



Persoonia marginata

Cunn ex R. Br.

Common name: Clandulla Geebung

Conservation status

Persoonia marginata 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. marginata (Proteaceae) is a spreading shrub that grows to 50cm high and up to 1m across. The young branches are hairy, the leaves are elliptic to obovate, 2-4cm long and 6-23mm wide, and the flowers are yellow with brownish hairs (Harden 1991). The hairy ovary and fruit, spreading habit and short pedicels distinguish *P. marginata* from other *Persoonias*.



Lembit 1999

Distribution

P. marginata occurs in the Capertee district (Harden 1991) in the Rylstone Local Government Area. It is known from at least 11 different locations, the majority of which are within Clandulla State Forest, west of Kandos. There is also an outlying population north of Dark Corner in Evans Shire.

Recorded occurrences in conservation reserves

There are no recorded populations within conservation reserves.

Habitat

P. marginata is found in dry woodland communities associated with Shoalhaven Group sediments. Soils are shallow hard-setting sandy loams, generally with gravel or rocks, and the topography is flat. The vegetation is part of the Tablelands Grassy Woodland Complex vegetation described by Benson and Keith (1990). The dominant tree species include *Eucalyptus punctata*, *E. sparsifolia*, *E. rossii*, *E. fibrosa* and *E. crebra*.

The understorey generally comprises a shrub layer of medium density and a grassy ground layer of low to medium density. Common shrub species include *Acacia buxifolia*, *Exocarpos strictus*, *Acacia terminalis*, *Pultenaea microphylla*, *Acacia verniciflua*, *Dillwynia phyllicoides*, *Platysace ericoides*, *Persoonia linearis* and *Grevillea ramosissima*. Ground layer species include *Chionochloa pallida*, *Lomandra filiformis* var. *coriacea*, *Dianella revoluta* and *Chrysocephalum apiculatum*.

Potential habitat beyond known locations would include flat land with sandy soils on Shoalhaven Group sediments.

Ecology

P. marginata flowers in winter. Field observations indicate that significant numbers of fruit do not survive to maturity, possibly indicating a pollen incompatibility problem. Mature fruit survive on the plant for a few months, but may be susceptible to predation by birds and small mammals as it is a drupe, that is, a fleshy fruit with a stone. The longevity of the species is unknown, but it appears to respond well to disturbance, with greater densities found along the edges of tracks and in areas disturbed by forestry.

The seeds may be passed through the guts of birds and mammals and this may assist seed dispersal. Whether the seeds

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are dormant at the time of dispersal is unknown, but germination is likely to be triggered by fire and/or high light levels.

Fire plays a significant role in the lifecycle of *P. marginata* by creating niches for the establishment of new plants, enabling increased light to reach seed stored in the soil and, possibly, liberating seed from germination inhibitors. Under suitable regimes it would also enable the species to better compete with other shrubs it grows in association with.

The ability of mature plants to resprout from lignotubers after fire means that what appear to be fairly young plants in the field may have survived for a considerable period of time. Estimated time since fire for known sites is of the order of ten years. Juvenile plants with immature lignotubers are probably killed by fires. Since only immature and mature plants were seen during a survey in April 1999, and no senescent plants were detected in the field, loss of individuals appears to be minimal. The lack of seedlings and evidence of pre-maturity fruit drop indicates that the species may have difficulty reproducing or that a suitable disturbance regime is necessary for seedling recruitment to occur, as is the case with many species of *Persoonia*.

Threats

P. marginata is known only from a small area of Clandulla State Forest. Its highly restricted nature renders it extremely vulnerable to external shocks such as

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References

Benson, D.H. and Keith, D.A. (1990) The Natural Vegetation of the Wallerawang 1:100 000 Map Sheet, *Cunninghamia* 2(2): 305-35.

Harden, G.J. (Ed.) (1991) *Flora of New South Wales*, Vol. 2, UNSW Press, Kensington.

disease or cataclysmic events such as intense fire or drought.

While the intensity of timber extraction from Clandulla State Forest is not great, the impacts of roading, recreational use of the State Forest, weed invasion due to dumping of garden waste and introduced honeybees all threaten the continued existence of the species. Permanent removal of vegetation involving significant soil disturbance, such as for the construction of roads, is a serious threat to *P. marginata*. Spread of fungal pathogens would also be a serious threat due to its very restricted distribution.

The area of available habitat has been reduced by the network of roads and tracks through the forest. Although there is no evidence of a recent decline in the species, its restricted distribution, problems with setting fertile fruit and seed dormancy give rise to concern for the ongoing survival of *P. marginata*.

Management

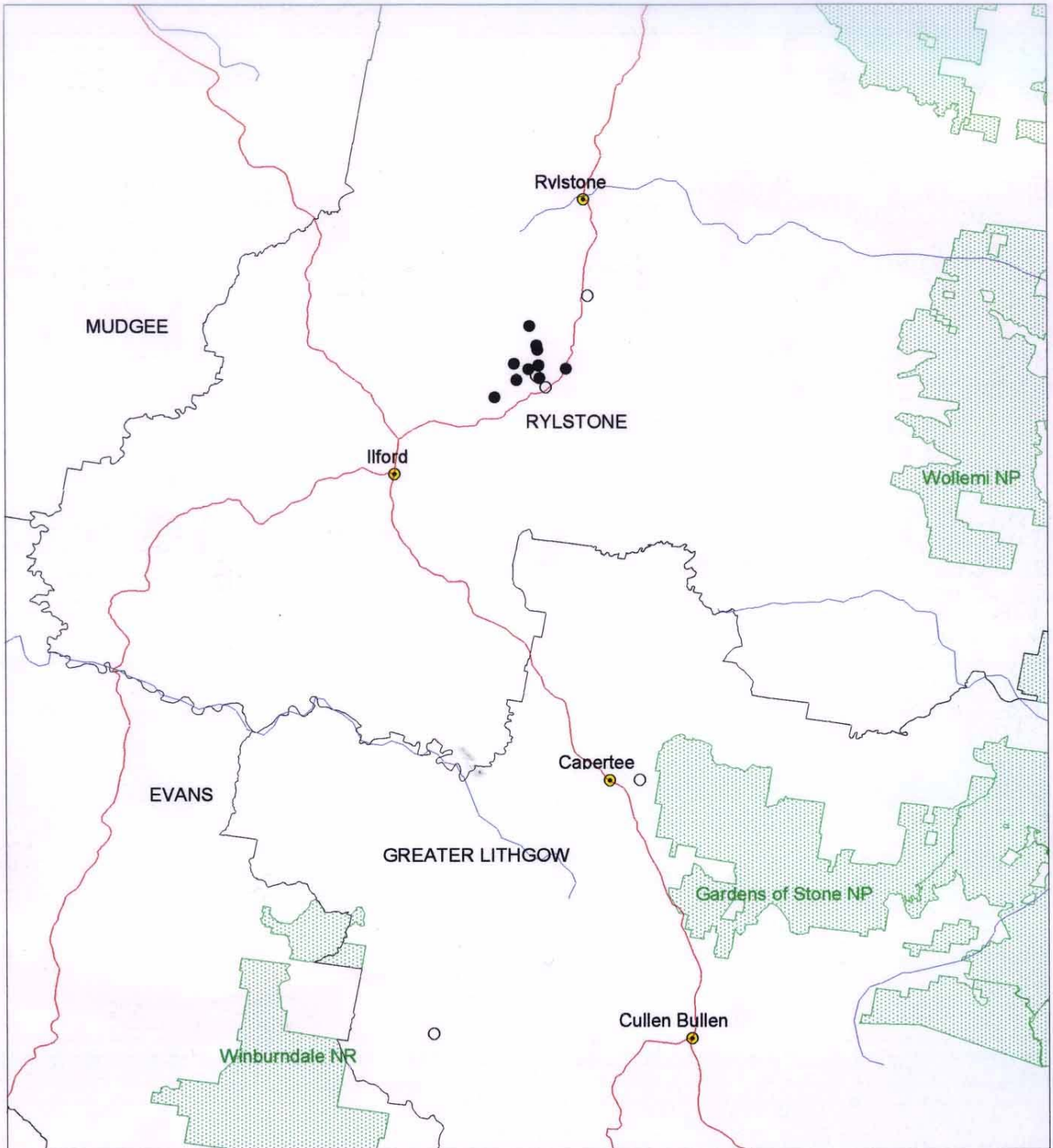
Management actions should be directed at towards the rationalisation of the existing network of roads and tracks through the State Forest, management of recreational use and the prevention of rubbish dumping. Research into the fire tolerance limits for the species will assist fire management of *P. marginata* populations and can be used in planning any intentional use of fire to promote viability of the species.

Recovery Plans

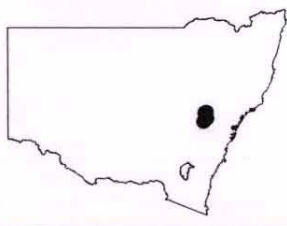
No recovery plan has been prepared for *P. marginata*.

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- pre 1980 records
- post 1980 records
- Main Roads
- Major Rivers
- Towns
- LGA boundaries
- ▨ NPWS Estate



Persoonia marginata

Distribution Map

SCALE 1: 400,000
 Projection: Australian Map Grid, Zone 55 & 56

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

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