DELINEATION of IMPORTANT HABITATS of THREATENED PLANT SPECIES in SOUTH-EASTERN NEW SOUTH WALES

RESEARCH REPORT
to the
Australian Heritage Commission

J.D. Briggs & J.H. Leigh

CSIRO Division of Plant Industry
GPO Box 1600
Canberra ACT 2601

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Acacia georgensis Tindale Family: Mimosaceae

Conservation Status: Vulnerable (Code 2V/N/58)

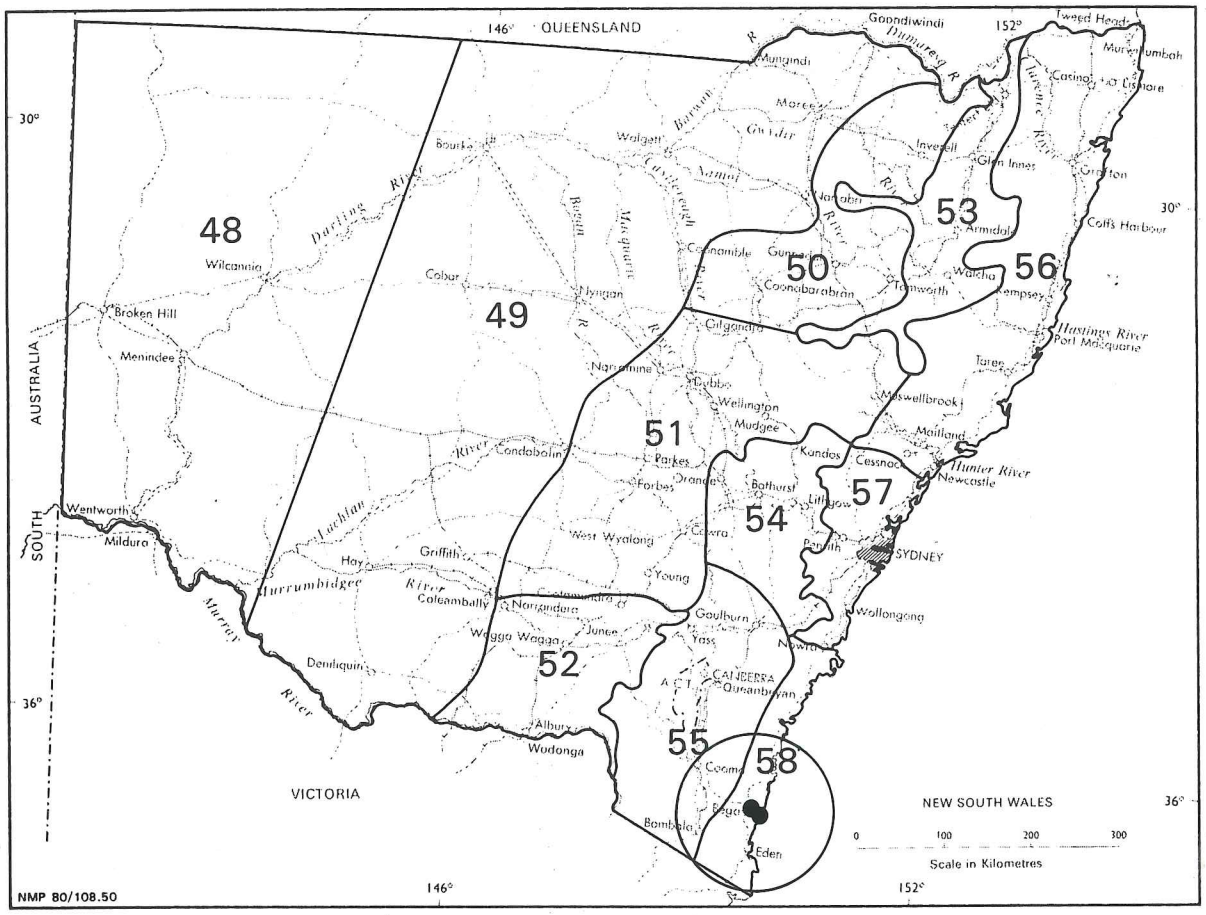
A small tree of *A. georgensis*.

Description

Shrub or small tree 3-10 m high with rough, grey bark often very corrugated towards the base of older trees. The young branchlets are usually covered with a white waxy bloom. *Seedling leaves* bi-pinnate. *Adult leaves* (phyllodes) alternate, slightly sickle-shaped, 7-16 cm long and 1.5-3 cm wide, borne on short stalks 2-8 mm long which have a small gland just above the junction with the stem. *Flowers* pale-yellow, crowded in cylindrical spikes up to 3.5 cm long and 7 mm diameter which arise singly or occasionally in pairs from the leaf axils. Individual flowers small, with a tubular corolla about 2 mm long and stamens 3-6 mm long. *Fruits* are flattened linear pods to about 5 cm long, dull greyish-brown, often with a slight waxy bloom and containing glossy black oblong-elliptical seeds 3-4.5 mm long and 2-2.5 mm wide.

Flowering: Mainly late August to October but also recorded in February.

Distribution of Acacia georgensis



Distribution

Known only from two sites on the New South Wales South Coast. The Type locality is on Dr George Mountain 5.5 km east-north-east of Bega and the second locality is at Kianinny Bay, immediately south of Tathra. These sites are 11 km apart and the total population is about 2,300 plants. Other small populations of the species may eventually be found, particularly in view of the differing habitats of the known sites and the extent of hilly terrain between the known sites which has yet to be thoroughly searched botanically.

Habitat Summary

Shallow loams on both granite and rhyolite outcrops supporting shrub communities and *Eucalyptus - Acacia* woodland. The altitude ranges from almost sea level at the coastal site to 300 m at the inland site.

Threats Summary

Burning too frequently is a potential threat to the coastal site whilst the construction and maintenance of various structures has affected part of the inland site. At neither site is the vegetation formally protected.

Reservation

Although the Kianinny Bay population occurs in Bournda State Recreation Area, the vegetation is not afforded specific protection there.

Cultivation

A horticulturally appealing, dense, rounded, large (to 10 m) tree. It can be readily propagated from seed. Three plants are in cultivation at the Australian National Botanic Gardens, Canberra (M. Richardson, pers. comm.).

Recommendations Summary

Dedication of the two known sites for flora conservation is desirable for the long term protection of the species. Frequent burning of the Kianinny site should be avoided. The Dr George Mountain site is now on the Register of the National Estate and the Kianinny Bay site has been nominated for inclusion on the Register.

SITE DETAILS

Site 1 - Kianinny Bay

Latitude and Longitude: 36° 44' 23", 149° 48' 50".

Altitude: 5-40 m.

Location: Rocky slopes and ridge immediately west of Kianinny Bay and associated north-facing slopes extending for 400 m inland. The nominated area is bounded on the north by a small creek draining into Kianinny Bay and

on the east by high water along the shores of Kianinny Bay. The southern and western boundaries are defined by straight lines joining the Bega 1:25,000 map sheet 8824-1-S grid reference points 66232973-65802973-65802987. (See map page 41).

Looking south-west across the northern part of Kianinny Bay to the rocky headland and the north-facing slopes which support *A. georgensis* at Site 1.

Land Status: Bournda State Recreation Area which is under the control of the New South Wales National Parks and Wildlife Service.

Area: ca. 5 ha.

Population: 500-600 young, reproductively mature plants.

Habitat

Soil: Skeletal grey loam.

Substrate: Rhyolite, extensively exposed.

Topography: Coastal headland and adjacent hillside above small creek.

Aspect: Easterly and northerly.

Vegetation: Stunted *Eucalyptus tereticornis* woodland/shrub community including *Melaleuca armillaris, Commersonia fraseri, Lasiopetalum macrophyllum, Beyeria lasiocarpa, Zieria* sp. nov. (aff. *cytisiodes*), *Lomandra longifolia, Monotoca elliptica, Platysace lanceolata, Plectranthus parviflorus, Olearia tomentosa* and *Dendrobium speciosum*.

A section of the regenerating shrub community in which *A. georgensis* is particularly abundant and forms dense thickets. The stand is likely to naturally thin itself as the plants mature.

Threat: The site is adjacent to a popular recreation area and frequent accidental burning of the site is a potential threat. Adult trees of *Acacia georgensis* are killed by fire and regeneration is from seed. At the time of this survey the *A. georgensis* community was recovering from a fire which occurred between late 1979 and early 1980 (M. Parris, pers. comm.). The western part of the site had been burnt again a few months prior to this survey in mid 1986. A succession of frequent burns before adult trees have produced an adequate seed reserve in the soil could lead to a decline in the population.

Looking south towards Site 1. A recent fire has burnt the western part of the site, all of which was previously burnt in late 1979/early 1980. A succession of frequent burns would be detrimental to both *A. georgensis* and the shrub community in general.

Recommendation: Burning of the site should be avoided until ecological research is conducted to determine minimum 'safe' intervals between fires. The New South Wales National Parks and Wildlife Service should prepare interim development and management plans for this area of Bournda State Recreation Area which include specific guidelines for the conservation of *A. georgensis*.

Survey Dates: 2/8/1986. The distribution and population size was confirmed by N. Fisher on 29/7/90.

Voucher Specimen: J.D.B. and M. Parris No. 2030.

Site 2 - Dr George Mountain

Latitude and Longitude: 36° 39' 34", 149° 54' 10".

Altitude: 200-300 m.

Location: The summit area and steep upper western and southern slopes of Dr George Mountain, 5.5 km direct north-east of Bega. *Acacia georgensis* extends no more than 150-200m in any direction from the trig point (Gilmour, unpublished report). The area on the Register of the National Estate is far more extensive (65 ha) than is the local distribution of any of the rare species as mapped by Gilmour (unpublished report) on Dr George Mountain and the area encompassing all the rare species could be re-defined to only include the area of Crown land (12 ha) surrounding the summit. The boundary of this smaller site follows straight lines joining the Bega 1:25,000 map sheet 8824-1-S grid reference points 59373860-59453900-59733894-59653855-59373860. (See map page 42).

Land Status: By far the largest portion of the population occurs on Crown land on the upper southern and western slopes. A very small portion of the population on the lower western slopes is in Mumbulla State Forest.

Area: ca. 8 ha.

Population: More than 1,700 plants (Gilmour, unpublished report).

Habitat

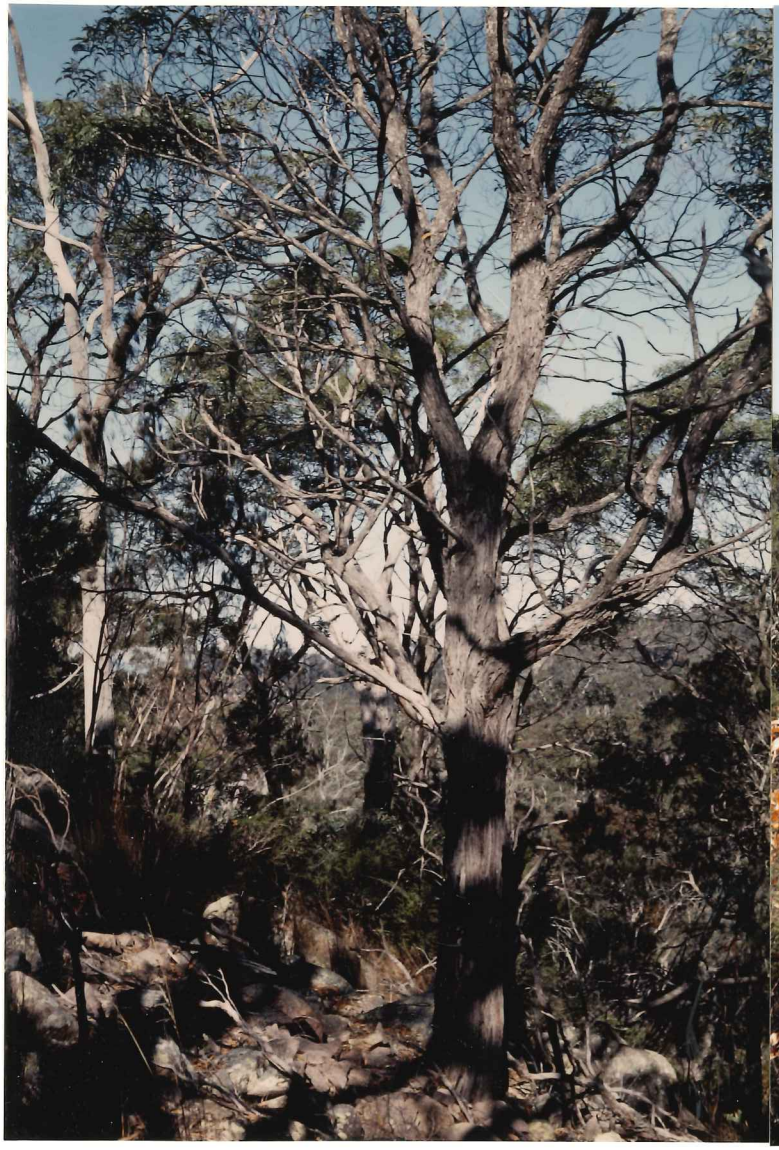
Soil: Skeletal grey loam.

Substrate: Granite, extensively exposed.

Topography: Summit and steep slopes of mountain in hilly terrain.

Aspect: North-west, westerly and southerly.

Vegetation: Shrub community dominated by *Kunzea ambigua, Eriostemon myoporoides, Boronia anemonifolia, Acacia georgensis, Phebalium carruthersii* and *Eucalyptus* aff. *stricta* on the summit and steep upper slopes which grades into *Eucalyptus - A. georgensis* woodland downslope.



On the southern slopes of the mountain *A. georgensis* develops into a substantial tree and forms a woodland with a sparse shrub understorey.

An example of the shrub community on the summit area of Dr George Mountain. A small tree of *A. georgensis* on the edge of the summit area can be seen rising above the general level of the adjacent shrub community.

Threats: The summit area, particularly to the north of the trig point, has suffered some disturbance in the past with the construction of a small brick building by Telecom and the erection of various power and antennae poles. Vegetation surrounding these structures has been periodically slashed. Telecom planned to construct a new transmitter tower on the summit but has agreed to select another location for the tower in view of the rare species occurrences on Dr George Mountain.

Recommendations: This site has particular value because it also supports two other nationally Rare species, *Phebalium carruthersii* and *Haloragodendron baeuerlenii* and a possibly new rare species of *Eucalyptus* which has affinities to *E. stricta*. It is desirable that the Crown land area of the site be dedicated as a flora reserve to provide formal protection of these species. The Australian Heritage Commission should note that it has now been established that the area supporting these rare species is considerably smaller than the area currently on the Register of the National Estate. The Commission should consider amending the boundary of the Registered area to that detailed in the location section above.

Survey Dates: April, 1985 by P. Gilmour and August, 1986 by J.D.B.

Voucher Specimens: Collected by M. Parris (1978) and P. Gilmour.


Nelson
Beach
Moon Bay
NELSON LAKE ROAD
MOON BAY ROAD
Timber Mill
CHINNOCK LAGOON
CHINNOCK
RAY WHYMAN RESERVE
MOGAREKA INLET
HANCOCK BRIDGE
(under reconstruction)
Launching Ramp
Picnic Area
Black
Ada
Swamp
Reach
Humbug
ANDERSONS SADDLE
ZECKS LAGOON
LONG FLAT
Sand Pit
COHENS LOOKOUT
BLACKFELLOWS LAGOON
Caravan Park
Wharf (Ruins)
Bowling Greens
Tathra Head
TATHRA
Tathra
Gravel Pit
Exchange
Substation
Sports Ground
Launching Ramp and Slip
Kianinny Bay
AGOOT
"Strathmore"
HIGHWAY
ROAD
EVANS HILL
Acacia georgensis Kianinny Bay Site
(Site 1)
Bega 1:25,000
map sheet 8824-I-S
5km

(INCLUDES TANJA LAGOON 8924-IV-S)