

Persoonia pauciflora

Persoonia pauciflora was previously known as *Persoonia* sp “North Rothbury”.

Conservation status

Persoonia pauciflora P.H. Weston is listed as an **Endangered Species** on Schedule 1 of the New South Wales *Threatened Species Conservation Act 1995*.

Description

P. pauciflora is a newly discovered species which has recently been formally described (Weston 1999). It is a small spreading shrub, 0.1-1.4m high, 0.4-2.0m wide, with bright green needle-like leaves which are moderately hairy when immature. *P. pauciflora* closely resembles *P. isophylla* and to a lesser extent *P. pinifolia*, but is distinguished by its inflorescence which is fewer-flowered and shorter (Weston 1999). *P. pauciflora* is shown below.



G Patrick/NPWS

Persoonia pauciflora - flower

Distribution

P. pauciflora has an extremely restricted distribution. All known individuals occur within 2.5km of the original or “type” specimen, which was recorded near North Rothbury in the Cessnock Local Government Area. Within this

range, there are three main sub-populations which comprise approximately 90% of the total population (Patrick 1999). The other 10% of the population occurs as scattered individuals or in small isolated groups. It is possible that further sub-populations and/or individuals of this species will be discovered during future survey effort.

Recorded occurrences in conservation reserves

P. pauciflora has not been recorded within any conservation reserves (NPWS 1999).

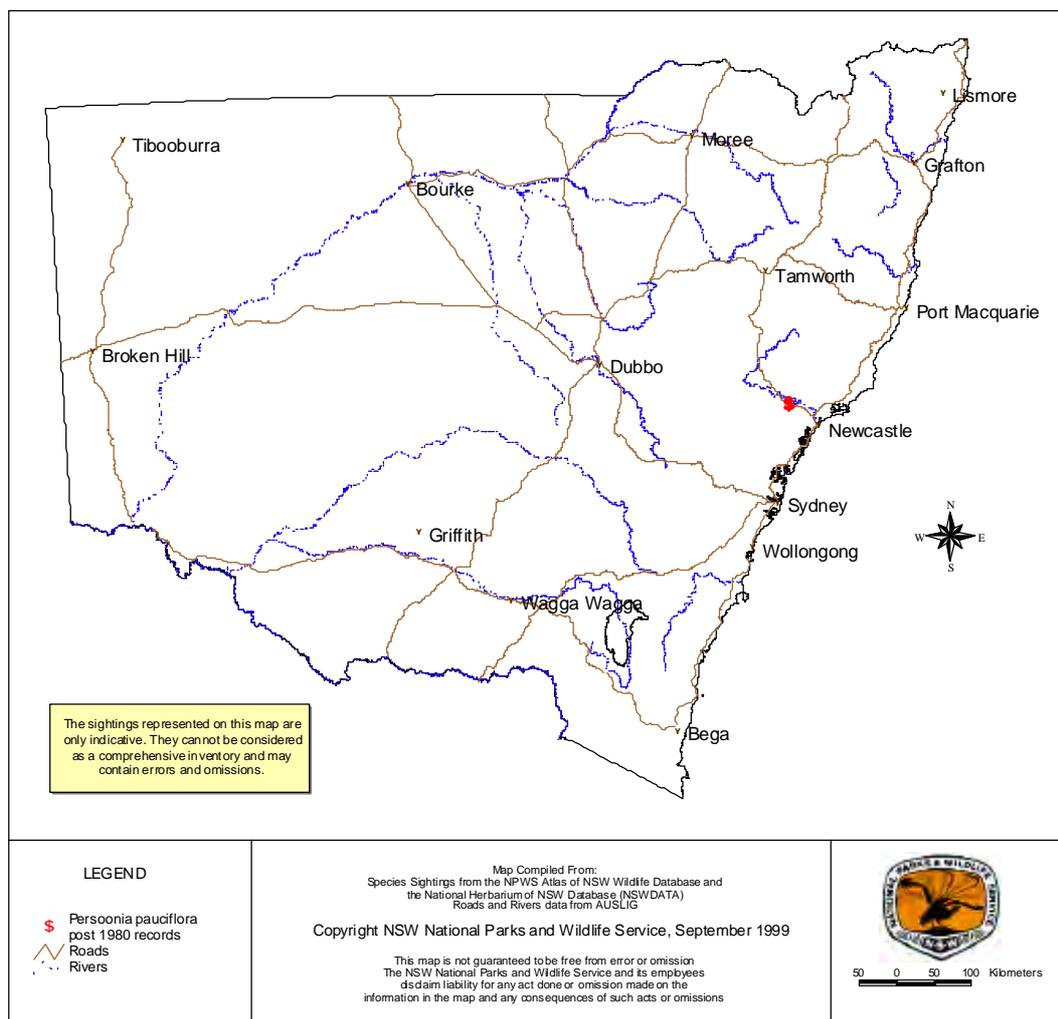
Habitat

P. pauciflora occurs in dry open-forest or woodland habitats, generally with a projected foliage cover ranging between 10 to 40% and tree height range of between 6 to 18 metres. The lower strata usually comprises of a moderate to sparsely distributed shrub layer, with a high percentage of groundcover species, particularly grasses. Vegetation communities are dominated by Spotted Gum (*Corymbia maculata*), Broad-leaved Ironbark (*Eucalyptus fibrosa*), and/or Narrow-leaved Ironbark (*E. crebra*). Sub-dominant species include Grey Gum (*E. punctata*) and Grey Box (*E. mollucana*). Common understorey shrubs include *Acacia parvipinnula*,



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Persoonia pauciflora



NPWS records for *Persoonia pauciflora* in NSW

Daviesia ulicifolia and *Bursaria spinosa*. The majority of the population is known to occur on silty sandstone soils derived from the “Farley Formation” (Patrick 1999).

P. pauciflora habitat is disturbed at each of the sub-populations to varying degrees, as a result of unrestricted access, frequent underscrubbing, and/or proximity to roadside edges (Patrick 1999).

Ecology

P. pauciflora has been collected in flower from January to April, but probably flowers as late as May (Weston 1999). The breeding system in *P. pauciflora* is unknown, however, Bernhardt & Weston (1996) suggest that the pollination vector in *Persoonias* is primarily native bees.

The total population of *P. pauciflora* is low, with approximately 400 individuals known, of which approximately 200 are reproductively mature (Patrick 1999). There are immature plants present within each of the sub-populations, which indicates that the population is reproducing, however the factors which encourage recruitment and establishment of individuals are poorly known. Patrick (1999) suggests that disturbance events such as grazing, fire and slashing are key factors which influence both the presence/absence and age structure of the sub-populations. For example, the plant appears to be absent from comparable habitat that is currently grazed and/or frequently burnt or slashed. Patrick (1999) further suggests that increased rainfall and recent favourable growing conditions has allowed seedlings to propagate naturally.

Fire ecology is unknown, however, since other smooth-barked *Persoonias* (eg *P. mollis*) are fire-sensitive, it is likely that *P. pauciflora* is killed by fire.

Threats

Threats to *P. pauciflora* include habitat loss (vegetation clearing), habitat fragmentation and vandalism (Weston 1999). The species may also be susceptible to grazing, fire and an over-frequent slashing/underscrubbing regime (Patrick 1999). A residential subdivision has recently been approved over an area where one of the *P. pauciflora* sub-populations occurs. Several ameliorative conditions were placed on the development consent, however, the long term viability of this sub-population is questionable.

Management

Management of *P. pauciflora* should attempt to minimise habitat loss (in particular vegetation clearance); maintain and improve habitat connectivity within and among sub-populations; minimise and/or

prevent habitat degradation factors (such as large edge-area ratios, urban/agricultural runoff and stormwater, unrestricted access etc); implement appropriate environmental assessment principles; and the responsible conduct of fire control and track maintenance activities.

Active liaison with landholders is required in order to implement sympathetic management practices on private land. Opportunities for incentives exist under the *Native Vegetation Conservation Fund* and these should be explored with the Department of Land and Water Conservation and landholders.

Collection of material for *ex situ* propagation and storage should be investigated in order to safeguard the species from extinction.

Recovery plans

A recovery plan has not been prepared for this species.



G Patrick/NPWS

Persoonia pauciflora - habitat

References

- Bernhardt P. and Weston P.H. 1996. The pollination ecology of *Persoonia* (Proteaceae) in eastern Australia. *Telopea* 6(4): 775-804.
- NPWS 1999. Atlas of NSW Wildlife. NPWS, Hurstville.
- Patrick G. 1999. Initial flora survey to sample potential habitat: abundance and distribution of the new plant species *Persoonia* "North Rothbury". Report prepared for the NPWS, Hurstville.
- Weston P. H. 1999. *Persoonia pauciflora* (Proteaceae), a new species from the Hunter Valley, New South Wales. *Telopea* 8(2): 159-164.

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