

GREVILLEA OBTECTA (PROTEACEAE), A NEW SPECIES FROM CENTRAL VICTORIA

by

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ABSTRACT

Molyneux, W.M. *Grevillea obsecta* (Proteaceae), a new species from central Victoria. *Muelleria* 6(1)147-151 (1985)—A new species of *Grevillea* R.Br. ex Knight, *G. obsecta*, is described, its affinities within the "aquifolium group" are discussed and notes on biology are given. The species is currently known from the Taradale—Daylesford area of Central Victoria.

TAXONOMY

Grevillea obsecta W.M. Molyneux, sp. nov.

Frutex prostratus, in amplitudini ad circiter 2.3 m, ramulis fragilibus, caulibus juvenilibus villosis. *Folia* variabilia, ascendunt vel erecta, simplicia vel profunde divisa, plerumque ovata vel obovata vel rhombiformia, 3-18 cm (praecipue 3-11 et 13.5-16) long, 1.5-8 cm (praecipue 1.5-5) lata, ad basin cuneata, attenuata; petioli 0-21 mm (praecipue 3-12) longi; lobi acuminati, 2-9 mm (praecipue 4-7) lati, simplices vel varie divisi, marginibus planis vel recurvatis, supra pilis sparsis (secundum venam medianam) aliquando praediti, subter pilis crispatis dispersis instructi; venae principales et secundariae, ut videntur in superficiebus, prominentes. *Inflorescentiae* plerumque terminales, interdum in axibus vetustioribus, secundae, c. 3-6.5 cm longae. *Pedunculis et rhachibus* villosis. *Bracteae* conspicuae c. 5-12 mm longae, c. 3-9 mm latae, in alabastro imbricatae, deciduae vel saepe persistentes. *Pedicelli* c. 2-3.5 mm longi, sparse villosi. *Perianthium* viride, c. 6 x 2 mm, externe laxe villosum. *Nectarium* prominens. *Stipes* c. 2 mm longus. *Ovario* villosus. *Stylo* glabro (praeter basin) 8-13 mm longo. *Pollinis-donor* obliquus. *Stigmate* prominenti.

Shrub to 2.3 m wide but usually c. 1 m, prostrate. *Branches* stout, brittle. *Stems* villous when young, becoming glabrous or sparingly villous with age. *Petiole* (0-)3-12(-21) mm long. *Leaves* variable, mostly ascending, crowded, subsessile to petiolate, 3-18 cm (usually either 3-11 or 13.5-16 cm) long including the petiole, 1.5-5(-8) cm wide, mostly ovate obovate or rhomboidal in outline, simple with irregularly serrate margin to pinnatifid or pinnatisect; base cuneate, tapered, a quarter to two-thirds of the total leaf length; margin recurved or flat; primary lobes (4-)7-13 per leaf, (2-)4-7(-9) mm wide, tapering to a sharp brittle point, simple or divided into secondary lobes which also taper to similar points; upper surface mostly glabrous except when young, or with a few scattered hairs along the midvein; lower surface with scattered curled or twisted hairs; venation on upper surface indented, the primary veins conspicuous, secondary veins less so; venation of lower surface raised and conspicuous. *Inflorescence* terminal, often displaced by a proximal branch, occasionally axial on old wood, or on a short branchlet arising on older wood, erect or decurved, secund, c. 3-6.5 cm long, bracteose. *Peduncle and rhachis* villous. *Bracts* imbricate, conspicuous, firmly attached, broadly to narrowly ovate, acute, concave, (5-)7-8(-12) mm long x (3-)5(-9) mm wide, deciduous at or during anthesis, or sometimes retained until flowers have withered; outer surface with central rib and longitudinal striations, mostly villous or if occasionally only sparsely hairy then mainly villous along edges; inner surface glabrous. *Pedicels* 2-3.5 mm long, sparsely covered with long twisted hairs. *Perianth* c. 6 mm long x 2 mm wide, loosely villous and green outside, glabrous and purple inside. *Torus* almost straight to oblique. *Nectary* prominent, ± U-shaped, c. 0.5-1.0 mm high, up to 0.5 mm thick; margin irregular. *Pistil* c. 12-16 mm long. *Stipe* c. 2 mm long, sparsely villous, attached toward the top of the torus. *Ovary* with mostly appressed long hairs. *Style* (8-)10-12(-13) mm long, sparsely hairy at base. *Pollen-presenter* oblique, c. 1.5-2 mm wide with a prominent stigma. *Fruit* ellipsoid with appressed hairs, opening to almost flat after dehiscence; style persistent. Flowering period Oct.—Dec.

TYPE COLLECTION:

6 km SW. of Taradale, on north-westerly slopes above forest track, 1 km SW. of

*Belfast Road, Montrose, Victoria, Australia 3765.



Fig. 1. Inflorescence of *Grevillea obtecta*, showing the villous floral bracts still firmly attached during flowering.



Fig. 2. *Grevillea obtecta*, aborted bud showing the ribbing and villous margins of the floral bracts.

aqueduct, 37°09'S., 144°19'E. Fryers Range State Forest, Central Victoria, 2.xi.1977, W.M. Molyneux & S.G. Forrester (Holotype: MEL 665917. Isotypes: CANB, K, MEL 665918, NSW).

SELECTED SPECIMENS EXAMINED:

Victoria—5 km SW. of Taradale on the west side of aqueduct, Fryers Range State Forest, 2.xi.1977, W.M. Molyneux & S.G. Forrester (CANB, K, MEL 665921, NSW); 3.3 km along Wewak road after Middleton's Creek crossing, Upper Loddon State Forest 2.xi.1977, W.M. Molyneux & S.G. Forrester (CANB, K, MEL 665919, NSW); 14.6 km N. on the Porcupine Ridge Road from its junction with the Daylesford—Malmsbury Road,



Fig. 3. Diverse leaf forms of *Grevillea obtecta*. Large leaf 18 cm long, central leaf 9 cm, small leaf 6 cm.

Upper Loddon State Forest, 2.xi.1977, *W.M. Molyneux & S.G. Forrester* (CANB, K, MEL 665920, NSW); Glenluce Road, 5.3 km west of the junction with the Malmesbury—Daylesford Road, 28.x.1967, *R.V. Smith 67/166* (AD, CANB, MEL 1527731); Wewak Road, c. 3.9 km by road SW. of Glenluce, 28.x.1967, *R.V. Smith 67/177* (AD, CANB, K, MEL 1527729 and 730, MO, NSW, PERTH); Glenluce Road, c. 5 km SSW. of Glenluce, 1.xii.1976, *R.V. Smith 76/48* (AD, CBG, MEL 1527732 and 733; PERTH).

DISTRIBUTION AND HABITAT:

Apparently confined to the Fryers Range State Forest and Upper Loddon State Forest in the Taradale—Daylesford area of Central Victoria. A limited occurrence in the Metcalfe State Forest a few kilometres east of Taradale was noted by G. Sitch (Pers. comm., 1983) but I was not able to locate this population.

Occurrence is sporadic over about 400 sq. km in auriferous areas. Plants are found singly or in small populations on slopes and ridges or occasionally on flats where some seasonal moisture collects.

Associated species include *Acacia acinacea*, *A. aculeatissima*, *A. mitchellii*, *A. retinodes*, *Billardiera procumbens*, *Burchardia umbellata*, *Dichopogon strictus*, *Epacris impressa*, *Eriostemon verrucosus*, *E. dives*, *E. goniocalyx*, *E. macrorhyncha*, *E. polyanthemos*, *E. radiata*, *Gompholobium huegelii*, *Goodenia lanata*, *Grevillea alpina*, *Hakea sericea*, *Hardenbergia violacea*, *Microseris scapigera*, *Oxylobium procumbens*, *Persoonia rigida*, *Platylobium formosum*, *Poa australis*, *Prostanthera decussata*, *Pultenaea pedunculata* and *P. graveolens*.

BIOLOGY:

As older flowers wither, new buds commence to develop on other parts of a plant. Many of these wither without completing development, enveloped by the unyielding bracts, whereas some develop in late summer-autumn and are held in a dormant stage until the flowering period of October-December.

I have studied this species in the field (1966-83) and in cultivation and have noted that it sets few seeds when compared to other members of the "aquifolium group". For example, following successive years of good flowering in 1982 and 1983 only twenty-five spent seed capsules and one seedling were located during a search under and around ten plants in

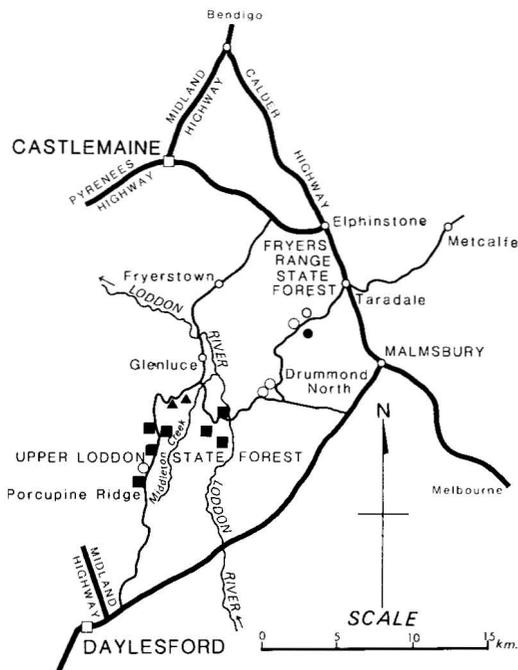


Fig. 4. Distribution of *Grevillea obtecta*.

- — small-leaved.
- — type collection (small-leaved).
- — intermediate-leaved.
- ▲ — large-leaved.

different localities. Three or more suckers were observed growing from the roots of most of these plants. In contrast, *Grevillea repens* sets large quantities of viable seed which germinates and produces numbers of seedlings around parent plants. *G. aquifolium* does likewise in the Grampians (where it does not sucker) although I have never (1963-70) noted seed on the form of this species from the Little Desert (where the form shows considerable sucker regeneration). No specific explanation for these differences in reproduction can be given but it is noted that both *G. obtecta* and the Little Desert form of *G. aquifolium* appear to grow in less favourable environments than either *G. repens* or the Grampians populations of *G. aquifolium* and this could support suckering at the expense of seed production. *G. obtecta* mostly grows on soils which are less friable and which retain less moisture than those which support *G. repens* and the Grampians *G. aquifolium*.

The flowers of *G. obtecta* are highly nectariferous, and their sweet honey-like perfume is quite intrusive. Numerous small ants have been noted attending the flowers.

DISCUSSION:

This new species is a member of the "aquifolium group". This group is well represented within Victoria and includes a number of species which have their known natural distribution confined to relatively limited areas. *G. obtecta* has affinities with both *G. repens* F. Muell. and *G. aquifolium* Lindl. but is readily distinguished from them and from all other species of the group by the much larger, ribbed, floral bracts. Additional comparisons with *G. repens* and *G. aquifolium* are given in Table 1.

G. obtecta is extremely variable in both the size and shape of its leaves (Fig. 3). Generally small-leaved plants occur in the northern area of the species range and intermediate-leaved occur in the southern area. Large-leaved are located between the small and the intermediate but toward the southern end of the known distribution.

The range of leaf length 3-11 cm accounts for 68% of measured specimens, the range 13.5-16 cm for 30% and the length of 18 cm for only 2%. No measurements of 12, 13

or 17 cm were recorded. These figures are based on a total of 300 samples taken from 75 plants.

This is the species referred to by J.H. Willis, 'Handbook P1. Victoria' 2:40 (1973), as *Grevillea* sp., Elphinstone Grevillea, excluding his reference to "... a similar population in Enfield district south of Ballarat". The latter population belongs to a distinct species yet to be described. *Grevillea obtecta* is known in the nursery trade as Fryerstown Grevillea, Taradale Grevillea and Elphinstone Grevillea.

The specific epithet alludes to the large bracts which cover and protect immature flowers and often partly shield mature flowers.

Table 1. Comparisons between *Grevillea obtecta*, *G. repens* and *G. aquifolium*.

	<i>G. obtecta</i>	<i>G. repens</i>	<i>G. aquifolium</i>
Habit	Prostrate, mostly c. 1 m wide.	Prostrate, mostly c. 1.5 m wide.	c. 2 m high x 2.5 m wide, or prostrate, mostly c. 1.5 m wide,
Leaves	Variable, simple with irregularly serrate margins to pinnatisect; lobes simple or again divided into secondary lobes. Mostly glabrous on both surfaces (except when young) or with scattered hairs on undersurface. 3-18 cm long x 1.5-8 cm wide.	Simple with undulate, dentate margins. Glabrous on both surfaces at all stages or with a few scattered hairs on undersurface. 1.5-11.5 cm long x 0.7-4.0 cm wide.	Simple with undulate, dentate margins, or occasionally pinnatifid or ± pinnatisect. Mostly glabrous on both surfaces or with a light to dense indumentum on undersurface. 2-10.5 cm long x 1-4.5 cm wide.
Floral bracts	5-12 mm long x 3-9 mm wide.	0.7-2.1 mm long x 0.4-2.2 mm wide.	0.9-4.1 mm long x 1.4-3.0 mm wide
Rhachis and peduncles	Villous.	Sparingly clothed with silky hairs.	Usually villous.
Pistil	12-16 mm long.	16-19 mm long.	21-26 mm long.
Distribution	Apparently confined to the Upper Loddon and Fryers Range State Forests, north of Daylesford.	Wombat State Forest and Sailor's Falls south of the Daylesford area; also Kinglake National Park and Healesville areas north-east of Melbourne.	Grampians area, Little Desert, and more southern heathlands; also south-east South Australia.

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