

# WILLDAMPIA, A NEW GENERIC NAME FOR STURT PEA

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## ABSTRACT

The legume known as Sturt Pea (or Sturt's Desert Pea), which has been placed in both *Clianthus* and *Swainsona*, is considered to belong to a distinct, monotypic genus which is described under the name *Willdampia* and a new specific combination made accordingly.

## INTRODUCTION

The ephemeral or biennial legume known as Sturt Pea or Sturt's Desert Pea (floral emblem of South Australia) was long known under the name *Clianthus formosus* (G.Don) Ford & Vickery, although it was accepted widely that it was misplaced in that genus, the type species of which is native to New Zealand. Sturt Pea differs from *Clianthus* s. str. in its short inflorescence, well-developed calyx lobes, long, narrow cylindrical bilocular legume, indumentum, large stipules and ephemeral prostrate habit (Thompson, 1990). In 1990, J. Thompson, completing a revision of the genus *Swainsona*, decided that *C. formosus* was more appropriately placed in that genus and made the formal combination (Thompson, 1990). She gave minimal justification for her decision, stating only that 'it is closely related to *S. beasleyana* F.Muell. from which it differs in its larger usually red (not purple) flowers, acute keel and longer fruit'. Her revision of the genus (Thompson, 1993) gave no further reason for the transfer. I believe that her analysis has ignored the

very distinctive corolla of this plant which is easily distinguished from all other taxa of *Swainsona* by the orientation of the standard and keel, by its large size and typically red petals with a prominent black 'boss' on the standard. The standard and keel petals of Sturt Pea diverge at an angle of c. 180° and the 'boss' is prominently convex, in contrast to *Swainsona* in which they diverge at 70–90° and the eye is concave. In the Cape Range peninsula of north-western Western Australia the 'boss' is dark red. Elsewhere, occasional plants have pinkish or white shades, but these are atypical. The corolla of Sturt Pea is 90–120 mm long; the largest corolla otherwise in *Swainsona* is 30 mm long (*S. maccullochiana* F.Muell.). All species of *Swainsona* have corollas that are various shades of pink, mauve or purple, sometimes with yellow parts, and some show considerable change from a creamish colour in bud to the purple open flower. The legume of Sturt Pea, 40–90 mm long, is also larger than that of most other species of *Swainsona*, most of which are below 30 mm, the longest



being 65 mm in *S. murrayana* Wawra. Accordingly the species is here placed in a new, monotypic genus.

**Willdampia** A.S.George, gen. nov.

Herbae ephemerae, interdum biennes. Folia pinnata, stipulis prominentibus. Inflorescentia axillaris, racemus floribus usque ad 6 in pedunculo robusto recto, rhachide contracto; flores bracteis prominentibus latis subtenti. Calyx in hypanthio insertum, bracteolis 2 longis. Corollae vexillum ab carina ad angulum c. 180° divergens; petala coccinea, ad basin vexilli nigra et nitens, raro rubra vel alba; vexillum rectum, ad basin convexum, in ungue decrescenti, 4–6 cm longum; alae in ungue gracili auriculato, ad apicem acutum angustatae; carina 5–6 cm longa, pendens, ad apicem acutum decrescens, ungue breve auriculato. Stamina breviter et longa alternantia, 9 coalita, 1 libera. Pistillum gracile in stipite prominente; ovarium angustum ovulis multis; stylus decrescens, glaber; stigma parva. Legumen cylindricum ad anguste ellipsoidale, aliquantum inflatum, in rostro recto angustatum, suturo profunde impresso, secus suturum primum dehiscens, deinde laterum alterum. Semina multa, discoidea, pallida.

Typus: *Willdampia formosa* (G.Don) A.S.George, comb. nov.

Basionym: *Donia formosa* G.Don, *Gen. Hist. Dichlamydeous Plants* 2: 468 (1832); *Clanthus formosus* (G.Don) Ford et Vickery, *Contr. New South Wales Natl. Herb.* 1: 302 (1950); *Swainsona formosa* (G.Don) Thompson, *Telopea* 4: 4 (1990). Typus: Curlew River [Ashburton R., W.A.], 20 Feb. 1818, P.P.King; holo: BM n.v., fide J.Thompson, *Telopea* 5: 469 (1993).

For further synonymy and discussion of nomenclature, see Ford & Vickery (1950) and Perry, Wilson & Greuter (1992).

Ephemeral or sometimes biennial herbs. Leaves pinnate; stipules prominent. Inflorescence axillary, a raceme of up to 6 flowers on a robust erect peduncle, the rachis contracted; flowers subtended by prominent broad bracts. Calyx surmounting a hypanthium with 2 long bracteoles. Standard of corolla diverging from keel at an angle of c. 180°; petals usually scarlet with a shining black (sometimes deep red) boss near the base of the standard, rarely pink to almost white; standard erect on a tapered claw, 4–6 cm long with a prominent raised boss; wings on a slender claw with auricles, narrowed to an acute tip; keel 5–6 cm long, descending, long-tapering, acute, on a short claw with basal auricles. Stamens alternately short and long, 9 fused and 1 free. Pistil slender; stipe prominent; ovary narrow, with many ovules; style tapered to a small, glabrous stigma. Legume cylindrical to narrowly ellipsoidal and tapering to a slender straight beak, 40–90 mm long, somewhat inflated, the suture deeply impressed; dehiscing along the suture, later also along the opposite side. Seed numerous, disc-like, pale.

*Distribution* Widespread through arid Western Australia from North-West Cape S to Kalgoorlie and E through the western desert and Nullarbor Plain to inland South Australia and western New South Wales as well as the southern Darling Downs; occasional in far-southern Northern Territory.

*Etymology* The generic name is formed from the family and given names of the first European collector of this plant, William Dampier, who, until now, has been acknowledged nomenclaturally only in a synonym of the species.



Among his many activities Dampier was a privateer and hence might find a little wry humour in seeing his name slightly corrupted. The Dedication in his 'Voyage to New Holland' (1703) is signed 'Will. Dampier'. He collected the plant in September 1699 on 'Rosemary Island' (the present-day East Lewis Island) in what is now known as the Dampier Archipelago off the north-western coast of Western Australia. A photograph of his collection was given in George (1971).

*The type locality* No previous writer has discussed the type locality of *Willdampia formosa*. It was collected on the first of Phillip Parker King's voyages surveying the Australian coast. Although most botanising on these voyages was undertaken by Allan Cunningham, King himself has been cited as the collector of this plant. In his journal (King, 1827), he gave a detailed account of their exploration of what he called the Curlew River on 20 February 1818 but did not mention the flora except 'a species of *eucalyptus*' and mangroves. The Curlew is now known as the Ashburton River. King and his party 'ascended it in a boat for four miles'. For two miles they rowed past mangroves, but 'Beyond this the banks were low and sandy'. They landed but found an arid country with poor, mostly sandy soil and 'large patches of salt incrustations'. It was probably in this area that they found Sturt Pea. The date of collection is interesting since Sturt Pea usually flowers in winter and early spring. In contrast to the terrestrial environment, they found the river abounding in fish (but of a 'nauseous taste'), and pelicans and curlews were very numerous (hence the name given to the river). But 'the most numerous

and annoying of the inhabitants of this part were the flies, from their constantly creeping into the eyes, nostrils, and mouth, particularly during our meals; and it required some little trouble to partake of our repast without also conveying with it several of these troublesome insects.'

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