

SHORT COMMUNICATION

A putative hybrid in *Verbena* (Verbenaceae) and the application of the name *V. brasiliensis*.

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In my studies leading to the recognition of *Verbena incompta* P.W. Michael (*Telopea* 6: 2–3: 181–183, 1995) it became clear that there were other problems awaiting resolution in the genus, one of which is proper typification of *V. brasiliensis* Vell., a name widely used in the Americas and elsewhere, including Australia. Initially it was often impossible, among plants with subpetiolate or petiolate leaves, to distinguish between plants known as *V. litoralis* Kunth and those known as *V. brasiliensis*. It was not until I had considered and tested the possible existence of a third taxon, which turned out, I believe, to be *V. caracasana* Kunth that the subject could be explored with more confidence.

V. caracasana and *V. litoralis* have often been confused in the literature. *V. caracasana* has an extended regularly branched inflorescence with short spikes even at full development and leaves with regular serrations, sometimes clearly crenate-serrate, while *V. litoralis* has an irregularly branched inflorescence often with very long spikes at full development and leaves with larger, somewhat obtuse teeth, often with prominent lobes at the base of the lower ones.

A further complication is the occasional occurrence in New South Wales, Queensland and New Zealand of a sterile form of *Verbena*, again with subpetiolate or petiolate leaves, closely related to this group of three taxa. These plants puzzled me at first because they produced no mature nutlets. On close examination of the flowering spikes it soon became evident that the flowers were aberrant, often with only four corolla lobes, sometimes fewer, the lobes occasionally emarginate, with the tube sometimes split along one side, with stamens abnormal in relation to their point of insertion and anther development. Infrequently, the ovaries develop to the extent of showing two immature nutlets.

Vellozo's description of *V. brasiliensis* is preceded by a description of *V. quadrangularis* Vell. which Yeo in *Kew Bull.* 45: 101–120, 1990 treats as a synonym of the former. Vellozo's descriptions of the two species are reproduced below from the reprint of the complete text (but not the tables) of his *Flora Fluminensis* in *Archivos do Museu Nacional do Rio de Janeiro* 5: 17, 1881.

3. *V. quadrangularis*. *V.* tetrandra: spicis congestis; limbo corollae quinque partito, aequali; laciniis rotundis, C. herbaceus, tetragonus, orgyalis, fistulosus, ciliatus. R. patentes, oppositi, axillares. F. subpetiolata, hirsuta, lanceolata, a dimidio ad apicem serrata, acuta. Ped. terminales, brevissimi, bracteati. Infl. flores minimi; limbi laciniis quinque aequalibus. Habitat campis maritimis. Floret Jan. Feb.

4. *V. brasiliensis*. *V.* tetandra (sic): foliis lanceolatis; caule quadrangulati, limbo quadri-partito. Haec species tantummodo corolla a praecedenti differt; nam lacinias 4 habet, quarum una est latior, et crenata. Duo semina habet oblonga.

V. quadrangularis is illustrated in *Fl. Flum. Icon.* 1 Tab. 39, 1827 and *V. brasiliensis* in *ibid.* Tab. 40, 1831. Unfortunately, Vellozo's specimens do not appear to be extant (Yeo, *loc. cit.* following Stafleu & Cowan). Since no type material has been found, the illustrations of both species have been designated as lectotypes by Verdcourt in the *Flora of Tropical East Africa*, Verbenaceae, 9–10, 1992.

The plates of both species represent, without doubt, tall plants with subpetiolate or petiolate leaves. The aberrant flowers of *V. brasiliensis* and the unexpected '*Duo semina habet oblonga*' [has two oblong seeds] in a group of plants in which normally the fruits have four nutlets, strongly point to plants like the sterile plants described above, which I take to be of hybrid origin. Accordingly, I think it appropriate to name these putative hybrids as:

Verbena × *brasiliensis* Vell., *Fl. Flum.* p.17 (1825) pro sp.

Lectotype: *Fl. Flum.* Icon. 1, Tab. 40 (1831)

Representative specimens: Queensland: Slade Point, Mackay, *Batianoff*, Aug 1992 (BRI). Rothwell, near Redcliffe, *Michael s.n.*, Oct 1995 (NSW).

New South Wales: Central Coast: Devlins Ck at end of Kent St, Epping, *Michael s.n.*, March 1994 (NSW, AD, UB); Along Pembroke St, near Terrys Ck, Epping, *Michael s.n.*, March 1994 (NSW); Bedlam Pt, Gladesville, *Michael s.n.*, March 1995 (NSW).

New Zealand: North Island: Hokianga Co. near Waimamaku, *Wright* 9480, Nov 1989 (AD; also in HO, CHR, not seen).

Fertile plants with subpetiolate or petiolate leaves often known as *V. brasiliensis* can now be referred to:

Verbena quadrangularis Vell., *Fl. Flum.* p.16 (1825)

Lectotype: *Fl. Flum.* Icon 1. Tab. 39 (1827)

Field observations suggest that the most likely parents of the putative hybrids are *V. quadrangularis* and *V. litoralis*, having leaves somewhat irregularly lobed as in *V. litoralis* and fastigate clusters of flowering spikes as in *V. quadrangularis*.

It is desirable to find South American material fitting the putative hybrids of Australia and New Zealand. This is, I think, likely since Moldenke in his paper 'Hybridity in the Verbenaceae' in *American Midland Naturalist* 59 (2): 333–370, 1958, has noted more or less 'anomalous forms' of *V. brasiliensis*. There is an obvious need for hybridisation experiments as well.

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