THREATENED SPECIES INFORMATION

Grevillea evansiana

McKee

Conservation status

Grevillea evansiana 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

G. evansiana (Proteaceae) is a spreading shrub that grows to about 1.5m high and 2m wide. The leaves are grey-green, 2-4cm long and usually 3-10mm wide, with smooth intramarginal veins (Harden 1991). Flowers are dark red with scattered grey hairs. The fruit is a glabrous follicle. The plants are quite distinct in leaf size, colour and branching pattern and do not resemble other species which occur in the area.

Distribution

G. evansiana occurs on the western side of Wollemi National Park and nearby private lands, with large populations at Currant Mountain Gap, Kandos Weir (Dunns Swamp) and Cyrils Rocks.

There are at least 22 separate populations, all in the Rylstone local government area.

Recorded occurrences in conservation reserves

Most of the recorded populations are within Wollemi National Park. Undiscovered populations may occur on private land near the Park to the east and north of Olinda, as well as in Gardens of Stone National Park.

Habitat

Within the Sydney Basin bioregion *G. evansiana* is found on sandy soils on sandstone pagodas or broad, sandy flats. The sites are all associated with Narrabeen sandstone geology.

Plant communities in which the species has been recorded include Pagoda Rock Complex, Scribbly Gum – Stringybark Woodland and Sydney Sandstone Ridgetop Woodland (Benson and Keith 1990) .

Pagoda Rock Complex is scattered along the western side of Wollemi National Park, as well as being found in Gardens of Stone National Park and the Wollangambe section of Blue Mountains National Park. This community is also found north of Lithgow in Crown Land subject to coal mining.

Scribbly Gum - Stringybark Woodland occurs between Mount Piper and Ben Bullen (including parts of Gardens of Stone National Park) and north of Glen Davis in Wollemi National Park. Sydney Sandstone Ridgetop Woodland is widespread in the Blue Mountains and Wollemi National Parks. Factors which have led to *G. evansiana* being found in one part of this broader habitat (centred around Kandos Weir and Cyrils Rocks) is unknown, but may be due to climatic conditions.

Ecology

Grevillea fruits are a thin follicle which usually splits once the seeds are mature. Seeds fall from the follicle at maturity and may be transported by ants.

Populations may consist of a majority of older plants or mixed populations of mature and young plants. The latter population structure is typical of disturbed sites such as the campground at Dunns Swamp and along fire trails and cross drains (Lembit pers. comm.).

Observations of the populations in Wollemi National Park indicate that the species is relatively long lived (to 30 years), and that seedling recruitment occurs after disturbance events such as fire, clearing or canopy opening. Seedling recruitment is quite high in such areas.

Flowering occurs from July to November. Each follicle contains two seeds. Time of maturity of *G. evansiana* follicles has not been recorded.

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Seed longevity is unknown. As the plant has a dense spreading form, a stand of mature plants would be likely to prevent germination of new seedlings. Disturbance such as the death of older plants or fire may be required for recruitment of new plants.

Response to fire is unknown. *Grevilleas* include both obligate seeders and resprouters. The habit of the species indicates it may be a resprouter following fires of low to medium intensity (Lembit pers. comm.).

The length of time from seed germination to plant maturity is unknown, but is likely to be at least 6 years. Fire frequencies for the types of communities in which the species occurs may range from 3 to 50 years. Frequent fires would be likely to reduce population size and may threaten small populations of the species. Many of the sites where the species occurs have geological and topographical conditions which are not conducive to uniform spread of a fire front and it would be likely that the species would survive in patches less affected by an individual fire event.

Threats

The largest known population of the plant occurs at Dunns Swamp in an area which has been used intensively as a campsite over a long period of time. The NPWS has recently completed a program of restoration of this camping area which has provided increased protection for *G. evansiana*.

Multiple trails used by four-wheel drive vehicles along the Army Road may prevent regeneration after mature, seed-producing plants are lost. In addition, Grevilleas are known to be susceptible to fungal pathogens, the spread of which may be exacerbated by recreational use.

Management

Management should be directed at monitoring the impact of recreational use of the Dunns Swamp area. Hazard reduction burning operations need to have regard to fire tolerance limits for the species. Consideration may need to be given to intentional use of fire to promote recruitment of new plants if the population becomes senescent.

Monitoring may be necessary to determine whether regeneration should be assisted. Use of off-road vehicles should be restricted to essential management operations.

Recovery Plans

A recovery plan has not been prepared for *G. evansiana*.

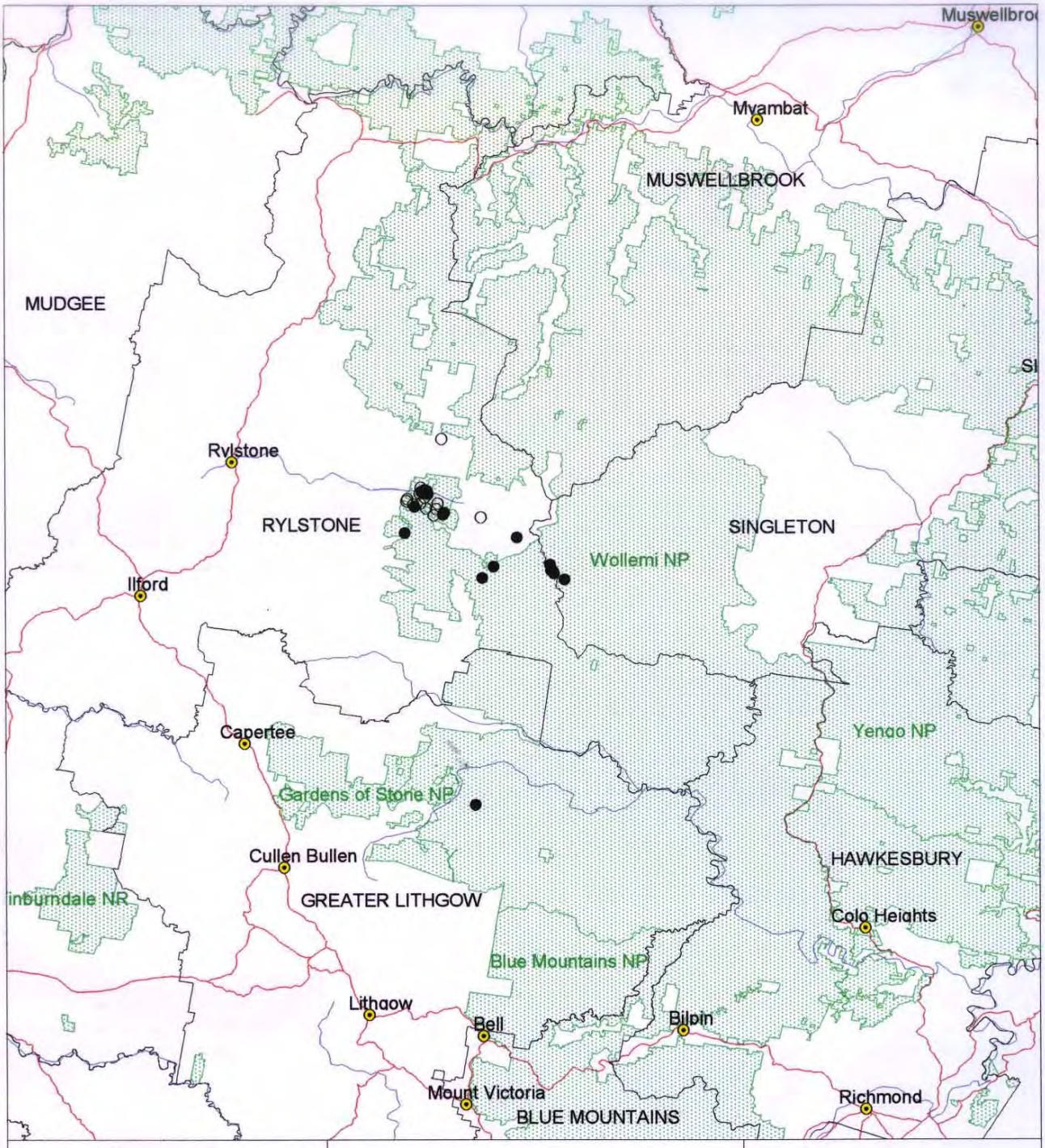
For further information contact

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

Benson, D.H. and Keith, D.A. (1990) The Natural Vegetation of the Wallerawang 1:100 000 Map Sheet. *Cunninghamia* 2(2): 305-335.

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



pre 1980 records
post 1980 records
Main Roads
Major Rivers
Towns
NPWS Estate

Grevillea evansiana

Distribution Map

SCALE 1: 747,000
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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