Notes on African plants

VARIOUS AUTHORS

VITACEAE

THE STATUS OF CYPHOSTEMMA UNGUIFORMIFOLIUM IN SOUTHERN AFRICA

The transfer of *Cissus schlechteri* Gilg & M.Brandt and *C. unguiformifolius* C.A.Sm. to the genus *Cyphostemma* (Planch.) Alston was made by Descoings (1967). However, by this date of publication, Wild & Drummond (1966) had already included the taxon *Cissus unguiformifolius* within *Cyphostemma schlechteri*, a notion which has been largely upheld (Lebrun & Stork 1992; Retief & Herman 1997; Retief 2006), with one notable exception (Verdcourt 1991) (see protologue for *C. pseudoburgeri* Verdc. 1991: 88). Subsequent field work, and consideration of literature and herbarium specimens from South Africa and adjacent countries revealed a need to separate these two taxa. This decision was based on observed differences in growth form, leaf succulence, tendrils, inflorescences (Figures 1, 2), and distribution patterns (Figure 3).

Furthermore, it was also established that Cyphostemma unguiformifolium actually exhibits a growth form and morphological characters identical to that of an earlier described species, C. omburense (Gilg & M.Brandt) Desc.; accordingly, C. unguiformifolium is relegated to the synonymy of this species. Although the leaves of C. omburense have been observed as 3-7-foliolate (Merxmüller & Schreiber 1969), we have noted that juvenile leaves appear first as 3-foliolate prior to development of at least two further leaflets. The description of C. omburense is based on a specimen Dinter collected in Namibia and the taxon was considered a Namibian endemic (Craven & Loots 2002; Retief 2003). Its distribution in southern Africa now includes Namibia, Botswana, Swaziland, and Limpopo, Mpumalanga, KwaZulu-Natal provinces in South Africa. The species also extends into Zimbabwe and Mozambique.



FIGURE 1.—Cyphostemma omburense (= C. unguiformifolium) with trailing habit, from Verdoorn (1946).



FIGURE 2.—Cyphostemma schlechteri in habitat, Imfolozi Game Reserve, Zululand, showing suberect habit. Photograph: N. Crouch.

Both *Cyphostemma schlechteri* and *C. omburense* are glabrous and glaucous with sessile or subsessile leaves, but are geographically isolated in the main, though distributions overlap in the Lebombo Range (Figure 3). These closely related *Cyphostemma* species, both of which are usually 5-foliolate, may be separated using the following key:

- Plants procumbent, long trailing stems up to 1 m long; leaves (3-)5(-7)-foliolate, subfleshy; leaflets 15-120 × 2-20 mm; tendrils prominent, forked or with a monofilament, often curly at apex; inflorescences terminal on lateral branchlets (appearing axillary) C. omburense

1. Cyphostemma omburense (Gilg & M.Brandt) Desc. in Naturalia Monspeliensia (Séne Botanique) 18: 225 (1967). Cissus omburensis Gilg & M.Brandt: 518 (1912). Type: Namibia, Omburo, Dinter 1408 (B, holo.†).

Cissus unguiformifolius C.A.Sm.: xx (1932). Cyphostemma unguiformifolium (C.A.Sm.) Desc.: 229 (1967). Type: South Africa, Zoutpansberg Dist., Messina, Pole Evans H13119 (PRE, holo.!, K, iso.!).

2. Cyphostemma schlechteri (Gilg & M.Brandt) Desc. ex Wild & R.B.Drumm. in Flora zambesiaca 2,1: 463 (1966) pro parte. Cissus schlechteri Gilg & M.Brandt: 489 (1912); Suesseng.: 174 (1953). Type: Mozambique, Ressano Garcia, Schlechter 11893 (B, holo.†).

SPECIMENS EXAMINED

Numbers in brackets signify the identity of the specimens: (1) *Cyphostemma omburense*; (2) *C. schlechteri*.



FIGURE 3.—Known distributions in *FSA* region of *Cyphostemma* omburense (= C. unguiformifolium), \bullet ; C. schlechteri, \triangle ; and both taxa, \triangle .

Acocks 13007 (2) PRE.

Braun 589 (1) PRE. Bremekamp & Schweickerdt 309 (1) PRU. Bydendyk PRE28780 (1) PRE.

Codd 5986, 8852 (1) PRE. *Cole 1159, 1165* (1) PRE. *Crouch 1212* (2) PRE.

De Winter & Leistner 5560 (1) PRE, WIND. B. Dlamini PRE48159 (2) PRE. Downing 623 (2) NU, PRE; 327 (2) K.

Eicker & students (8-01-1973) (1) PRE, PRU.

Germishuizen 512 (1) PRE. Gerstner 6026 (1) PRE; 700 (2) K, PRE; 4603, 6260 (2) PRE. Giess 10455, 11327 (1) PRE, WIND.

Hillary & Robertson 498 (1) PRE. Hitchins 290 (2) NU, PRE. Hutchinson 2953 (1) K, PRE.

Jacobsen, N.H.G. 5853 (1) PRE.

Kemp 1157 (2) PRE.

Liebnitz, Fakude & Hancox 11 (2) NU, PRE. Louw 613 (1) PRE; 1894, 2519 (1) PRU.

Merxmüller & Giess 1402 (1) PRE, WIND. Miller B843, B792 (1) PRE.

Nel 85 (2) NH, PRE. Netshiungani 818 (2) PRE.

Oates 138, 272 (1) PRE. Obermeyer, Schweickerdt & Verdoorn 330 (1) PRE.

Pienaar 321 (1) K, PRE. Pole Evans PRE13119 (1) K, PRE.

Rogers 13432 (1) PRE; 20386, 22204 (1) K. Ross 2396 (2) PRE.

Singh 179 (2) NH. Straub 920 (1). Strey 9137 (2) PRE.

Theron 2819 (1) PRE, PRU. Thode A1370 (1) K, PRE.

F. van der Merwe, 36 (1) PRE. *Van der Schijff 2488, 3971, 3304* (1) PRE. *Van Rooyen 193* (1) PRU. *Venter 12195* (1) PRE; *5205* (2) PRE. *Visser L13* (1) PRE.

Ward 1663 (2) NH, NU, PRE; 10871 (1) PRE, WIND.

G. Zambatis G, GZ257 (1) PRE. N. Zambatis 1258 (1) PRE.

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REFERENCES

- CRAVEN, P. & LOOTS, S. 2002. Vitaceae/Namibia. In J. Golding, Southern African plant Red Data Lists. Southern African Botanical Diversity Network Report No. 14: 84.
- DESCOINGS, B. 1967. Note rectificative a propos de la nomenclature des Cyphostemma (Vitacées). Naturalia Monspeliensia (Séne Botanique) 18: 217–230.
- GILG, E. & BRANDT, M. 1912. Vitaceae africanae. In A. Engler, *Bota-nische Jahrbücher* 46: 415–557.
- HOLMGREN, P.K., HOLMGREN, N.H. & BARTLETT, L.C. 1990. Index herbariorum, edn 8. Regnum vegetabile 120. New York Botanical Gardens, Bronx, New York.
- LEBRUN, J.-P. & STORK, A.L. 1992. Énumeration des plantes à fleurs d'Afrique tropicale. II. Chrysobalanaceae à Apiaceae. Conservatoire et Jardin botaniques, Geneve.
- MERXMÜLLER, H. & SCHREIBER, A. 1969. Vitaceae. Prodromus einer Flora von Südvestafrika 80: 1–8.
- RETIEF, E. 2003. Vitaceae. In G. Germishuizen & N.L. Meyer, Plants of southern Africa: an annotated checklist. *Strelitzia* 14: 946– 949.
- RETIEF, E. 2006. Vitaceae. In G. Germishuizen, N.L. Meyer, Y. Steenkamp & M. Keith, A checklist of South African plants.

Southern African Botanical Diversity Network Report No. 41: 850–853.

- RETIEF, E. & HERMAN, P.J. 1997. Vitaceae. Plants of the northern provinces of South Africa: keys and diagnostic characters. *Strelitzia* 6: 647–650. National Botanical Institute, Pretoria.
- SMITH, C.A. 1932. Cissus L. Ampelidàceae. In J. Burtt-Davy, A manual of the flowering plants and ferns of the Transvaal with Swaziland, South Africa. Part II. Malvaceae to Umbelliferae: 471–477. Longmans, Green, London.
- SUESSENGUTH, K. 1953. Vitaceae. In A. Engler & K. Prantl, Die natürlichen Pflanzenfamilien, edn 2, 20d: 174–333.
- VERDCOURT, B. 1991. Vitaceae. In R.M. Polhill, Flora of tropical East Africa: 1–149.
- VERDOORN, I.C. 1946. Cissus unguiformifolius. The Flowering Plants of Africa 25: 1. 972.
- WILD, H., & DRUMMOND, R.B. 1966. Vitaceae. In A.W. Exell, A. Fernandes & H. Wild, *Flora zambesiaca* 2,1: 439–492.

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