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TWO NEW SPECIES OF POLYGALACEAE FROM CENTRAL AUSTRALIA

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Abstract

Comesperma pallidum and *Polygala isingii* are described as new. These names are used in the account of Polygalaceae in the handbook to the Flora of Central Australia.

Comesperma pallidum Pedley, species nova affinis *C. ericini* DC. foliis inflorescentiisque grandioribus et *C. sylvestris* Lindl. ramulis glabris foliis oblongis differt.

Typus. Queensland: Mitchell District: Torrens Creek, March 1933, *White 8703* (BRI, holotypus; BRI, K, isotypi).

Frutex usque circa 2 m altus; ramuli angulatus glauci glabri vel raro sparsim puberuli. Folia subsessilia oblonga obtusa mucronulata 15-25 x 2.5-5 mm, 4-6.5 plo longiora quam latiora crassa costa sola conspicua. Inflorescentia aliquantum densa circa 6 cm longa; pedicelli circa 4 mm longi; bractei et bracteoli decidui. Flores eburnei ad carinae apicem purpurascens. Calyx: sepala externa ± aequilonga, 1.4-1.6 mm longa, sepala interiora concava obtusa 4.2-4.7 mm longa. Corolla: carina 4.3-4.8 mm longa, alis longiora; alae 3.8-4.4 mm longae. Pistillum glabrum. Capsula 10-15 x 3.5-4 mm, retusa umbonata, sensim basin versus attenuata. Semina 2.7-3 mm longa, subcylindrica 1.2-1.5 mm diam., coma basem capsulae complenti.

Shrub to about 2 m tall; branchlets angular glaucous glabrous or rarely sparsely puberulous. *Leaves* subsessile oblong obtuse mucronulate, 15-25 x 2.5-5 mm, 4-6.5 times as long as wide, rather thick only the midrib prominent. *Inflorescence* rather dense ca 6 cm long, pedicels ca 4 mm long; bracts and bracteoles deciduous. *Flowers* cream, purplish on the keel. *Calyx*: outer sepals more or less equal in length, 1.4-1.6 mm long, inner sepals concave, obtuse, 4.2-4.7 mm long. *Corolla*: keel 4.3-4.8 mm long, longer than the wings, wings 3.8-4.4 mm long. *Pistil* glabrous. *Capsules* 10-15 x 3.5-4 mm, retuse umbonate, gradually narrowed to the base. *Seeds* 2.7-3 mm long, subcylindrical 1.2-1.5 mm diam., the coma filling the base of the capsule.

Specimens examined

NORTHERN TERRITORY: Central North. ca 28 miles (45 km) N of highlands Rocks (approx. 21°S, 130°E), vii.1970, *Maconochie 1083* (BRI, NT).

QUEENSLAND: Burke District. "Mt Sturgeon" Station, ii.1931, *Hubbard & Winders 7134* (BRI, K). Mitchell District. 10 miles (16 km) ENE of Torrens Creek, vi.1953, *Perry 3558* (BRI, CANB, K). South Kennedy District. Sandy forest tableland of the Sutor, *Mueller s.n.* (K).

Notes

The specific epithet alludes to the pale flowers and the overall pale appearance of the leaves of the plant when dry.

Comesperma pallidum occurs on sandy or gravelly soils in eucalypt communities on both sides of the Great Dividing Range in tropical Queensland and has been recorded as being rare in red sand in the Northern Territory. The *Mueller* specimen cited above was identified as *C. sylvestre* Lindl. by Bentham (1863, p. 146) and since then the species has usually been included with *C. sylvestre* which is restricted to areas of dissected sandstone in south-central Queensland.

***Polygala isingii* Pedley, species nova affinis *P. linariifoliae* Willd. a qua foliis late obovatis vel late oblongis hirsutis marginem versus differt.**

Typus. Northern Territory: 5 miles S. of Mt Barkley, "Barkley" Station, 21°40'S, 132°30'E, iii.1971, *Latz 1224* (BRI, holotypus: NT, isotypus).

Misapplied name. *Polygala chinensis* var. *squarrosa* auct. non. (Benth.) Domin; Ising, Trans. & Proc. Roy. Soc. South Australia 81: 168 (1958).

Herba parva prostrata interdum dense ramosa globosaque; ramuli indumento pilorum longorum (1 mm) et breviorum curvatorum. Folia late obovata vel interdum late oblonga, obtusa retusave, 5-18 x 3-9 mm, 1.2-2.4 plo longiora quam latiora pilis longis patulis marginem versus praedita; petiolus 1-2 mm longus. Racemi pauciflori axillares pedicellis 1-2 mm longis. Flores 3-4 mm longi. Sepala pilis longis patulis; externa 1-1.5 mm longa, alae falcatae circa 4 mm longae. Corolla purpurea vel purpurea et flava; petala lateralia obovata obtusa longitudine carinam aequantia leviter pubescentia ad adnationem tubi staminalis; carina 4-6 appendicibus unisquibusque iterum atque iterum furcatis. Filamenta staminum $\pm 1/3$ libera. Ovarium \pm oblongum emarginatum. Stylus curvatus apice hamosus stigmate intra curvaminem. Capsule interdum aliquantum asymmetrica, oblonga emarginata, 4-4.5 x 2.4-3 mm, ala pubescenti perangusta praedita. Semina nigra obovoidea circa 3.5 mm longa pilis albis rigentibus tecta; carunculus 3 brevis appendicibus.

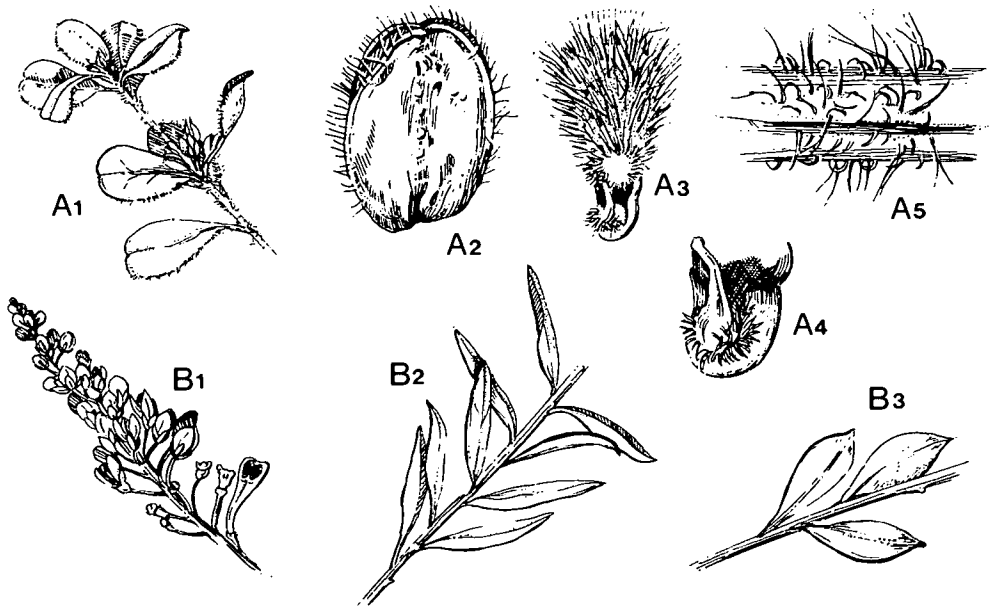


Fig. 1. A. *Polygala isingii*. A1, branchlet with leaves and inflorescence (x 1); A2, capsule (x 6); A3, seed (x 6); A4, caruncle (x 12); A5, branchlet showing indumentum (x 12). (All from holotype.)

B. *Comesperma pallidum*. B1, inflorescence (*Gittins 2495*); B2, branch with leaves (*Gittins 2495*); B3, branch with leaves (*Maconochie 1083*). All natural size.

A prostrate herb, sometimes densely branched and rounded; branchlets with indumentum of long (to 1 mm) spreading hairs and shorter curved ones. *Leaves* broadly obovate or occasionally oblong, obtuse or retuse, 5-18 x 3-9 mm, 1.2-2.4 times as long as wide, with long spreading hairs towards the margin; petioles 1-2 mm long. *Racemes* few-flowered, axillary; pedicels 1-2 mm long. *Sepals* with long spreading hairs; outer ones 1-1.5 mm long; alae falcate ca 4 mm long. *Corolla* purple or purple and yellow; lateral petals obovate obtuse, about as long as the keel, slightly hairy at the adnation of the staminal tube; keel with 4-6 appendages each of which is iterately forked. *Staminal filaments* free $\pm 1/3$. *Ovary* \pm oblong, emarginate; style curved, hooked at end with stigma inside the curve. *Capsules* oblong, emarginate, sometimes somewhat asymmetrical, with a very narrow hairy wing. Seeds black, obovoid, ca 3.5 mm long, with stiff white hairs; caruncle with 3 short membranous appendages.

Specimens examined

WESTERN AUSTRALIA: 4 miles (6 km) W of Dovers Hills, northern Gibson Desert, 23°06'S, 128°37', vii.1967, *George 9008* (PERTH); \pm 13 km SW of Well 35 (?39), Canning Stock Route, 21°50'S, 125°36'E, v.1979, *George 15652* (NT); 14 miles S of W end of Hopkins Lake, 24°26'S, 128°40', viii.1962, *Symon 2371* (AD); 81 miles [130 km] SW of Warburton Mission (approx. 26°55'S, 125°30'E), viii.1962, *George 2898* (PERTH).

NORTHERN TERRITORY: North Central. 10 miles [16 km] S of Rabbit Flat, 20°22'S, 129°55'E, vii.1973, *Latz 4060* (BRI, NT); between Tanami and The Granites (approx 20°S, 130°E), vii.1948, *Banks NT1929* (BRI); Lander Creek flood out area, 20°05'S, 131°37'E, iii.1973, *Henry 648* (BRI, NT); SE corner of entry to L. Surprise, Lander River [20°15'S, 131°55'E], iii.1973, *Maconochie 1670* (BRI); "Alcoota" Station, 22°58'S, 134°08'E, iii.1974, *Latz 4753* (NT); Undala Range, 15 km (10 miles) NW of Macdonald Downs, viii.1933, *Ising 3768a* (AD); Burt Plain, 36 miles [58 km] N of Alice Springs [23°10'S, 133°40'E], iii.1972, *Swinbourne NT8637* (NT); Mt Guide, "Tarlton Downs", 22°36'S, 136°52'E, v.1972, *Dunlop 2608* (BRI, NT). South Central. Mt Olga, 25°19'S, 130°43'E, viii.1973, *Latz 4137* (BRI); Kunoth Well, "Hamilton Downs", 23°30'S, 133°35'E, ii.1974, *Nelson 2341* (NT); Simpsons Gap National Park, 23°41'S, 133°43'E, iv.1974, *Latz 4900* (NT); 32 km S of Alice Springs, 23°56'S, 133°55'E, iii.1976, *Latz 6421* (BRI, NT); James Range, 24°19'S, 133°27'E, iv.1974, *Latz 4917* (BRI, NT); NW Simpson Desert, 24°37'S, 135°46'E, viii.1977, *Latz 7590* (NT).

SOUTH AUSTRALIA: Lake Eyre Basin. Evelyn Down, ca 120 km SW of Oodnadatta, x.1955, *Ising 3768B*.

QUEENSLAND: Gregory North District. approx. 47 km NSW of "Glenormiston" Station, 23°03'S, 138°29'E, ix. 1978, *Purdie 1365* (BRI).

Notes

The species is named in honour of Mr Ernest H. Ising (1884-1973) who made significant contributions to our knowledge of South Australian plants.

Polygala isingii is restricted to the 'Flora of Central Australia' region from about 125°E to 139°E in Western Australia, the Northern Territory and Queensland in the Lake Eyre Basin of South Australia. Though widely spread, it is evidently a rare plant usually found on gravelly or shallow soils on hills, but sometimes on sandy soil in hummock grassland.

The flowers of *P. isingii* are remarkably similar to those of *P. linariifolia* (see illustration in Adema, 1966) but the indumentum and broadly obovate leaves of the plant are quite different.

References

- Adema, F. (1966). A review of the herbaceous species of *Polygala* (Polygalaceae). *Blumea* 14: 253-256.
Bentham, G. (1863). "Flora Australiensis", vol. 1. (London: L. Reeve).