Persoonia glaucescens

Sieber ex Sprengel

Conservation status

Persoonia glaucescens is listed as a **vulnerable species** on Schedule 2 of the NSW *Threatened Species Conservation Act* 1995 and as a **vulnerable species** under the Commonwealth *Endangered Species Protection Act* 1992.

Description

P. glaucescens (Proteaceae) is an erect shrub that grows to 3m and has a smooth, mottled stem and brownish-red branches and branchlets with a light covering of short, hairs. The leaves are erect, greyish-green, with a very light covering of short hairs. The midvein is slightly raised; the margins are flat and are tinged with red; the apex terminates in a short, thick point (Harden 1991).

Photo: Douglas 1999

The flowers are light to deep yellow and the fruit resembles a small plumb (Blombery and Maloney 1992). *P. glaucescens* resembles the common and widespread *P. lanceolata*, its main distinguishing feature being its red leaf margins and red young stems.

Distribution

P. glaucescens is endemic to a relatively small area of the south-western Central Coast and south-eastern Central Tablelands Botanical Divisions in the Sydney Basin Bioregion. Within this range, habitat is patchy and linear and has been subject to substantial clearing due to the relatively arable nature of the low relief, clayey soils.

Recorded occurrences in conservation reserves

Two populations of *P. glaucescens* have been recorded from Nattai National Park, one population from Thirlmere Lakes National Park and three populations from Bargo State Recreation Area. However, recent surveys failed to locate the species in Thirlmere Lakes National Park, despite the presence of suitable habitat. It is known from numerous records in the proposed Bargo River National Park and a relatively large population occurs in the Box Valley Tramway Crown Reserve at Welby. The record known from Ironmines Reserve in Mittagong was not relocated during a survey in 1999.

Habitat

P. glaucescens grows in woodland to dry sclerophyll forest on clayey and gravelly laterite (Douglas pers. obs.). The preferred soils are associated with the Mittagong Formation (passage beds between Wianamatta Shale and Hawkesbury Sandstone) and are represented by the Lucas Heights Soil Landscape.

NSW NATIONAL PARKS AND WILDLIFE SERVICE

P. glaucescens seems to prefer the interface between Lucas Heights and the Hawkesbury and Gymea Soil Landscapes. The preferred topography is ridge-tops, plateaux and upper slopes. Aspect does not appear to be a significant factor.

Commonly associated canopy species are *Corymbia gummifera, Eucalyptus sieberi* and *E. sclerophylla* as well as *E. pauciflora* at higher altitudes west of Mittagong. Associated understorey species include *Lambertia formosa, Banksia spinulosa, B. serrata, Hakea sericea, Acacia terminalis, A. brownei, A. ulicifolia, Petrophile pedunculata, Eriostemon australis, Isopogon anemonifolius, Bossiaea obcordata* and *Pimelea linifolia* (Wasley, 1997, Douglas, pers. obs.).

Within its habitat, *P. glaucescens* is generally rare and the populations are linear and fragmented. Under ideal circumstances, the species can be locally common, though such conditions are very rare.

Ecology

The longevity of this species is unknown. Flowering occurs mainly in late summer and in autumn. Peak flowering appears to occur in February, though this is likely to vary considerably with local climatic conditions.

P. glaucescens is fire sensitive. (Wasley 1997). Adults are generally killed by fire and recruitment is solely by seed.

Seed viability is very low (Wasley 1997). Seed is mainly stored in the litter layer, where it may be at risk of high mortality during fire (Wasley 1997). However, they survive the temperatures is stored in the soil. Germination may be enhanced by fire, even though germination levels are low. Seed banks may take greater than 10 years to develop (Wasley 1997).

Mechanical disturbance of the seedbank and/or the reduced competition and increased light associated with such disturbance appears to advantage this species (*sensu* Wasley 1997; Douglas pers. obs.).

Threats

P. glaucescens occurs primarily outside conservation reserves and is threatened by trail and road maintenance and "tidying up" of road verges due to its preference for disturbance margins on clayey ridge-tops and upper slopes.

Similarly, all records from NPWS lands and other conservation reserves are close to access trails and are at risk from inappropriate use of these trails and from maintenance activities. Most of these records are also close to the margins of the reserves.

P. glaucescens is also threatened by its very low seed viability and herbivory of seedlings (Wasley 1997).

Genetic dilution of *P. glaucescens* through hybridisation with the common *P. lanceolata* is a potential threat that warrants further study.

Bernhardt and Weston (1996) suggest that the introduced European honey bee (*Apis mellifera*) may be a threat because it is unlikely to facilitate effective pollination even though it can readily collect pollen.

Management

Management actions should be aimed at protection and enhancement of habitat and removal and management of other threats such as recreational vehicle activities. A fire interval of at least 10-15 years is recommended by Wasley (1997), as is a mosaic pattern of burning.

Recovery Plans

No recovery plan has been prepared for *P. glaucescens*.

For further information contact

Threatened Species Unit, Central Directorate, NSW NPWS, PO Box 1967, Hurstville NSW 2220.
Phone (02) 9585 6678 or visit our website www.npws.nsw.gov.au.

References

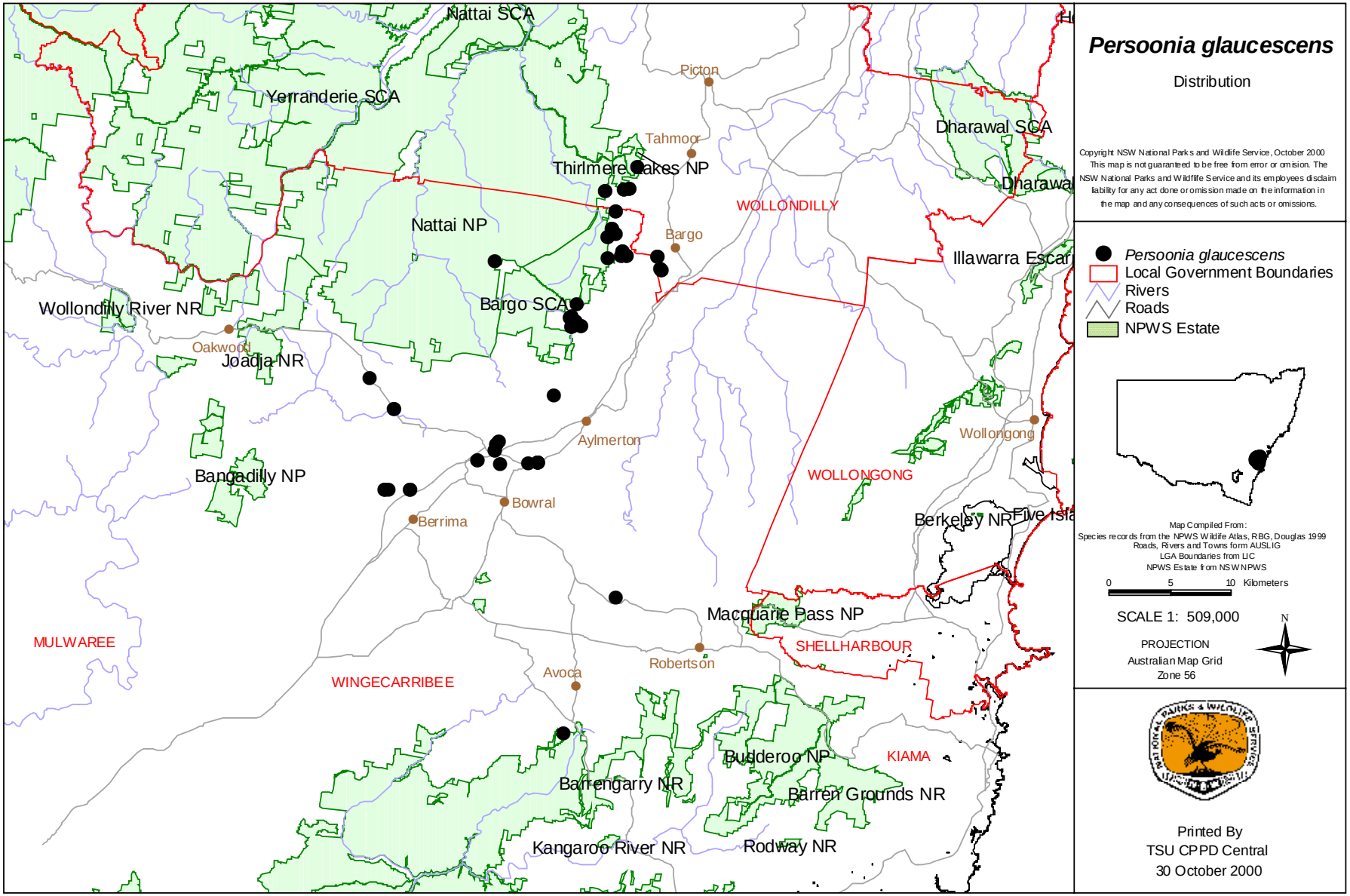
Bernhardt, P. and Weston, P.H. (1996) The pollination ecology of *Persoonia* (Proteaceae) in eastern Australia. *Telopea* 6(4): 775-804.

Blombery, A. and Maloney B. (1992) *The Proteaceae of the Sydney Region*. Kangaroo Press, Kenthurst.

Harden, G. (Ed.) (1991) *Flora of NSW* Vol. 2. UNSW Press, Kensington.

Wasley, J. (1997) Ecology of three obligate seeding *Persoonia* species in a fire prone habitat. Honours Thesis, University of Wollongong.

May 2000



Persoonia glaucescens

Distribution

Persoonia glaucescens
Local Government Boundaries
Rivers
Roads
NPWS Estate

Map Compiled From:
Species records from the NPWS Wildlife Atlas, RBG, Douglas 1999
Roads, Rivers and Towns form AUSLIG
LGA Boundaries from LIC
NPWS Estate from NSW NPWS

0 5 10 Kilometers

SCALE 1: 509,000

N

PROJECTION
Australian Map Grid
Zone 56

Printed By
TSU CPPD Central
30 October 2000