

***Hakea tamminensis* (Proteaceae): a case of mistaken identity**

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Abstract

Barker, W.R. *Hakea tamminensis* (Proteaceae): a case of mistaken identity. Nuytsia 7(1): 1-3 (1989). *Hakea tamminensis*, described by C.A. Gardner from Tammin, Western Australia, is synonymous with *H. gibbosa* (Sm.) Cav., a species from the Sydney region of New South Wales. Possible reasons for Gardner's error are discussed.

My participation in an ongoing revision of *Hakea* with Mrs R.M. Barker and Dr L. Haegi has provided the opportunity of examining the original specimen upon which Gardner (1964) based his new species *H. tamminensis* which he reported had been collected by him from gravelly sand-heath near Tammin in the Avon district of Western Australia.

The holotype of *H. tamminensis*, on loan from the Western Australian Herbarium (PERTH), is undoubtedly a specimen of *H. gibbosa* (Sm.) Cav., a species confined to the near coastal region in and surrounding the city of Sydney, New South Wales.

The type matches *H. gibbosa* in all features, some of which are unusual in *Hakea*. One such feature is the persistent long-villous tomentum on the branchlets and leaves. Another is the fruit, which in *H. gibbosa* is unique amongst species of *Hakea* with ovoid to broad-ovoid fruits of this size (c. 3 cm long) by the transverse orientation of the seed within the fruit body. The flowers on Gardner's specimen are identical to those of *H. gibbosa* in the size, shape and orientation of the tepals, anthers and pistil.

But for a reference to flower colour as purple or red ('purpureis vel rubra'), the type description also matches well the characteristics of *H. gibbosa* and, in particular, the holotype of *H. tamminensis*, including reference to a villous tomentum on the branchlets and a clearly oblique fruit. *H. gibbosa* differs from the description in its cream-yellow flowers, but they do turn dark-brown on drying, clearly causing Gardner to confuse its colour.

No material from Western Australia has been seen which remotely matches the original specimen of *H. tamminensis*. The two specimens seen which have been determined as this species are from the herbarium of the Australian National Botanic Gardens, Canberra (CBG) (*R.W. Purdie* 5305, 24 Sept. 1983, 17 km S of Tammin (Charles Gardner Flora Reserve)) and from the Western Australian Herbarium (PERTH) (*P. Roberts* 390, 20 Sept. 1984, Charles Gardner Flora Reserve, South Tammin). Both are *H. strumosa* Meissner (Mrs R.M. Barker, pers. comm. June 1988).

It has come to my attention from various sources that the Tammin region has been intermittently visited in order to rediscover *H. tamminensis*. In the absence of authentic material of the species from Western Australia despite these searches, it seems extremely unlikely that the species represents a distant outlier of *H. gibbosa*. Indeed, the Sydney region is very different bioclimatically compared with the general region of Tammin (cf. Nix 1982). Accordingly, it seems certain that the species was described as a result of an unfortunate mislabelling by Gardner of a specimen of *H. gibbosa* from the Sydney region or possibly from plants cultivated in wetter parts of south-west Western Australia. Confusion in the information on labels of C.A. Gardner is known in at least one other instance; Haegi (1983) cites the case of Gardner's erroneous numbering of the type of *Anthocercis aromatica* C. Gardner [= *Symonanthus aromaticus* (C. Gardner) Haegi].

It is fortunate that the creation of the Charles Gardner Flora Reserve provided for "the protection of indigenous flora" and not specifically for *H. tamminensis* (Dr S.D. Hopper, pers. comm. June 1988). It was founded on 1 March 1929, well before the *H. tamminensis* issue arose.

How did Gardner commit his error of describing this discordant specimen as new? Neither Gardner's notes nor his manuscript "Flora of Western Australia" treatment for *Hakea* answer this (Dr N.G. Marchant, pers. comm. October 1988). Did he take the flower colour solely from his impression of his dried type or did he confuse it with red-flowered *H. strumosa* which he had collected in flower in sand heaths at Tammin in September 1936 (Gardner s.n., PERTH) and on 7 September 1945 (Gardner 7651, PERTH)? In both specimens of *H. strumosa* fruits were absent and he incorrectly identified the material as or possibly as *H. commutata* F. Muell. A fruiting specimen of *H. strumosa* from Mt Madden (Gardner 12873, PERTH) was correctly determined. It is possible that Gardner long had these problem plants from Tammin in mind and, when he came across fruiting material which he believed to have come from the same provenance, he realised it was a species he had not seen elsewhere. Unfortunately, since his herbarium was very much a regional herbarium, he had no facility to compare his specimen with representative material of *Hakea* species from the eastern States. The type of *H. tamminensis* to this day represents the only specimen of *H. gibbosa* in the Western Australian Herbarium.

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