertia empetrifolia</i>
<i>Hibbertia serpyllifolia</i>	<i>Kunzea ambigua</i>	<i>Laxmannia gracilis</i>
<i>Leptospermum trinervium</i>	<i>Leucopogon juniperinus</i>	<i>Lissanthe strigosa</i>
<i>Lomandra longifolia</i>	<i>Melaleuca decora</i>	<i>Melaleuca nodosa</i>
<i>Microlaena stipoides</i>	<i>Microtis parviflora</i>	<i>Notelaea longifolia</i>
<i>Orthoceras strictum</i>	<i>Ozothamnus diosmifolius</i>	<i>Podolobium ilicifolium</i>
<i>Pultenaea villosa</i>	<i>Rhytidosporum procumbens</i>	<i>Stackhousia viminea</i>
<i>Stipa pubescens</i>	<i>Stipa rudis</i>	<i>Syncarpia glomulifera</i>
<i>Thelymitra pauciflora</i>	<i>Themeda australis</i>	<i>Xanthorrhoea media</i>

4. The total species list of the community is considerably larger than that given in 3 (above), with many species present only in one or two sites or in very small quantity. In any particular site not all of the assemblage listed in 3 may be present at any one time (at least above ground), seeds of more species may be present in the soil seed bank. The species composition of a site will be influenced by the size of the site and by its recent disturbance history. For a number of years after a major disturbance, dominance by a few species may

NSW SCIENTIFIC COMMITTEE

occur, with gradual restoration of a more complex composition and vegetation structure over time. The balance between species will change over the fire cycle, and may also change in response to changes in fire frequency.

5. The Cooks River Clay Plain Scrub Forest occurs on clay soils on Wianamatta Shale including the Birrong Soil Landscape and associated shale lowlands.
6. The community has been reported from areas of Wianamatta Shale in the Local Government Areas of Auburn, Bankstown, Canterbury, Parramatta, Strathfield.
7. The Scientific Committee noted that general information on the Cooks River Clay Plain Scrub Forest is contained in the Draft Cooks River Foreshores Strategic Plan, Volumes 1-3, March 1997, prepared for the Cooks River Regional Working Party by Clouston Landscape Architects, Leichhardt.

The Scientific Committee has found that:

8. The Community, as defined by the proposal, satisfies the definition of an ecological community under the Act; i.e., an assemblage of species occupying a particular area.
9. Less than 1% of the original area of the community currently exists in the form of a number of small remnants.
10. Threats to the survival of the community include invasion by exotic species, illegal dumping, water pollution, unauthorised access, fragmentation and clearing for urban, recreational and industrial development.
11. None of this community is represented in any national park or nature reserve. In view of the substantial reduction in the area occupied by the community, its fragmentation and the numerous threats to the integrity of the community, the Scientific Committee is of the opinion that the Cooks River Clay Plain Scrub Forest is likely to become extinct in nature in New South Wales unless the factors threatening its survival cease to operate.
12. In view of 9, 10 and 11, the Scientific Committee is of the opinion that the community is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival cease to operate. Accordingly, the Committee has made a Final Determination to list the Cooks River Clay Plan Scrub Forest on Part 3 of Schedule 1 of the Act.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 31/10/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Cumberland Plain Woodland as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. Listing of Endangered Ecological Communities is provided for by Section 12 of the Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

The Scientific Committee has found that:

1. The Cumberland Plain Woodland is the accepted name for the plant community that occurs on soils derived from shale on the Cumberland Plain.
2. The Cumberland Plain Woodland is characterised by the following assemblage of plant species:

<i>Acacia decurrens</i>	<i>Acacia falcata</i>	<i>Acacia implexa</i>
<i>Acacia parramattensis</i>	<i>Aristida ramosa</i>	<i>Aristida vagans</i>
<i>Arthropodium milleflorum</i>	<i>Asperula conferta</i>	<i>Brunoniella australis</i>
<i>Bursaria spinosa</i>	<i>Cheilanthes sieberi</i>	<i>Chloris truncata</i>
<i>Chloris ventricosa</i>	<i>Commelina cyanea</i>	<i>Cyperus gracilis</i>
<i>Daviesia ulicifolia</i>	<i>Dianella longifolia</i>	<i>Dianella revoluta</i>
<i>Dichelachne micrantha</i>	<i>Dichondra repens</i>	<i>Dillwynia sieberi</i>
<i>Echinopogon caespitosus</i>	<i>Echinopogon ovatus</i>	<i>Entolasia marginata</i>
<i>Eragrostis leptostachya</i>	<i>Eremophila debilis</i>	<i>Eucalyptus crebra</i>
<i>Eucalyptus eugenioides</i>	<i>Eucalyptus fibrosa</i>	<i>Eucalyptus maculata</i>
<i>Eucalyptus moluccana</i>	<i>Eucalyptus tereticornis</i>	<i>Exocarpos cupressiformis</i>
<i>Glycine clandestina</i>	<i>Glycine tabacina</i>	<i>Goodenia hederacea</i>
<i>Hardenbergia violacea</i>	<i>Hibbertia diffusa</i>	<i>Hypericum gramineum</i>
<i>Hypoxis hygrometrica</i>	<i>Indigofera australis</i>	<i>Lepidosperma laterale</i>
<i>Lissanthe strigosa</i>	<i>Lomandra filiformis</i>	<i>Lomandra multiflora</i>
<i>Melaleuca decora</i>	<i>Microlaena stipoides</i>	<i>Oplismenus aemulus</i>
<i>Oxalis exilis</i>	<i>Panicum simile</i>	<i>Phyllanthus filicaulis</i>
<i>Pratia purpurascens</i>	<i>Solanum pungetium</i>	<i>Themeda australis</i>
<i>Tricoryne elatior</i>	<i>Vernonia cinerea</i>	<i>Wahlenbergia gracilis</i>

The total list of plant species which occur in the community is much larger, with many species occurring in one or a few sites, or in very low abundance. Not all species listed above occur in every single stand of the Community.

3. The Cumberland Plain Woodland sites are characteristically of woodland structure, but may include both more open and more dense areas, and the canopy is dominated by species including one or more of the following: *Eucalyptus moluccana*, *Eucalyptus tereticornis*, *Eucalyptus crebra*, *Eucalyptus eugenioides* and *Eucalyptus maculata*.

NSW SCIENTIFIC COMMITTEE

4. The understorey is generally grassy to herbaceous with patches of shrubs, or if disturbed, contains components of indigenous native species sufficient to re-establish the characteristic native understorey.
5. The Cumberland Plain Woodland includes regrowth which is likely to achieve a near natural structure or a is seral stage towards that structure.
6. The Community has been reported as occurring in the local government areas of Auburn, Bankstown, Baulkham Hills, Blacktown, Camden, Campbelltown, Fairfield, Hawkesbury, Holroyd, Liverpool, Parramatta, Penrith and Wollondilly.

The Scientific Committee noted that a more detailed description of the community is provided in:

- * Benson (1992) The natural vegetation of the Penrith 1:100,000 map sheet. See particularly p. 556-7, p. 558, p. 566-575.

In addition, general information on the Cumberland Plain Woodland is also provided in:

- * Benson, D. & Howell, J. 1990. 'Taken for Granted - The Bushland of Sydney and its Suburbs'. Kangaroo Press, Kenthurst
- * Benson, D., Howell, J., and McDougall, L., 1996, Mountain Devil to Mangrove: a guide to the natural vegetation in the Hawkesbury-Nepean Catchment. Royal Botanic Gardens, Sydney

The Scientific Committee has found that:

7. The Community, as defined by the proposal, satisfies the definition of an Ecological Community under the Act, i.e. an assemblage of species occupying a particular area.
8. Only 6% of the original extent of the community remained in 1988(Benson, D. & Howell, J. 1990 Proc. Ecol. Soc. Aust. 16, 115-127) in the form of small and fragmented stands. Although some areas occur within conservation reserves, this in itself is not sufficient to ensure the long term conservation of the Community unless the factors threatening the integrity and survival of the Community are ameliorated.
9. Threats to the survival of the community include clearance for agriculture, grazing, hobby and poultry farms, housing and other developments, invasion by exotic plants, and increased nutrient loads due to fertiliser run off from gardens and farmland, dumped refuse or sewer discharge.
10. In view of the substantial reduction in the area occupied by the Community, its fragmentation and the numerous threats to the integrity of the Community, the Scientific Committee is of the opinion that the Cumberland Plain Woodland is likely to become extinct in nature in New South Wales unless the factors threatening its survival cease to operate.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 13/6/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Eastern Suburbs Banksia Scrub as an ENDANGERED ECOLOGICAL COMMUNITY on Part 3 of Schedule 1 of the Act. Listing of Endangered Ecological Communities is provided for by Section 12 of the Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

The Scientific Committee has found that:

1. The Eastern Suburbs Banksia Scrub is the accepted name for a plant community occurring on nutrient poor sand deposits in the eastern and southeastern suburbs of Sydney.
2. It has the structural form predominantly of sclerophyllous heath or scrub occasionally with small areas of woodland or low forest, with, depending on local topography and drainage conditions, limited wetter areas.

3. The characteristic assemblage of vascular plant species in the community is:

<i>Acacia longifolia</i>	<i>Acacia suaveolens</i>	<i>Acacia terminalis</i>
<i>Actinotus minor</i>	<i>Allocasuarina distyla</i>	<i>Astroloma pinifolium</i>
<i>Baeckaea imbricata</i>	<i>Banksia aemula</i>	<i>Banksia ericifolia</i>
<i>Banksia integrifolia</i>	<i>Banksia serrata</i>	<i>Bauera rubioides</i>
<i>Boronia parvifolia</i>	<i>Bossiaea heterophylla</i>	<i>Brachyloma daphnoides</i>
<i>Caustis pentandra</i>	<i>Darwinia fascicularis</i>	<i>Darwinia leptantha</i>
<i>Dianella revoluta</i>	<i>Epacris microphylla</i>	<i>Epacris obtusifolia</i>
<i>Eragrostis brownii</i>	<i>Eriostemon australaisus</i>	<i>Eucalyptus gummifera</i>
<i>Haemodorum planifolium</i>	<i>Hakea teretifolia</i>	<i>Hardenbergia violacea</i>
<i>Hibbertia fasciculata</i>	<i>Hypolaena fastigiata</i>	<i>Kunzea ambigua</i>
<i>Lambertia formosa</i>	<i>Lepidosperma laterale</i>	<i>Leptocarpus tenax</i>
<i>Leptospermum laevigatum</i>	<i>Leptospermum trinervium</i>	<i>Lepyrodia scariosa</i>
<i>Melaleuca squamea</i>	<i>Monotoca elliptica</i>	<i>Monotoca scoparia</i>
<i>Persoonia lanceolata</i>	<i>Philotheca salsolifolia</i>	<i>Pimelea linifolia</i>
<i>Pteridium esculentum</i>	<i>Ricinocarpos pinifolius</i>	<i>Styphelia viridis.</i>
<i>Xanthorrhoea resinifera</i>		

4. The total species list of the community is considerably larger than that given in 3 (above), with many species present only in one or two sites or in very small quantity. In any particular site, not all of the assemblage listed in 3 may be present at any one time (at least above ground), seeds of more species may be present in the soil seed bank. The species composition of a site will be influenced by the size of the site and by its recent disturbance history. For a number of years after a major disturbance dominance by a few species (such as *Kunzea ambigua* or *Leptospermum laevigatum*) may occur, with gradual restoration of a more complex floristic composition and

NSW SCIENTIFIC COMMITTEE

vegetation structure over time. The balance between species will change over the fire cycle, and may also change in response to changes in fire frequency.

5. The Eastern Suburbs Banksia Scrub is distinguished from the coastal heath which occurs along the eastern seaboard on soils derived either directly from sandstone, or, if aeolian of younger age than those of the Eastern Suburbs Banksia Scrub. Coastal heath is characteristically much lower than Eastern Suburbs Banksia Scrub and, although sharing many species with the Eastern Suburbs Banksia Scrub characteristically contains a more maritime element including *Baeckea imbricata*, *Correa alba* and *Westringia fruticosa*
6. The Community has been reported from areas of sand deposits in the local government areas of Botany, Randwick, Waverley and Woollahra.
7. The Scientific Committee noted that general information on the Eastern Suburbs Banksia Scrub is provided in Benson D & Howell J 1990. 'Taken for Granted - The Bushland of Sydney and its Suburbs'. Kangaroo Press, Kenthurst

The Scientific Committee has found that:

8. The Community, as defined by the proposal, satisfies the definition of an ecological community under the Act i.e. an assemblage of species occupying a particular area.
9. Less than 1% of the original area of the community currently exists in the form of a number of remnants.
10. Threats to the survival of the community include fragmentation, development, increased nutrient status, inappropriate fire regimes, invasion by exotic plants, grazing by horses and rabbits, erosion from use of bicycles, motorcycles and from excessive pedestrian use.
11. Although a small part of the surviving Eastern Suburbs Banksia Scrub is included within the Botany Bay National Park, this in itself does not ensure the survival of the community unless the threats to the integrity of the community are ameliorated. In view of the substantial reduction in the area occupied by the community, its fragmentation and the numerous threats to the integrity of the community the Scientific Committee is of the opinion that the Eastern Suburbs Banksia Scrub is likely to become extinct in nature in New South Wales unless the factors threatening its survival cease to operate.
12. In view of 9, 10 and 11, the Scientific Committee is of the opinion that the Community is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival cease to operate. Accordingly, the Committee has made a Final Determination to list the Eastern Suburbs Banksia Scrub on Part 3 of Schedule 1 of the Act.

Dr Chris Dickman
Chairperson
Scientific Committee

Gazetted: 13/6/97

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act has made a Final Determination to list the Maroota Sands Swamp Forest as an ENDANGERED ECOLOGICAL COMMUNITY under Schedule 1, Part 3 of the Act. Listing of Endangered Ecological Communities is provided for by Section 12 of the Act.

The Ecological Community which is the subject of the proposal is:

1. A Forest to Open-forest with a canopy dominated by swamp mahogany *Eucalyptus robusta*.
2. The community occupies an area of about two hectares within Crown Water Reserve 35733 and the adjoining Portion 198 in the Parish of Cornelia at Maroota.
3. The community is found on the Maroota Sandmass along a drainage line.
4. A list of the assemblage of vascular plants is provided below:-

<i>Acacia ulicifolia</i>	<i>Acacia linifolia</i>	<i>Acacia rubida</i>
<i>Allocasuarina torulosa</i>	<i>Angophora costata</i>	<i>Billardiera scandens</i>
<i>Bossiaea obcordata</i>	<i>Calochlaena dubia</i>	<i>Comesperma ericinum</i>
<i>Corymbia gummifera</i>	<i>Cyathea australis</i>	<i>Cymbidium suave</i>
<i>Dodonaea triquetra</i>	<i>Drosera spathulata</i>	<i>Entolasia sp. (E. ?marginata)</i>
<i>Eucalyptus robusta</i>	<i>Gahnia sp. (G. ?sieberiana)</i>	<i>Gleichenia dicarpa</i>
<i>Glochidion ferdinandi</i>	<i>Glochidion ferdinandi</i>	<i>Glycine tabacina</i>
<i>Hardenbergia violacea</i>	<i>Hypolaena fastigiata</i>	<i>Hypolepis muelleri</i>
<i>Leptospermum juniperinum</i>	<i>Melaleuca linariifolia</i>	<i>Microlaena stipoides</i>
<i>Pittosporum undulatum</i>	<i>Polyscias sambucifolia</i>	<i>Pteridium esculentum</i>
<i>Restio spp.1</i>	<i>Schoenus spp.</i>	<i>Senecio bipinnatisectus</i>
<i>Todea barbara</i>	<i>Viminaria juncea</i>	

5. The community is distinctive in that *Eucalyptus robusta* is normally a dominant in river flat and coastal forests on Quaternary alluvium. The Maroota Sands Swamp Forest occurs on sand at approximately 160 m. above sea level.
6. No other stand with similar floristic and environmental features is currently known.
7. The community is threatened by weed invasion. It is also at risk from hydrological changes resulting from nearby extractive industries.
8. In view of 7 above the Scientific Committee is of the opinion the Community is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival cease to operate.

Associate Professor Paul Adam
Deputy Chairperson
Scientific Committee

Gazetted: 17/10/97



KEY THREATENING PROCESS

NSW SCIENTIFIC COMMITTEE

Final Determination

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to reject a proposal for the listing of the incidental catch (or bycatch) of seabirds during longline fishing operations as a KEY THREATENING PROCESS in Schedule 3 of the Act. Listing of Key Threatening Processes is provided for by Section 15 of the Act.

Any submissions received following advertisement of the Preliminary Determination have been considered by the Scientific Committee.

The Scientific Committee has found that:

1. The incidental catch (or bycatch) of seabirds during oceanic longline fishing operations has been declared a Key Threatening Process under the Commonwealth Endangered Species Protection Act 1992. The following species were identified as being affected by this Process:

Wandering Albatross (all subspecies)	<i>Diomedea exulans</i>
Royal Albatross	<i>Diomedea epomophora</i>
Black-browed Albatross	<i>Diomedea melanophris</i>
Buller's Albatross	<i>Diomedea bulleri</i>
Shy Albatross	<i>Diomedea cauta</i>
Yellow-nosed Albatross	<i>Diomedea chlororhynchus</i>
Grey-headed Albatross	<i>Diomedea chrysostoma</i>
Sooty Albatross	<i>Phoebetria fusca</i>
Light-mantled Sooty Albatross	<i>Phoebetria palpebrata</i>
Northern Giant Petrel,	<i>Macronectes halli</i>
Southern Giant Petrel	<i>Macronectes giganteus</i>
White-chinned Petrel	<i>Procellaria aequinoctialis</i>
Flesh-footed Shearwater	<i>Puffinus carneipes</i>
Sooty Shearwater	<i>Puffinus griseus</i>

2. There is considerable evidence for the decline of albatross populations in the Southern Ocean and that longline fishing is a significant cause of mortality to several albatross species.
3. The Threatened Species Conservation Act 1995 applies to the coastal waters of the New South Wales.
4. There is evidence that a number of species of seabird, including the Wandering Albatross and the Flesh-footed Shearwater occur in New South Wales waters.

NSW SCIENTIFIC COMMITTEE

5. The Committee noted that there are restrictions on the types of fishing methods that can be used in New South Wales waters, and that while some types of longline fishing are permitted, the Committee has been unable to obtain any conclusive evidence that the bycatch of seabirds from longline fishing operations occurs in New South Wales waters.
6. In the light of 3 and 5 above the Committee has rejected the proposal to list the incidental catch (or bycatch) of seabirds during longline fishing operations as a Key Threatening Process.

The Committee strongly supports the approach of the Commonwealth to require the modification of fishing methods in Commonwealth Waters so as to reduce seabird bycatch.

Dr Chris Dickman
Chairperson
Scientific Committee



*A Notice advising that this nomination
was rejected by the Committee was gazetted: 13/6/97*

National Parks & Wildlife Service



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