



POLYGALACEAE

THE REINSTATEMENT OF *POLYGALA AFFINIS* AND THE IDENTITY OF *POLYGALA SCABRA*

INTRODUCTION

Polygala affinis DC. was generally accepted as a species endemic to South Africa and Namibia, occurring from the Western Cape in the south and extending northwards to Namibia and eastwards to the Eastern Cape (see e.g. Harvey 1860 and Levyns 1955) until Paiva (1998), in his treatment of the genus *Polygala* L. in Africa, considered it to be a synonym of *Polygala scabra* L., a name that was not listed in the main regional revisions of the genus (Harvey 1860; Levyns 1955).

This synonymy (Paiva 1998) was based on the assumption that the holotype of *Polygala scabra* was a specimen kept at G (Herbarium of the Conservatoire et Jardin botaniques de la Ville de Genève) and that this specimen was also the holotype of *P. affinis*. If the two names were indeed based on the same type, the earlier one would have priority, and *P. scabra* L. (1753) would take precedence over *P. affinis* DC. (1824). Recent literature has accepted Paiva's use of the name *P. scabra* (e.g. Goldblatt & Manning 2000).



FIGURE 1.—Illustration in Plukenet (1705: 153, t. 440, f.6), that we designate as lectotype of the name *Polygala scabra* L.

However, as shown by Jarvis (2007), the specimen at G cannot be the holotype of *Polygala scabra* because it is not part of the original material and was not examined by Linnaeus when he described the species. The original material of *P. scabra* consists of two illustrations and one reference only. No specimens are known to be part of the original material. An examination of the illustrations reveals a misinterpretation of the identity of *P. scabra*. The illustrations show a plant with terminal inflorescences, while in *P. affinis* the inflorescence is lateral and leaf-opposed, a diagnostic character. Therefore the two taxa are not conspecific. The name *Polygala*

affinis is thus reinstated here as the accepted name for the species.

The original material for *Polygala scabra* is listed by Jarvis (2007) and comprises:

1. An illustration in Plukenet (1705: 153, t. 440, f. 6).
2. A reference in Plukenet (1700: 153).
3. An illustration in Burman (1739: 204, t.73, f.4) imaged and accessible at http://books.google.co.za/books/about/Rariorum_Africanarum_plantarum_decas_pri.html?id=z51WBmJncwMC&redir_esc=y.

As there are no known specimens among the original material, the illustration in Plukenet (1705: 153, t. 440, f.6), showing more detail, is here designated as lectotype (Figure 1).

The illustrations in Plukenet's work were mostly based on specimens that are now kept in the Sloane Herbarium, at The Natural History Museum, in London. One of the specimens of *Polygala* in that Herbarium (HS 94: 108) closely resembles the illustration designated here as lectotype and appears to be the one that was used to draw that figure. However, the specimen cannot be considered as original material since it was not examined by Linnaeus.

Based on the illustrations, *Polygala scabra* could arguably be a synonym of *Polygala bowkeriae* Harv., Fl. Cap. (Harvey) 1: 92 (1860) and would have priority over that name. It is our opinion that the type is too poor to enable definite and unambiguous identification, therefore this name is left as unplaced.

***Polygala affinis* DC.**, *Prodromus systematis naturalis regni vegetabilis* 1: 322 (1824). Type: South Africa, without precise locality or collector (G holo.).

Polygala burmanii DC. : 322 (1824) [as 'burmanni?']. Type: South Africa, [Mossel Bay area] on dry hills on the Eastern side of Gouritz River, Burchell 6437 (K000231663, lecto.!, designated by Paiva 1998: 268 as 'holo-'; G00210296!, PRE0259681-0!, isolecto.).

Polygala agnipila Gand.: 455 (1913). Type: South Africa, Western Cape, Saron, Schlechter 4879 (PRE,lecto.!, designated here).

***Polygala scabra* L.**, *Species plantarum* 2: 703 (1753). Type: Illustration in Plukenet: 153, t. 440, f. 6 (1705), lecto., designated here.

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REFERENCES

- BURMAN, J. 1739. *Rariorum africanarum plantarum*. Boussière, Amsterdam.
 CANDOLLE, A.P. de. 1824. *Polygaleae. Prodromus systematis naturalis regni vegetabilis*, vol. 1: 321–342. Paris.

- GANDOGGER, M. 1913. L'Herbier Africain de Sonder. *Bulletin de la Société botanique de France* 60: 454–462.
- GOLDBLATT, P. & MANNING, J. 2000. Cape Plants. A conspectus of the Cape flora of South Africa. *Strelitzia* 9. National Botanical Institute, Pretoria, and Missouri Botanical Garden, St Louis.
- HARVEY, W.H. 1860. Polygaleae. In W.H. Harvey & O.W. Sonder, *Flora capensis* 1: 79–113. L. Reeve: Kent.
- JARVIS, C. 2007. *Order out of chaos. Linnean plant names and their types*. London: The Linnean Society & The Natural History Museum.
- LEVYNS, M. 1955. The species of *Polygala* in the south-western Cape Province. *The Journal of South African Botany* 21: 9–49.
- LINNAEUS, C. 1753. *Species plantarum*, vol. 2. Holmiae: Impensis Laurentii Salvii.
- PAIVA, J. 1998. Polygalarum africanarum et madagascariensium prodromus atque gerontogaei generis *Heterosamara* Kuntze, a genere *Polygala* L. segregati et a nobis denuo recepti, synopsis monographica. *Fontqueria* 50: 1–346.
- PLUKENET, L. 1700. *Almagesti botanici mantissa*. London.
- PLUKENET, L. 1705. *Almatheum botanicum*. London.
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