

## Notes on *Verbena officinalis* sensu stricto and *V. macrostachya* (Verbenaceae) with new combinations in two closely related taxa

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### Abstract

Michael, P.W. (National Herbarium of New South Wales, Royal Botanic Gardens, Mrs Macquaries Road, Sydney, NSW, 2000, Australia) 1997. Notes on *Verbena officinalis* sensu stricto and *V. macrostachya* (Verbenaceae) with new combinations in two closely related taxa. *Telopea* 7(3): 293–297. Two new combinations are made in *Verbena*, namely *V. gaudichaudii* and *V. africana* which, along with *V. macrostachya* (here lectotypified) are considered to be native Australian species previously included under *V. officinalis*. Notes are given relating to the typification of *V. officinalis* sensu stricto, which is quite uncommon in Australia. Leaves of *V. officinalis*, *V. gaudichaudii* and *V. africana* are illustrated.

### Introduction

Australian plants in MEL, BRI and NSW called *Verbena officinalis* L. show much variation suggesting that there are different species involved. One of these is *V. officinalis* L. sensu stricto, while there are three others which I believe, on grounds of dates of collection, distribution and morphology, to be native.

#### *Verbena officinalis* L. sensu stricto

*V. officinalis* L. sensu stricto, which occurs widely throughout Europe and Asia, appears to be quite uncommon in Australia where it is certainly introduced. It has been collected occasionally in central and eastern Victoria and rarely in New South Wales. I have collected it only once in New South Wales, along Tuena Creek between Bathurst and Crookwell in February 1997. This taxon can easily be recognized by its leaf shape (see Fig. 1) and its very glandular bracts, calyces and flowering stems. It has been well illustrated many times in Europe and Asia, for example by S. Ross-Craig (1966: t.38) and by S.J. Roles in Clapham, Tutin and Warburg (1963: Fig. 1167).

The earliest mention of its glandular inflorescence that I have been able to find is in Schauer's diagnosis of *V. officinalis*  $\alpha$  *vulgaris* in *Flora Brasiliensis* 9: 191 (1851) which I reproduce here:

caule erecto, brachiato-ramoso; foliis ambitu oblongis trifidis tripartitisve segmentis incisus vel laciniatis laciniis crenato-serratis; rhachi bracteisque calycibusque hirtellis glandulosisque.

Of the four syntypes of *V. officinalis* noted by Verdcourt (1992: 6), he has chosen as lectotype the specimen Herb. Clifford: 11, *Verbena* No. 6, fol. 6 (BM) (Jarvis et al. 1993: 98). I would expect this specimen to be from Central Europe (Linnaeus wrote: '*Habitat in Europae mediterraneae ruderatis*' in *Sp. Pl.* 1. 20–21 (1753) and '*crescit juxta areas & vias inque locis ruderatis per Belgium, Angliam, Galliam &c.*' in *Hort. Cliff.*: 11 (1737)) and to have glandular inflorescences. Glandular inflorescences, although not mentioned by Linnaeus or in any of the works he cites, appear in all but one immature specimen in a large number of specimens examined by me from Europe and Asia in NSW and MEL.

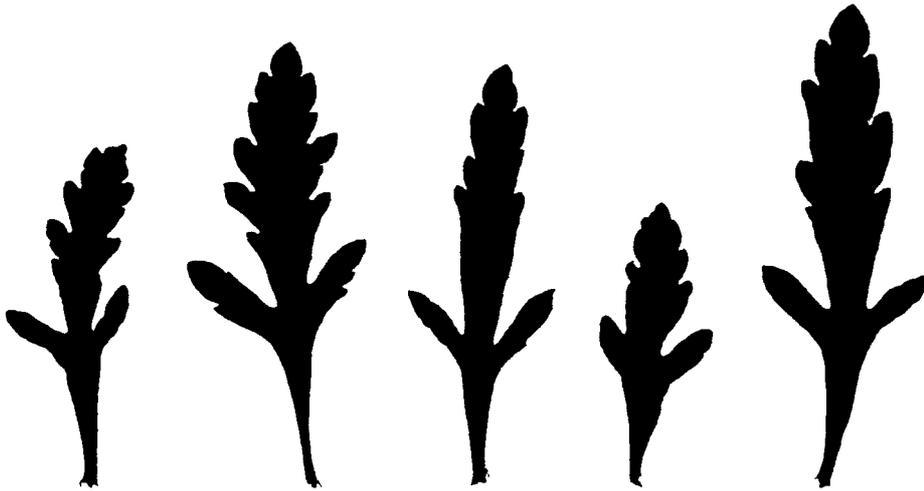


Fig. 1. Leaves of *V. officinalis* from plants collected by P. Michael along Tuena Creek between Bathurst and Crookwell, N.S.W. (NSW) ( $\times 1$ ).

### Native Australian species

Tate (1883) wrote about the South Australian plant he knew as *V. officinalis*: 'as Backhouse noted it in 1837 along the borders of the River Torrens its claim to rank as an endemic is thereby firmly established'. It is clear now that there are a number of distinctive verbenas native to eastern Australia. Robert Brown (1810: 514, 1814: 68) would have included one or two of these in his concept of *V. officinalis* which he considered native to both Europe and Australia. Comments by Kloot (1984) on the introduced status of *V. officinalis* in Australia are misleading because he did not consider it as a variable complex. This complex includes three native species which are treated below.

#### *V. macrostachya* F. Muell.

Lectotype (chosen here): Queensland: Peak Downs, F. Mueller, [1856] (MEL)

This species, described by Mueller (1858: 60), was later reduced to varietal status, *V. officinalis* L. var. *macrostachya*, by Bentham (1870:36). But I believe that this very hispid, glandular, erect plant with distinctive robust leaves and large flowers is undoubtedly worthy of specific status. It is so recorded in Henderson (1997). Mueller gave as locality of the type collections (his own and Leichhardt's), 'in planitieibus basalticis Australiae orientalis subtropicae'. I select as lectotype Mueller's own sheet from Peak Downs, Queensland (MEL 583551). Bentham *loc.cit.*, did not cite, nor have I seen, Leichhardt's specimen(s). There are other specimens of this species from Queensland, New South Wales and Central Australia. The drawing labelled *V. officinalis* in Jessop (1981: 296) appears to be of it.

***V. officinalis* L. var. *gaudichaudii* Briq.**

This variety was described by Briquet in 1907 (see below) as follows:

A var. *genuina* Briq. differt foliis caulinis elongato-lanceolatis, angustis, profunde inciso-dentatis, ad 7 cm longis et 8 mm latis, appendicibus circ. 2–5 mm altis, superioribus lineari-lanceolatis paucis et superficialiter dentatis, summis linearibus subintegris. Planta habitu a typo valde aliena, tamen vix segreganda.

I believe that plants like this described by Briquet occur throughout a large part of eastern Australia, that they are definitely native and that they are sufficiently distinct to raise to specific level. Many of these plants have no obvious glands in the inflorescence and quite inconspicuous vestiture. A practical reason for giving this taxon specific status is that it appears to include significant intraspecific taxa which await further elucidation.

Accordingly, I make the new combination:

***Verbena gaudichaudii* (Briquet) P.W. Michael, comb. et stat. nov.**

*Verbena officinalis* L. var. *gaudichaudii* Briq. in *Annuaire Conserv. Jard. Botan. Genève* 10: 105 (1907).

Type: Australia: Port Jackson, *Gaudichaud 144* (holo G, not seen)

The distinctive leaves of *V. gaudichaudii*, well described by Briquet, are illustrated in Fig. 2.



**Fig. 2.** Leaves of *V. gaudichaudii*, all from N.S.W. ( $\times 1$ ) **a**, from small plant collected by J. Hosking in Oxley Park, Tamworth (NSW); **b**, from large plant collected by J. Hosking in Oxley Park, Tamworth (NSW); **c**, **d**, from plants collected by P. Michael, near Gordon Duff Bridge, Forbes (NSW); **e**, from plants collected by D. King along Ellis Lane, Forbes (NSW).

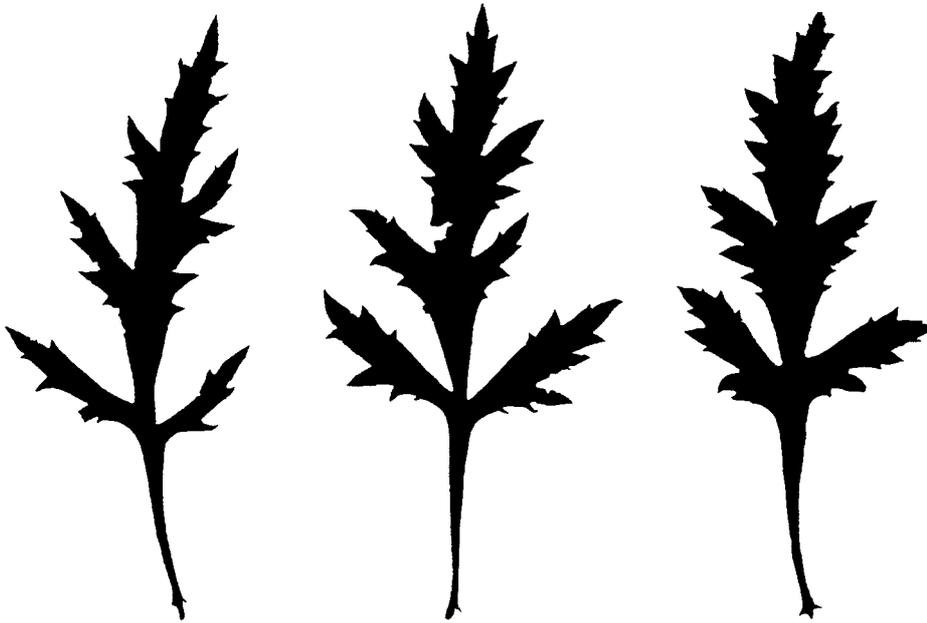


Fig. 3. Leaves of *V. africana* from plants collected by P. Michael at Lake Lalbert, Victoria (NSW) ( $\times 1$ ).

***V. officinalis* L. subsp. *africana* R. Fernandes & Verdc.**

This taxon with glandular inflorescence and sharply dentate leaves (see Fig. 3), of unknown extent in Australia, was recently described from Africa by Fernandes and Verdcourt (1989). It also occurs in the Indian sub-continent and, I think, is native in Australia. I collected it at Lake Lalbert in Victoria in November 1996. Occasional specimens from far western New South Wales may belong here. I consider that it is sufficiently distinct from *V. officinalis* L. sensu stricto and the other native Australian *Verbena* species to give it specific status also. In the original description Fernandes and Verdcourt questioned whether it might not be considered as a species in its own right. The new combination required is:

***Verbena africana* (R. Fernandes & Verdcourt) P.W. Michael, comb. et stat. nov.**

*Verbena officinalis* L. subsp. *africana*, R Fernandes & Verdcourt, Bol. Soc. Brot., ser. 2, 62: 305–10 and Tab. I (1989).

Type: Africa tropica: Zimbabwe: Harare (Salisbury) inter 'Avondale West and Mabelreign', alt. 1480 m, ubi, 21. viii. 1955, *Drummond* 4858 (holo K, not seen; iso B, BR, LISC, S, SRGH, not seen)

The plate is also reproduced in Verdcourt (1992: 7). There is an excellent drawing by A. Walters of this taxon (as *V. officinalis*) in Henderson & Anderson (1966: fig. 128 p.259).

### Acknowledgments

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### References

- Bentham, G. (1870) *Flora Australiensis*, vol. 5 (Reeve: London).
- Brown, R. (1810) *Prodromus Florae Novae Hollandiae* (R. Taylor: London).
- Brown, R. (1814) General Remarks — Geographical and Systematical on the Botany of Terra Australis. (London). Also in M. Flinders (1814) *Voyage to Terra Australis*, vol.2., Appendix III, p.592 (London).
- Clapham, A.R., T.G. Tutin & E.F. Warburg (1963). *Flora of the British Isles: Illustrations III* (Cambridge University Press: Cambridge).
- Fernandes, R.B. & B. Verdcourt (1989) A new African subspecies of *Verbena officinalis* L. *Bol. Soc. Brot.*, ser. 2, 62: 305–10.
- Henderson, M. & J.G. Anderson (1966) *Common Weeds of South Africa*. Memoir 37 of the Botanical Survey of South Africa.
- Henderson, R.J.F. (ed.) (1997) *Queensland Plants. Names and Distribution*. (Queensland Herbarium: Brisbane).
- Jarvis, C.E., F.R. Barrie, D.M. Allan, & J.L. Reveal, (1993) A list of Linnaean generic names and their types. *Regnum Vegetabile*, vol. 127.
- Jessop, J. (ed.) (1981) *Flora of Central Australia* (Australian Systematic Botany Society/Reed: Sydney).
- Kloot, P.M. (1984) The introduced elements of the flora of Southern Australia. *J. Biogeography* 11:63-78.
- Mueller, F. (1858) *Fragmenta Phytographiae Australiae* 1: 60.
- Ross-Craig, S. (1966) *Drawings of British Plants*. Part 23 (Bell: London).
- Tate, R. (1883) Bibliographical notes refuting the alleged alien nature of two species of South Australian Plants. *Trans. Proc. Rep. Royal Soc. South Australia* (1882-3) 6: 174.
- Verdcourt, B. (1992) *Flora of Tropical East Africa—Verbenaceae*. (A.A. Balkema: Rotterdam/Brookfield)

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