

STUDIES ON THE AUSTRALASIAN ASCLEPIADACEAE, V* *CYNANCHUM CARNOSUM* (R. BR.) SCHLTR. AND ITS SYNONYMY

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Summary

The synonymy associated with *Cynanchum carnosum* (R. Br.) Schltr. is clarified. A lectotype for *Oxystelma carnosum* R. Br. is selected.

Robert Brown (1810) described under the genus *Oxystelma*, the species *O. carnosum*. It is commonly distributed in littoral communities along the coastline of most of subtropical and tropical Australia and is also found in Java, Papua New Guinea, the Philippines and peninsular Malaysia.

There appears to have been considerable confusion in the taxonomic literature pertaining to the Australian and Javan regions as to both the generic placement and correct author citation of this species. For example, Green (1985) cites both "*Cynanchum carnosum* (R. Br.) Domin, Biblioth. Bot. 22 (89): 1085 (1928)" and "*Ischnostemma carnosum* (Schldl.) Merr. & Rolfe, Philipp. J. Sci. 3: 121 (1908)" as occurring in Western Australia, Jacobs and Pickard (1981) list "*Cynanchum carnosum* (R. Br.) Domin" for New South Wales, Dunlop (1987) lists "*Ischnostemma carnosum* (Schltr.) Merr. & Rolfe" for the Northern Territory; and Backer & Bakhuizen van den Brink (1965) list "*Ischnostemma carnosum* (Schltr.) Merr. & Rolfe" for Java. The only recent account to correctly list the author citation and synonymy, albeit under *Ischnostemma carnosum*, is that of Stanley and Ross (1986).

As outlined quite clearly by Merrill and Rolfe (1908), King and Gamble (1907) described the genus *Ischnostemma* with *I. selangorica* King & Gamble, based on specimens from the Philippines, as the type species. One of these specimens (but not the type) had been determined independently by Schlechter (1904) as *Oxystelma carnosum* R. Br. Schlechter (*loc. cit.*) transferred the taxon to *Cynanchum* (as *C. carnosum* (R. Br.) Schltr.) noting that it had been placed in *Vincetoxicum* by Bentham (1869). Domin (1928) later also effected the transfer to *Cynanchum*, being apparently unaware of the Schlechter combination. The Index Kewensis for that period incorrectly lists the Domin combination under *Cynanchum*, having not listed the earlier one made by Schlechter.

To further complicate matters, Index Kewensis lists a "*Cynanchum carnosum* Hort. ex Decne, in DC. Prod. 8: 550 [= *Hoya carnososa* (L.) R. Br.]". However reference to Decaisne (1844) reveals that he did not accept the name under *Cynanchum* but included the epithet under a '*species exclusae*' section.

Cynanchum is a large genus in the Asclepiadaceae and contains many distinctive species groups, some of which have been recognised in various subgeneric (Woodson 1941) or sectional (Tsiang & Li 1974) classifications. Given this large variability within the genus as so defined, the recognition of segregate genera is probably futile until a monographic account is undertaken.

King and Gamble (1907) did not list any distinguishing features for their genus *Ischnostemma* and there are no characters by which it can be delimited from *Cynanchum* L., especially in the broad sense favoured by Woodson (1941). It is worth noting that Schlechter, who was not known for his conservative approach to the generic taxonomy of the Asclepiadaceae (see for example the various generic synonyms of *Brachystelma* Sims, fide Forster in press), did not consider the species as being distinct enough from *Cynanchum* to warrant a separate genus.

* continued from Austrobaileya 2(5): 507-514 (1988)

C. carnosum is not significantly different from other taxa of *Cynanchum* with regard to either floral or vegetative features. One noticeable character by which *C. carnosum* does differ from other Australasian species of *Cynanchum* is the apparent absence of extrafloral nectaries from the leaf lamina base. This feature is probably over-rated as it may vary within species in other genera such as *Hoya* R. Br. (Forster unpubl. data). *C. carnosum* should be merely regarded as a littoral species of an otherwise rainforest or woodland genus and is best placed in the section *Vincetoxicum* (Wolf) Tsiang & Li. Adequate descriptions of the species may be found in Stanley and Ross (1986) or Williams (1984) under *Ischnostemma*.

The relevant synonymy is as follows:

Cynanchum carnosum (R. Br.) Schltr. in Perkins, Fragm. Flor. Philipp. 120 (1904).

Oxystelma carnosum R. Br., Prod. 462 (1810). **Lectotype** (designated here): Island a [Sweer's Island, Gulf of Carpentaria], Nov 1802, *Brown* s.n. (lecto: BM, two sheets, photo!).

Vincetoxicum carnosum (R. Br.) Benth., Fl. austral. 4: 331 (1869).

Ischnostemma carnosum (R. Br.) Merrill & Rolfe, Philipp. J. Sci. 3(3): 121 (1908).

Cynanchum carnosum (R. Br.) Domin, Biblioth. Bot. 22 (89): 1085 (1928), *nom. superfl.*

Ischnostemma selangorica King & Gamble, J. Asiat. Soc. Bengal, Pt. 2 Nat. Hist. 74: 532 (1907). **Type**: Selangor, at Kwala Selangor, *Ridley* 7564 (*n.v.*)

Pentatropis novoguineensis Valetton ('*novo-guineensis*'), Bull. Dep. Agric. Indes Neerl. 10: 49 (1907) fide van Steenis & Bakhuizen van den Brink, Bot. Jahrb. Syst. 86: 385–401 (1967). **Type**: *Atasrip* 96 (*n.v.*)

Selected specimens examined: Papua New Guinea. Daru Is, Western Division, Mar 1936, *Brass* 6328 (BRI). Australia. Western Australia. SE of Cape Londonderry, north Kimberley, 13°53'S, 127°04'E, Aug 1975, *George* 13354 (BRI). Northern Territory. Elcho Is, 11°58'S, 135°37'E, Jul 1975, *Maconochie* 2175 (BRI; CANB,DNA,K,L,NT *n.v.*). Queensland. COOK DISTRICT: Mission River, Weipa area, 12°35'S, 141°57'E, Jun 1978, *Williams* 78087 (BRI). BURKE DISTRICT: Normanton, Aug 1943, *Blake* 15118 (BRI). NORTH KENNEDY DISTRICT: Track to Swamp Bay, Conway Range N.P., Shute Harbour, 20°17'S, 148°47'E, Nov 1985, *Sharpe* 4120 (BRI). SOUTH KENNEDY DISTRICT: Penrith Is, 21°01'S, 149°54'E, Nov 1986, *Batianoff* 6056 & *Hegerl* (BRI). PORT CURTIS DISTRICT: South Percy Is, Mar 1906, *Tryon* AQ216614 (BRI). WIDE BAY DISTRICT: Granite Bay, Noosa N.P., Noosa, 26°22'S, 153°06'E, Sep 1985, *Sharpe* 3901 & *Batianoff* (BRI; NSW *n.v.*). MORETON DISTRICT: Point Arkwright, about 1 km S of Coolumb Beach, 26°32'S, 153°06'E, Oct 1983, *Sharpe* 3387 & *Windolf* (BRI). New South Wales. NORTH COAST: Norries Head, on sea coast ca 20 km E of Murwillumbah, 28°20'S, 153°35'E, Dec 1977, *Coveny* 9931 & *Haegi* (BRI; NSW *n.v.*).

Specimens from 60 localities examined.

Flowering period: Throughout the year, but predominantly in summer.

Fruiting period: Throughout the year, but predominately in autumn.

Conservation status: *C. carnosum* is a common, widespread species and is not endangered or threatened.

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