

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

December 1990

Zieria sp. 14 (sp. "P"; Box Range North)

Family: Rutaceae

Conservation Status: Endangered (Code 2E/N/58)

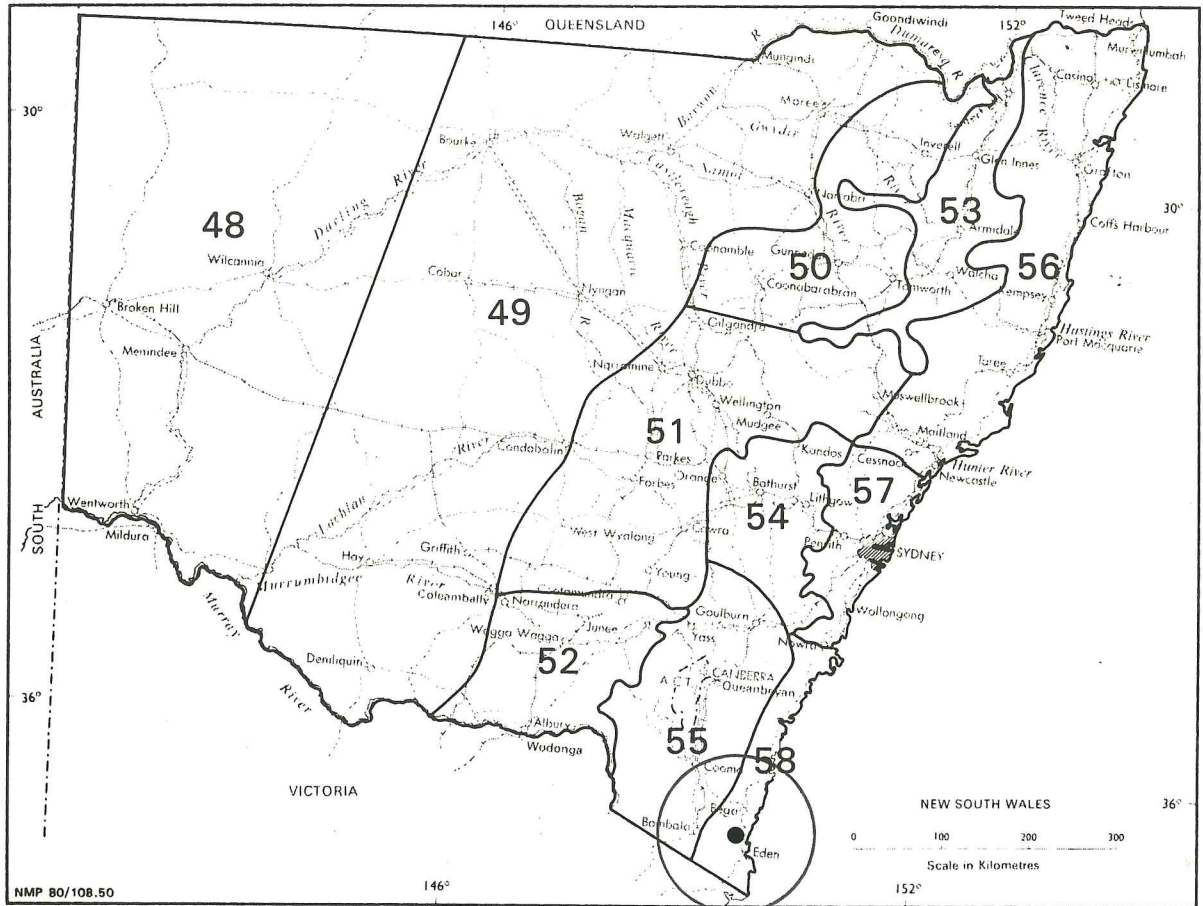


Description

Erect shrub to 2 m high. Leaves opposite and comprised of three leaflets (trifoliate), strongly aromatic when crushed. Both surfaces are covered with a dense, velvety layer of short stellate hairs and numerous conspicuous warts (tubercles). The central leaflet is linear to narrow oblanceolate with recurved margins, 15-30 mm long and 2-3 mm broad, dull grey-green above and pale-green beneath. The secondary leaflets are similar but only about three quarters the size. Flowers white, arranged in clusters of up to 28 flowers arising from the leaf axils on a common stalk to 1.5 cm long. Each flower is 6-7 mm across with 4 ovate-elliptic petals. Fruit is a capsule about 5 mm across and deeply divided into 4 chambers, red-brown when young becoming greenish at maturity. Each chamber contains one or rarely two elliptical seeds about 2 mm long.

Flowering: September.

Distribution of *Zieria* sp.14(sp."P")



Note: This species is to be described by Briggs and Armstrong and given the name *Z. buxijugum*. The specific epithet is from the Latin *buxus*, boxwood and *jugum*, range of hills and alludes to the name of the property on which the species is found.



A typical shrub of *Zieria* sp. 14 (centre foreground of photo). In this photo the paler greyish-green leaves help distinguish this species from the other associated shrubs.

Distribution

Known only from a single population of 68 plants on Box Range Farm 10 km west of Pambula on the far South Coast of New South Wales. The species was discovered in April 1986 by M. Parris and D. Albrecht during a botanical survey of some rhyolite and ignimbrite rock outcrops in the area. Extensive searches of other similar rock outcrops in the area by Albrecht, Fisher, Parris and J.D.B. have failed to locate any other populations of this species.

Habitat Summary

Zieria sp. 14 grows in skeletal soils on a steep east-facing ignimbrite rock outcrop supporting a shrub community.



The ignimbrite outcrop supporting *Zieria* sp. 14. Plants of the species are not visible in this photo as they are hidden amongst the *Melaleuca armillaris* shrubs on the upper slope.

Threats

All but the most inaccessible plants had been heavily browsed by the many wallabies sheltering in the area. The site lies between cleared grazing land and regularly control-burned State Forest. Indications are that wallabies are sheltering and browsing in this boundary zone, particularly when feed is short in the State Forest following a burn. They move out onto the adjacent cleared land at night to feed. *Zieria* sp. 14 is palatable and together with certain other species such as the Rock Orchid, *Dendrobium speciosum*, is selectively browsed.

The steep rocky nature of the site is the type of habitat known to be favoured by feral goats. The population of this palatable species could be destroyed if a herd of feral goats moved onto the site from the adjacent State Forest as they have done at the site of *Zieria* sp. 15, less than 2 km away.

Reservation

Not reserved.

Cultivation

The species can be propagated from cuttings and plants from 9 individuals of 1 clone have been established at the Australian National Botanic Gardens, Canberra (M. Richardson, pers. comm.). Successful methods of propagating the genus from seed have not yet been determined. The flowers of this species are not showy and the species lacks horticultural appeal.

Recommendations

The population should be monitored and when necessary the wallaby population culled to appropriate levels. Fencing of the site with a goat-proof fence is a desirable precaution and such a fence would also limit access to the site by wallabies. The New South Wales National Parks and Wildlife Service is the most appropriate organisation to assume responsibility for the required action and they have been advised of the situation. The Service is currently negotiating with the landholder regarding fencing of this site and that of another Engangered *Zieria* species on the same property (J. Benson, pers. comm.). Whilst the landowner has expressed an interest in the occurrence and preservation of this and several other rare species occurring on his property there has unfortunately been a difference of opinion between himself and the Service and others as to how the area should be managed. It is to be hoped that this can be satisfactorily resolved.

The site has been included on the Register of the National Estate.

SITE DETAILS

Site 1 - Box Range North

Latitude and Longitude: 36°55' 45", 149°45' 20".

Altitude: 290 m.

Location: Near the summit of a steep hill in Portion 100, Parish of Gnupa, about 15 km west of Pambula on the Wyndham Road and 500 m south of the road. The nominated site is encompassed by straight lines joining the Pambula 1:25,000 map sheet 8824-11-S grid reference points 455094-455096-456096-456094. (See map page 298).



Looking west from Box Range Farm towards the hill on Portion 100 on which *Zieria* sp. 14 grows. The ignimbrite rock outcrop supporting the *Zieria* is on the east side near the summit, but is hidden in this photo by the *Eucalyptus sieberi* - *E. muelleriana* open-forest growing below the outcrop.

Land Status: Private freehold.

Area: 0.4 ha.

Population: 68 mature plants, most heavily browsed. About 10 seedlings were seen on the most inaccessible crevices of the outcrop.

Habitat

Soil: Skeletal brown loam with high organic matter content.

Substrate: Ignimbrite.

Topography: On steep slope near crest of hill in generally hilly terrain.

Aspect: East.

Vegetation: Shrub community dominated by *Melaleuca armillaris* and with a sparse sub-shrub layer including *Cassinia longifolia*, *Plectranthus parviflorus*, *Olearia iodochroa*, *Platysace lanceolata* and *Dendrobium speciosum*. The shrub community is surrounded by *Eucalyptus sieberi* - *E. muelleriana* open-forest.

Survey Dates: 14/7/86 and 16/12/87.

Voucher Specimen: J.D.B. and M. Parris No. 1939.

55'

WYNDHAM 11 km

11 -

GNUP
52
STATE
FOREST

910 —

09 -
0

08 -

