

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



RESEARCH REPORT  
to the  
Australian Heritage Commission

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**Zieria sp. 2 (sp. "B")**

Family: Rutaceae

**Conservation Status:** Vulnerable (Code 3V/NV/55, 66)

**Conservation Status prior to species discovery in Victoria:** Endangered  
(Code 2E/N/55)



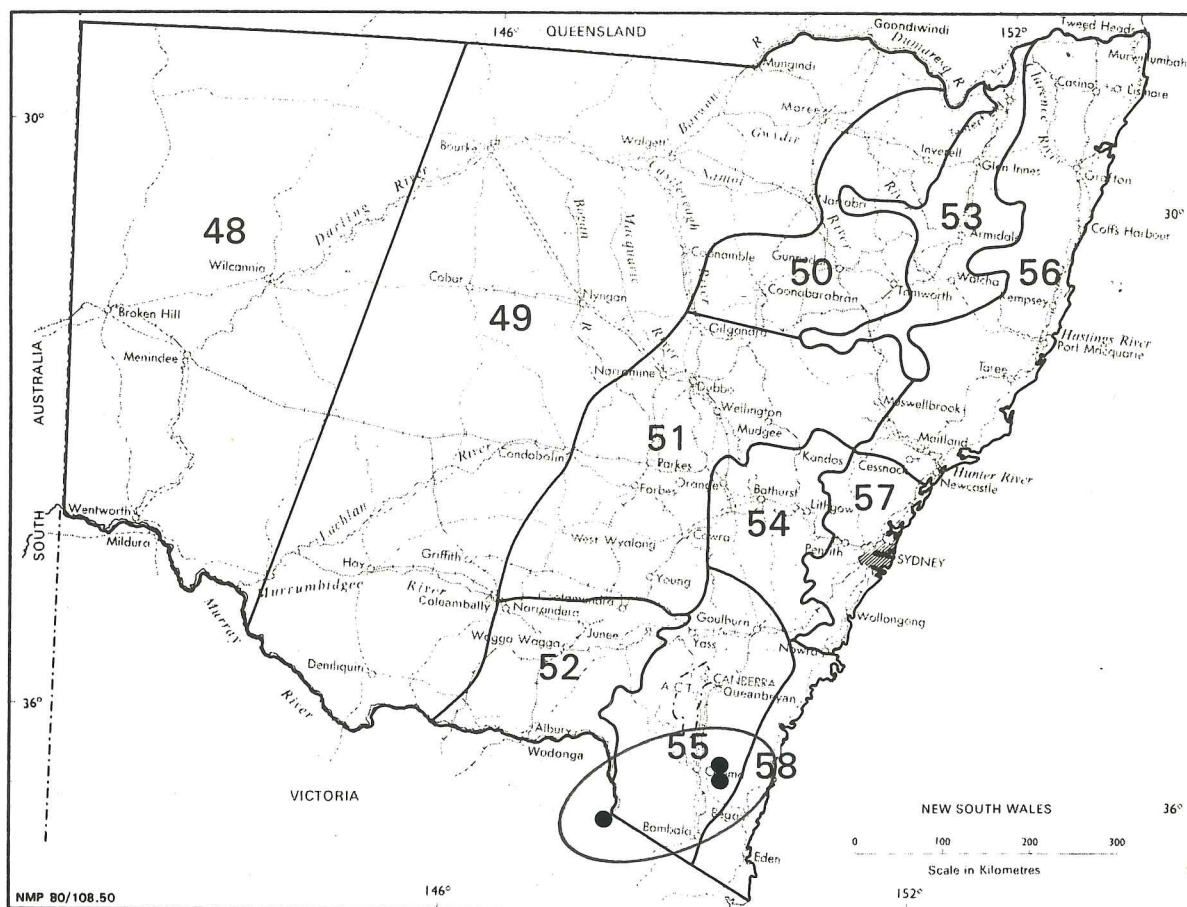
This species has small white or pale-pink flowers and small trifoliolate leaves which are strongly lemon-scented when crushed.

**Description**

Dense spreading sub-shrub to 30 cm high and 40 cm across. *Leaves* opposite, small, comprised of three leaflets (trifoliolate) and sparsely covered on both surfaces with short simple hairs. The central leaflet is narrow-elliptic, 4-10 mm long and 2-4 mm wide and the secondary leaflets are similar but very slightly narrower. *Flowers* are white or pale-pink fading white and are borne singly on stalks about 5 mm long arising from the leaf axils. Each flower is about 8 mm across with 4 elliptical-obovate petals. *Fruit* is a capsule about 5 mm across deeply divided into 4 chambers. Each chamber contains one or rarely two elliptical seeds about 1.5 mm long.

**Flowering:** November-December.

### Distribution of Zieria sp.2(sp."B")





Note: This species is to be described by J. Armstrong and will be given the name *Z. citriodora* because of its lemon-scented foliage.



A typical shrub of *Zieria* sp. 2 which has been browsed by native herbivores to within a few centimetres of ground level. The present intensity of browsing is not preventing the plants from producing at least a small crop of flowers which should enable some seed production.

### **Distribution**

In New South Wales the species is known only from two populations, one of about 150 plants occupying an area of about 15 ha, 5 km east of Numeralla and the other of 30 plants occupying an area of about 2 ha, 2 km north-west of Kybean Trig. The Numeralla site has been known for many years (M. Parris, pers. comm.) but the Kybean Trig site was only documented in 1986, during the current survey. This latter site was re-located with the guidance of D. Minehan, a retired fencing contractor, who had once sent Parris (pers. comm.) a piece of this plant for identification after noticing its unusual odour whilst sitting on it.

The species was discovered in Victoria in early 1988 by N. Walsh (pers. comm.). Four populations totalling about 400 plants occupying a total area of about 2 ha were found about 6 km north-west of Mt Cobberas No. 2 in



East Gippsland. The Victorian populations were not surveyed during this project.

### **Habitat Summary**

In New South Wales the species occurs on moderately steep, generally north to south-west facing slopes near small ephemeral creeks. The soils are gravelly to sandy loams overlying decomposed granite or metamorphosed sediments which support *Eucalyptus* low woodland with a shrub understorey. The habitat is apparently similar in Victoria but the substrate there is ignimbrite (volcanic rock).

### **Threats Summary**

In New South Wales neither site is protected and both are highly erodable areas which would be very vulnerable to localised disturbance such as overgrazing, frequent burning, trail-bike riding, etc. At both sites the *Zieria* plants have been selectively and heavily browsed over winter, apparently by native herbivores. Presumably the species would be also highly palatable to domestic stock.

The Victorian sites are on Crown land proposed for dedication as part of Cobberas-Tingaringy National Park and are not under identifiable threat (N. Walsh, pers. comm.).

### **Reservation**

Not reserved in New South Wales. The Victorian populations are within an area proposed for reservation.

### **Cultivation**

A combined total of 75 plants from 10 individuals from the two New South Wales populations have been established from cuttings at the Australian National Botanic Gardens, Canberra, (M. Richardson, pers. comm.). Plants strike readily from cuttings. This species has horticultural potential for use in rockeries because of its low compact growth habit coupled with its strongly lemon-scented foliage. Pink flowered individuals have the greater appeal.

### **Recommendations**

Both the New South Wales sites should be protected, particularly the larger site near Numeralla. All populations should be regularly monitored to determine the extent of browsing by native herbivores. Culling of these

herbivores may be required if the level of browsing threatens the survival of the populations.

Both New South Wales sites have been nominated for inclusion on the Register of the National Estate.

#### **SITE DETAILS**

##### **Site 1 - Numeralla**

**Latitude and Longitude:** 36° 10' 30", 149° 23' 50".

**Altitude:** 810 m.

**Location:** 5.2 km east of the bridge at Numeralla on the road to Countegany, then 500 m south of the road. The species occupies a series of 4 ridges encompassed by straight lines joining the Numeralla 1:25,000 map sheet 8725-1-S grid reference points 15009485-15559485-15559410-15009410. (See map page 252).



At Site 1 *Zieria* sp. 2 occurs on the lower slopes of a range of hills to the east of Numeralla.



**Land Status:** Crown land.

**Area:** 15 ha.

**Population:** An estimated 150 mature plants, all heavily browsed. No seedlings were observed.

**Habitat**

**Soil:** Pale-grey sandy loam.

**Substrate:** Finely broken metamorphosed sediments.

**Topography:** Moderately steep lower slopes above ephemeral creeks in low range of hills.

**Aspect:** West to south.

**Vegetation:** *Eucalyptus mannifera* - *E. macrorhyncha* - *E. dives* low woodland with a shrub understorey including *Allocasuarina nana*, *Banksia canei*, *Brachyloma daphnoides*, *Monotoca scoparia*, *Leucopogon fraseri*, *Platysace lanceolata*, *Olearia iodochroa* and *Acacia* spp.

**Survey Dates:** 29/7/86 and 14/12/86.

**Voucher Specimens:** J.D.B. Nos 2004 and 2161.



General habitat at the Numeralla site.

**Threats:** The site itself is presently in a relatively undisturbed natural state but immediately west and north of the site there are a number of disturbed areas resulting from bulldozer activities associated with an underground telephone cable, trail-bike riding and gravel extraction.

All plants were heavily browsed during winter by native herbivores. Nevertheless, most plants produce a small crop of flowers and presumably some seed which should enable regeneration in the future.

**Recommendations:** The site should be dedicated as a nature reserve and protected from the disturbances occurring in adjacent areas. The extent of browsing should be monitored and appropriate culling of the herbivores or fencing of the site undertaken if necessary.

#### **SITE 2 - Kybean Trig**

**Latitude and Longitude:** 36° 15' 20", 149° 24' 20".

**Altitude:** 990 m.

**Location:** 1.7 km directly north-north-west of Kybean Trig and 100 m east of the Kybean East Fire Trail. The site is encompassed by a circle of radius 150 m centred on the Kybean 1:25,000 map sheet 8725-11-N grid reference point 16808505. (See map page 253).

**Land Status:** The site straddles the boundary of two private properties.

**Area:** 2 ha.

**Population:** 32 mature plants. All had been browsed. No seedlings were found.

#### **Habitat**

**Soil:** Brown sandy loam.

**Substrate:** Finely broken decomposed granite.

**Topography:** Moderately steep lower slope above ephemeral creek.

**Aspect:** North-east to north.

**Vegetation:** *Eucalyptus mannifera* - *E. dives* low woodland with moderately dense understorey dominated by *Banksia canei* and *Allocasuarina nana*. Other shrubs include *Leucopogon attenuatus*, *L. fletcheri*, *L. pilibundus*, *Pultenaea procumbens*, *Hibbertia obtusifolia*, *Brachyloma daphnoides*, *Bossiaea foliosa*, *Lomandra longifolia* and *Poa* sp.





Looking east from the centre of the Site 2, which is at the intersection of a vehicular track connecting the Kybean East Fire Trail and a boundary netting fence.

**Threats:** Being on private property there is no guarantee that the site will remain uncleared. All plants at the site had been heavily browsed during the winter, apparently by native herbivores. At present there is no obvious sign of damage due to browsing by domestic stock but this could become a threat if stocking rates were increased.

**Recommendations:** Efforts should be made to have the site protected, either by acquisition as a reserve or perhaps through a conservation agreement with the landowners similar to that possible under the Heritage Agreement Scheme operating in South Australia.

**Survey Date:** 29/10/86.

**Voucher Specimen:** J.D.B. and M. Parris No. 2089.



Numeral 1a 1:25000  
Sheet 8725-1-S

Trachula Zieria sp.2 (sp. "B")  
 Abundant  
 Numeralia Site  
 (Site 1)

Approximate boundary  
of the Zieria population.



