

Ruellia tweediana, a new name for a well known Queensland weed

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Summary

The weedy hydrophilous *Ruellia* occurring in Queensland has been mis-named as *Ruellia brittoniana* or *R. malacosperma*. The correct name for this weed is *Ruellia tweediana* Griseb.

Introduction

A species of *Ruellia* (family Acanthaceae) with linear leaves and large purple or bluish flowers (Figures 1–3) has been a popular garden plant, as it is very hardy and the flowers are very attractive. Over the last few decades it has become an environmental weed.

The correct name for this species has been in doubt for many years. It has been variously called *Ruellia brittoniana*, *R. coerulea*, *R. tweediana* or *R. malacosperma*. I have examined the publications of Ezcurra (1993) and Wunderlin and Hansen (2004), viewed some images of type specimens (New York Botanic Gardens (2003 onwards); Harvard University Herbaria (2001 onwards)), and discussed the matter with Bruce Hansen (University of South Florida), and am now convinced that the correct name is *R. tweediana*.

Origin and distribution

Ezcurra (1993) recorded the native distribution of *R. tweediana* (under the name *R. coerulea*) as being western Bolivia, Paraguay, Uruguay, north-eastern Argentina, and southern Brazil. This part of South America (between latitudes 18–34°S) has a subtropical climate, with moderate rainfall (roughly 800–1300 mm per annum).

Some references (Godfrey and Wooten 1981, Diggs *et al.* 1999) record *R. tweediana* (under the name *R. brittoniana*) as being native to Mexico, but that is probably a mistake, and its occurrence there is probably as a naturalized plant.

It is certainly naturalized in south-eastern USA (where it is called Mexican bluebell or wild petunia), being recorded from Texas to Florida. I have been unable to confirm any naturalizations outside North America (including Hawaii) and Australia from the literature, but the Queensland Herbarium does have a specimen collected recently from New Guinea.

Much useful and interesting information about this plant is given in Hammer (2002).

Weediness in Australia

Ruellia tweediana has been grown as a garden plant in Australia for at least 50–60

years. The first specimen-based record of it as a weed in Queensland (and Australia) was in 1976, from Gladstone. The collector recorded that it was growing as a weed on a house allotment, and that it was proving difficult to eradicate. Several records of naturalization were reported during the 1980s, and since then, the species has spread rapidly. *R. tweediana* is now known from many parts of coastal Queensland, from Torres Strait to Beenleigh, and in some areas well removed from the coast. It is a hydrophilous weed that inhabits swampy areas or creek banks, and is sometimes semi-aquatic. It can form dense thickets about a metre high that



Figure 1. *Ruellia tweediana*, flowering plant.



Figure 2. *Ruellia tweediana*, fruiting plant.

completely exclude native species (Figure 3).

As in other species in the Acanthaceae family, the seeds are enclosed in a capsule that opens explosively at maturity. In the process, the seeds are flung a considerable distance from the parent plant. Also the seeds of *Ruellia* spp. are covered with mucilaginous hairs that become erect on wetting (Barker 1986) and allow the seeds to float.

Its very efficient vegetative propagation is amply described by Vandaveer (2003), who says 'I have never planted *Ruellia tweediana* in my garden (in Florida, USA). They are there because the runners have come over from a neighbour's yard. Although I've pulled them repeatedly and even sprayed with glyphosate, the plants are now a good twenty feet (six metres) into my garden and defy all attempts to eradicate them'.

As far as I can ascertain, *R. tweediana* has not yet escaped from cultivation in any other state of Australia, but it must be only a matter of time before it invades coastal parts of New South Wales.

It is not currently listed as a declared plant species in Queensland, nor in any

other state of Australia, but it is listed among the Top 200 environmental weeds of south-eastern Queensland (Batianoff and Butler 2002).

Nomenclature

Until the late 1980s, the name *R. brittoniana* was widely applied to this plant, both in Australia and overseas. Many recent publications and listings from the USA have used the name *R. tweediana*, although *R. brittoniana* still appears on nursery catalogues and some taxonomic listings.

The correct name is undoubtedly *R. tweediana*, as shown by the synonymy (gleaned from Wunderlin and Hansen (2004) and Ezcurra (1993)), and the discussion given below:

Ruellia tweediana Griseb., Abh. Königl. Ges. Wiss. Göttingen 24: 249 (1879)
Cryphiacanthus angustifolius Nees in DC., Prodr. 11: 199 (1847), non *Ruellia angustifolia* Sw. (1788); *Ruellia spectabilis* Britton, Ann. New York Acad. Sci. 7: 192 (1893), nom. illeg. non Nicholson (1886); *Ruellia brittoniana* Leonard, J. Washington Acad. Sci. 31: 96 (1941), nom. illeg. Type: Argentina. Entre Rios,

undated, *J. Tweedie s.n.* (lecto: K), fide Ezcurra (1993).

All of the names listed above are based upon the same type. The basionym is *Cryphiacanthus angustifolius*. That species epithet could not be transferred to *Ruellia* because *R. angustifolia* had already been published by Swartz. Grisebach obviously realized this and published *Ruellia tweediana* as a replacement name. Britton was also aware of Swartz's name and proposed the name *Ruellia spectabilis* as a replacement. Unfortunately, that name had been published earlier by Nicholson. Leonard proposed the name *R. brittoniana* as a replacement for Britton's epithet, and *R. brittoniana* was in use for many years. However, both Britton and Leonard overlooked the publication of *R. tweediana* by Grisebach in 1879, a name that must take precedence. *R. brittoniana* is an illegitimate name because it is superfluous (Greuter *et al.* 2000, Article 52.1).

Another name that has been used for this plant is *Ruellia coerulea* Morong. Ezcurra (1993) believed that *Ruellia tweediana* was not validly published by Grisebach, and because of that, placed *R. tweediana* in



Figure 3. clump of *Ruellia tweediana* growing beside a creek.

synonymy under the later name *R. coerulea* (published in 1893). Grisebach's original description of *R. tweediana* was reproduced in Fernald (1945: 9). The Latin description given by Grisebach is rather brief and not very diagnostic, but it is undoubtedly a valid publication of the name. Wunderlin and Hansen (2004) have produced an accurate and comprehensive synonymy for this and related species.

Previous names used in Australia

1. *Ruellia brittoniana* Leonard. This name can be discounted as it is a homotypic synonym of *R. tweediana* (see above).
2. *Ruellia malacosperma* Greenm. In her revision of the Acanthaceae in Australia, Barker (1986) decided that the linear-leaved weedy species was probably not *R. brittoniana* but closer to *R. malacosperma*. She settled on the terminology '*Ruellia* aff. *malacosperma*'.

Ruellia malacosperma is native to Mexico and south-eastern USA, including Florida, and is known as the 'softseed wild petunia'. Bruce Hansen, curator of the Herbarium at the University of South Florida informs me that 'In *Ruellia malacosperma* the leaves are lanceolate to oblanceolate or spatulate, while in *R. tweediana* they are very narrowly lanceolate to nearly linear'. I have looked at images of the syntype specimens of *R. malacosperma* (Pringle 6806) held at New York Herbarium and Gray Herbarium (Boston), and they certainly have elliptical to lanceolate leaves, not nearly as long as those of *R. tweediana*, though it seems otherwise similar. In the event that these species were considered synonymous, *R. tweediana* would still be correct as it is the earlier name (published 1879) and therefore has priority over *R. malacosperma* (published 1899).

Acknowledgments

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