

SHORT COMMUNICATION

Alexgeorgia nitens, a new combination in Restionaceae

In his original description of the Western Australian genus *Alexgeorgia*, Carlquist (1976) discussed the identity of *A. arenicola* Carlquist *vis-à-vis* *Restio nitens* Nees. He commented that ‘habitat similarity between herbarium specimens determined as *Restio nitens* Nees and the plants described here as *Alexgeorgia arenicola* is striking’.

Generic identity in this case depends on the interpretation of structures that have been described as fruits in *R. nitens*, since the fruits of *Alexgeorgia* are subterranean, borne singly, and much larger than those of the Australian species that have been referred to *Restio*. Male spikelets of both genera are similar and borne on aerial branches.

In the protologue, Nees interpreted the Type of *R. nitens* as female and as having diseased fruits (‘fructus morbosus’), naming the pathogen *Uredo restionum* Nees from the same material. Blackall (1959) illustrated a presumed fruit of *R. nitens* in a small sketch that shows sutures or ridges but no evidence of dehiscence.

Carlquist (1976) stated that if what appear to be fruits of *R. nitens* were galls, ‘specimens of *R. nitens* might be referable to the plant called *Alexgeorgia arenicola* here’ but that ‘for the present I find no reason to discredit Blackall’s drawing of the *R. nitens* fruit, and believe we must assume that *R. nitens* is a *Restio* unless field studies in the future show otherwise’.

We have examined a wide range of specimens in PERTH, UWA, AD and NSW but have found no mature fruits characteristic of ‘*Restio*’ among material attributed to *R. nitens*. Specimens previously identified as *R. nitens* frequently bear structures superficially resembling fruits but, in all cases we examined, these are galls resulting from fungal infection of a male inflorescence. In smutted inflorescences the ovaries of the pistillodes are enlarged, indehiscent and filled with a powdery spore-mass, without any seed development. Blackall’s illustration is a reasonable match for such an enlarged pistillode. Smutted plants are very common and mostly have all inflorescences affected. Johnson & Evans (1966) refer to abnormalities arising from fungal infection in eastern Australian Restionaceae.

Extensive field observations have confirmed the lack of healthy capsules characteristic of ‘*Restio*’. We have found female spikelets characteristic of *Alexgeorgia* in plants that we would otherwise have identified as *R. nitens*. The rarity of female inflorescences in collections can be explained by the common practice of collecting only the above-ground structures and the rather infrequent flowering of females. The geographic and ecological distributions recorded for *Restio nitens* and *Alexgeorgia arenicola* are consistent.

We therefore conclude that *R. nitens* and *A. arenicola* are conspecific and that the following new combination is necessary.

***Alexgeorgia nitens* (Nees) L. Johnson & B. Briggs, comb. nov.**

BASIONYM: *Restio nitens* Nees in Lehm., Pl. Preiss. Enum 2: 59 (1846).

HOLOTYPE: 'In arenosis porrectis sylvae prope Bassandeen, Perth, m. Nov. a. 1839 et in arenosis ad fluvium Cygnorum supra oppidulum Perth', *Preiss 1696* (LD) ♂; galled, with fungus-infected inflorescences. Isotype MEL 14779. The citation appears to imply two locations but, since *Preiss 1696* is the only number cited, lectotypification does not appear necessary.

SYNONYM: *Alexgeorgea arenicola* Carlquist, *Austral. J. Bot.* 24: 284 (1976).
Type: Western Australia: swampy area about 7 km north of Bullsbrook, *Carlquist 5643*, 16.xi.1974. **LECTOTYPE** (here designated): ♀ RSA; isolectotypes: ♀ NSW, PERTH. **Lectoparatype:** ♂ RSA; isolectoparatypes: ♂ NSW, PERTH.

Carlquist 5643 in RSA was designated as holotype but consists of male and female pieces. Article 7.5 of the International Code of Botanical Nomenclature (1983) states that 'When two or more specimens have been designated as types by the author of a specific or infraspecific name (e.g. male and female, flowering and fruiting, etc.), the lectotype must be chosen from among them'. Although a single number was designated as holotype, this comprised two specimens and, under the Article quoted, it has therefore been appropriate to select a lectotype.

The range of *Alexgeorgea nitens* extends on the coastal plain from the Arrowsmith River to the Canning River and inland to near Pingelly, with a single report from the Margaret River district.

References

- Blackall, W. E. (1959). 'How to Know Western Australian Wildflowers'. Part 1. (Univ. Western Austral. Press: Nedlands).
Carlquist, S. (1976). *Alexgeorgea*, a bizarre new genus of Restionaceae from Western Australia. *Austral. J. Bot.* 24: 281-295.
Johnson, L. A. S. & Evans, O. D. (1966). Restionaceae. *Contr. New South Wales Natl. Herb. Fl. Ser.* 25: 2-28.

Manuscript received: 11.4.1984

Manuscript accepted: 22.3.1985

L. A. S. Johnson & B. G. Briggs
Royal Botanic Gardens
Sydney, Australia 2000