

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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December 1990

Pultenaea sp. 1 (W. of Wadbilliga Trig)

Family: Fabaceae

Conservation Status: Vulnerable (Code 3VCi/NV/55C 66)

(Conservation Code prior to survey 2VCit/N/55C)

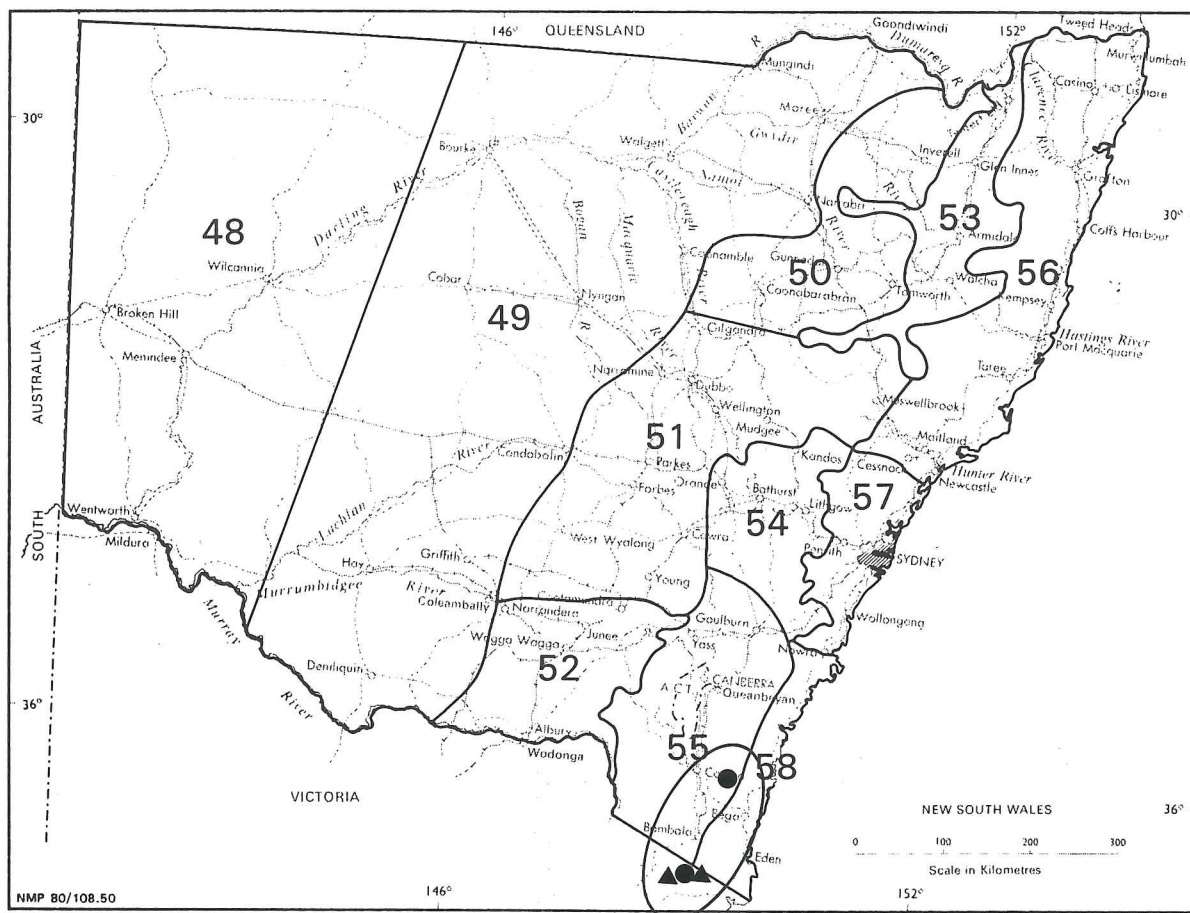


Pultenaea sp. 1 has small flowers which are borne in few-flowered heads at the ends of sparsely foliated stems. The stems scramble amongst litter and associated species and the plants are difficult to see when not in flower.

Description

Sub-shrub with a few slender, sparsely-foliaged stems either prostrate or scrambling through other associated sub-shrubs and grasses. Leaves alternate, almost stalkless, narrow-elliptic, slightly concave, 6-15 mm long and 1-2 mm wide. Each leaf has a conspicuous brown papery stipule 2.5-3.0 mm long. Flowers yellow and reddish-orange and arranged in small heads subtended by brown papery bracts at the ends of the stems. The standard petal is 3-4 mm across and remains partly folded along its vertical axis. The calyx tube is about 2 mm long with finely tapered lobes about 2 mm long. Fruits are small vertically-flattened ovate pods about 5 mm long and 2.5 mm high, each with a downwardly curved beak about 1.5 mm long. Each pod contains 1 or 2 small, black, ovate seeds about 2 mm long.

Distribution of Pultenaea sp.1



▲ = previously recorded imprecise localities which are not possible to re-locate.

Flowering: November.

NOTE: This species is to be described by J.D.B. and M. Crisp and named *P. parrisiae* after Mrs Margaret Parris who first collected the species and who has made many valuable botanical collections, particularly on the New South Wales South Coast and Southern Tablelands.

Distribution

Pultenaea sp. 1 is now known from two sites near the head of the Tuross River in Wadbilliga National Park on the New South Wales Southern Tablelands and from one site near Buldah in north-east Gippsland, Victoria. The total population in the Wadbilliga area is between 800 and 1000 plants and there are about 400 plants at the Victorian site. It is likely that additional populations will eventually be found as there are numerous potential sites within the recorded range of the species and it could be easily overlooked by collectors. There are, for example, two old collections from Victoria (Upper Genoa River, F. Mueller, 1860 and Coombienbar Valley, Head of the Bemm River, E. Merral, 1887) whose localities were too vague to warrant survey effort during this project, but which indicate that other localities did exist.

Prior to this survey this species had been recognised by M. Crisp (pers. comm.) from a single collection made by M. Parris in 1973 from a swamp in Wadbilliga National Park. During the present survey three visits to the Wadbilliga site were required before the species could be re-located. The difficulties in re-locating the species result from the inconspicuous nature of the plant which scrambles amongst other shrubs and grasses. The plants need for it to be flowering before they can be recognised in the field. Searches of several similar swamps in the Wadbilliga area eventually lead to the discovery of a second population in a nearby swamp (Site 2 in this report).

An examination of specimens of related *Pultenaea* species at both the Australian National Botanic Gardens Herbarium and the New South Wales National Herbarium by M. Crisp (pers. comm.) failed to locate any other collections of *Pultenaea* sp. 1. A similar search of the Melbourne Herbarium by M. Corrick (pers. comm.) located four specimens lodged under *P. paleacea* which match *P. sp. 1*. The collecting localities were: ENE of Buldah, G. Carr, 1984; Yambulla Creek and Upper Genoa River, J. Willis, 1948 and the two sites mentioned previously. With additional information from G. Carr the Buldah population was re-located during this survey. Despite additional

locality information from J. Willis a thorough search failed to re-locate *P. sp. 1* along the lower section of Yambulla Creek and in the vicinity of its junction with the Genoa River. The habitat at this site is very different to the swamp habitat of the other recorded localities and it appears as if Willis may have collected plants that established from seed washed downstream from another locality, and that the species has not persisted at this site.

Habitat Summary

At all sites *P. sp. 1* occurs in grey sandy loams or clay-loams in seasonally waterlogged conditions around the margins of permanent swamps or seepage areas. It occurs in low, open, wet-heath in or on the margins of eucalypt woodland.

Threats Summary

The known occurrences of *P. sp. 1* are highly localised on the margins of sub-alpine swamps and this is a habitat often severely disturbed by feral pigs. Although the two New South Wales sites have not yet been damaged and are within a national park, the threat of pig damage remains. The Victorian site is within State Forest and is vulnerable to habitat disturbance should intensive logging be conducted on adjacent areas.

Reservation

The two New South Wales populations with a total of 800-1000 plants are in Wadbilliga National Park.

Cultivation

Plants grown from seed in pots at CSIRO are much more densely foliated and branched than plants growing in the wild. Although the prostrate habit may be of horticultural interest, the small flower size of this species does not endow it with much horticultural appeal. Four plants from each of the two New South Wales populations and two plants from the Victorian population are in cultivation at CSIRO, Canberra. A few plants from each of the New South Wales sites are also in cultivation at the National Botanic Gardens, Canberra.

Recommendations Summary

The three known sites have been nominated for inclusion on the Register of the National Estate. All sites should be monitored by the relevant land managers to detect any habitat damage by feral pigs. Further searching, particularly in Victoria, is warranted in an effort to locate additional populations. Consideration should be given to including the Victorian population in a flora reserve or the like, in order to formally protect it.

SITE DETAILS

Site 1 - Back Creek North

Latitude and Longitude: 36° 19' 10", 149° 33' 00".

Altitude: 1045 m.

Location: Swamp near the head of a small tributary to Back Creek, 2.7 km directly east-south-east of the junction of the Tuross River and Back Creek. The nominated site is a circular area of radius 80 m centred on the Yowrie 1:25,000 map sheet 8825-111-N grid reference point 28937767. (See map page 157).

Land Status: Wadbilliga National Park.

Area: 0.25 ha.

Population: An estimated 400-500 plants.

Habitat

Soil: Grey sandy loam.

Substrate: Sedimentary rock.

Topography: Low rises in small swamp surrounded by hills.

Aspect: Flat.

Vegetation: Wet, low, open-heath dominated by *Baekkea utilis* and *Epacris paludosa* but including scattered *Banksia canei*, *B. marginata*, *Gleichenia microphylla*, *Grevillea lanigera*, *Callistemon sieberi*, *C. citrinus*, *Hakea dactyloides*, *Leptospermum myrtifolium*, *Pultenaea capitata*, *P. subumbellata*, *Lomandra longifolia*, *Sphaerolobium vimineum* and *Patersonia* sp. The site is surrounded by *Eucalyptus sieberi* - *E. aff. radiata* - *E. viminalis* - *E. fraxinoides* open-forest.



Looking north-east
across the swamp
habitat at Site 1.

The few scattered trees
in the swamp are
E. viminalis. *Pultenaea*
sp. 1 plants are not
visible in this photo but
many occur in the
open-heath between
the trees and the point
from where the photo
was taken.

Threat: See summary section.

Recommendation: See summary section.

Survey Date: 12/11/88.

Voucher Specimen: J.D.B. and M. Parris No. 2456.

Site 2 - Back Creek South

Latitude and Longitude: 36° 20' 50", 149° 32' 45".

Altitude: 1010 m.

Location: 900 m east of the western boundary of Wadbilliga National Park on the Razorback Fire Trail. The nominated area is bounded on the south-west side by the fire trail and elsewhere by straight lines joining the Yowrie 1:25,000 map sheet 8825-111-N grid reference points 283748-284748-28507457-28457453. (See map page 157).

Land Status: Wadbilliga National Park.

Area: 1 ha.

Population: An estimated 400-500 plants.

Habitat

Soil: Dark-grey sandy loam.

Substrate: Coarse grained sediments with quartzite pebbles.

Topography: Flat to very gently sloping margins of extensive swamp in undulating terrain.

Aspect: North-east to flat.

Vegetation: Margins of *Eucalyptus pauciflora* - *E. dalrympleana* woodland and wet, low, open-heath community fringing swamp. Associated species include *Leptospermum myrtifolium*, *Lomandra longifolia*, *Epacris microphylla*, *Acacia dealbata*, *Brachyloma daphnoides*, *Pimelea linifolia*, *Pultenaea capitata*, *Tetralochea* sp., *Stackhousia monogyna*, *Bossiaea foliosa*, *Gompholobium hueglei*, *Patersonia* sp. and *Poa* sp.



Looking south-west to Site 2. *Pultenaea* sp. 1 occurs on the margins of the eucalypt woodland and the swamp.

Threats: In addition to the threat mentioned in the summary section this site occurs adjacent to the Razorback Fire Trail and care should be taken that any future roadworks associated with this track do not affect the *Pultenaea* habitat.

Recommendations: See summary section.

Survey Date: 13/11/88.

Voucher Specimen: J.D.B. No. 2458.

Site 3 - Fiddlers Green Creek (Victoria)

Latitude and Longitude: 37° 16', 149° 13'.

Altitude: 560 m.

Location: 50 m south of Fiddlers Green Creek and 100 m west of Fiddlers Green Fire Trail crossing of Fiddlers Green Creek. The nominated site is a 100 m wide strip adjacent to the south side of Fiddlers Green Creek and extending from 50 to 200 m upstream from the western crossing of Fiddlers Green Fire Trail with Fiddlers Green Creek. (See map page 158).

Land Status: Buldah State Forest.

Area: 0.1 km.

Population : An estimated 400 plants.

Habitat

Soil: Grey clay-loam.

Substrate: Metamorphosed sediments.

Topography: Gentle slope near creek in hilly terrain.

Aspect: East.

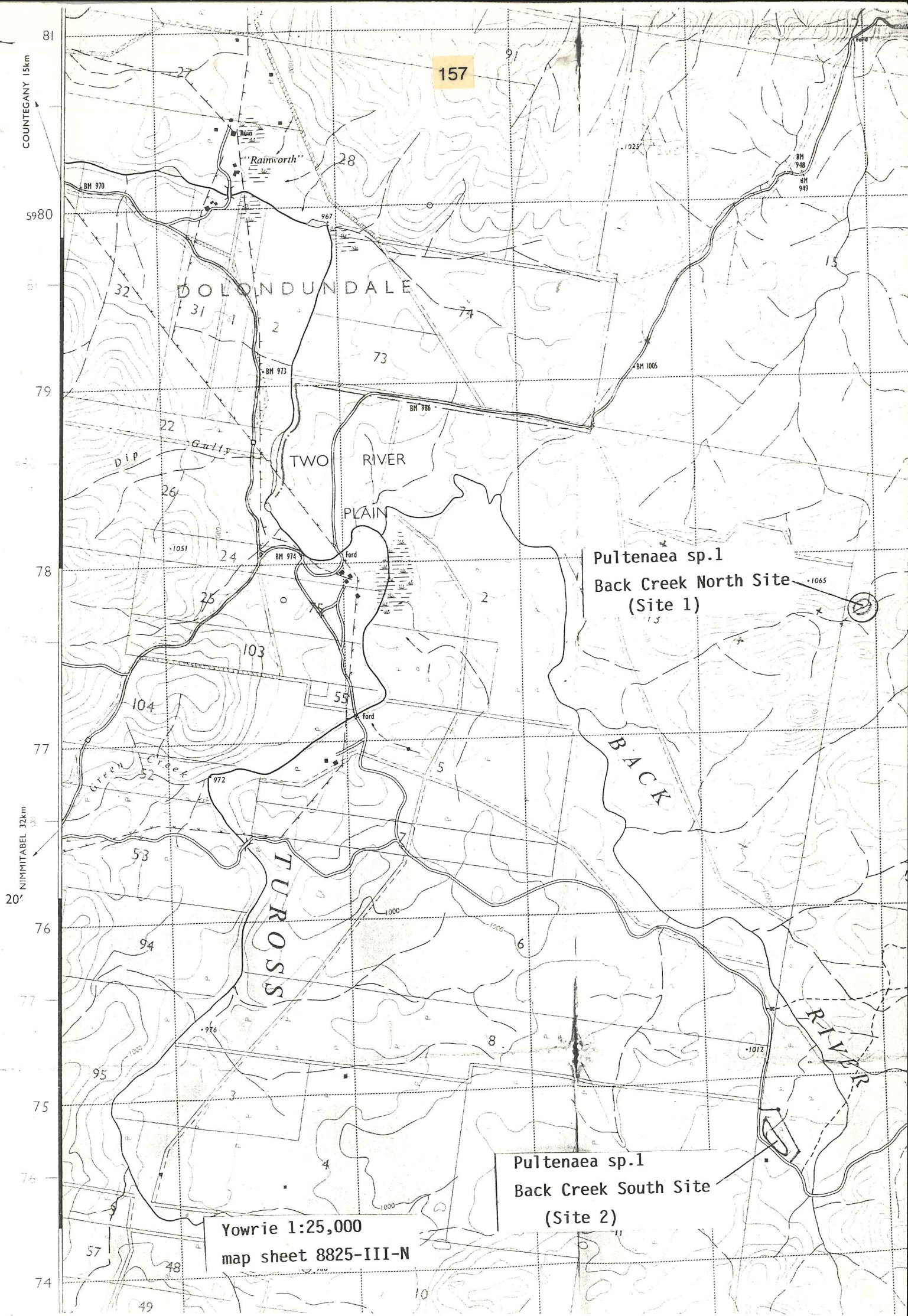
Vegetation: *Eucalyptus consideniana* - *E. radiata* woodland with a wet heath/scrub understorey including *Daviesia latifolia*, *Melaleuca squarrosa*, *Lomandra longifolia*, *Comesperma ericinum*, *Acacia mucronata*, *Leptospermum juniperinum*, *Bossiaea prostrata*, *Gahnia radula* and *Lepidosperma* sp.

Threat: See summary section.

Recommendation: See summary section.

Survey Date: 23/11/89.

Voucher Specimens: J.D.B. Nos. 2511-2514.



Pultenaea sp.1
Fiddlers Green Creek Site
(Site 3)

Craigie 1:100,000
map sheet 8723

