A new name in Ruellia L. (Acanthaceae) for Madagascar

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Abstract

Recent molecular phylogenetic studies showed that the endemic Malagasy Eusiphon Benoist is nested within Ruellia L. (Acanthaceae). The authors here propose a new name to replace an illegitimate later homonym for Eusiphon longissimum Benoist: Ruellia quartziticola Callm., E. Tripp & Phillipson. This striking species is rare in the wild and endemic to the quartzite veins of the Highlands of Madagascar. Following IUCN Red List Categories and Criteria, Ruellia quartziticola is considered to be “Critically Endangered”.

Key-words
ACANTHACEAE – Eusiphon – Ruellia – quartzite – IUCN Red List

Résumé

Introduction

The large family Acanthaceae has recently been the subject of many molecular phylogenetic studies (McDADE & al., 2000; MANKTELOW & al., 2001; McDADE & al., 2005; McDADE & al., 2008). These studies have demonstrated the existence of several major, well-supported lineages and have provided extensive discussion of the last comprehensive taxonomic treatment of the family (SCOTLAND & VOLLESEN, 2000). One of these lineages, the large pantropical Ruellieae (ca. 1200 spp.), has been the subject of expanded investigations by one of us (EAT) and colleagues (TRIPP, 2007; TRIPP & MANOS, 2008; TRIPP & al., 2009; TRIPP, 2010; TRIPP & FATMAH, 2012; TRIPP & MCDADE, 2012; TRIPP & al., 2013a; TRIPP & al. 2013b). In particular, TRIPP & al. (2013a; Table 1 therein) explored phylogenetic relationships among the 48 genera previously treated in this tribe by SCOTLAND & VOLLESEN (2000), and provided them with a revised classification. This comprehensive study included all five genera of the tribe endemic to Madagascar: Benoicanthus Heine & A. Raynal (1 sp.), Eusiphon Benoist (3 spp.), Ioncanthus Benoist (1 sp.), Pseudoruellia Benoist (1 sp.), and Zygoruellia Baill. (1 sp.). This last genus was excluded from Ruellieae and placed provisionally in Whitfieldieae; its precise taxonomic affinities remain to be investigated. The other four genera were nested with strong support in larger genera (TRIPP & al., 2013a), and these phylogenetic data in combination with morphological features resulted in their being treated as synonyms. Ioncanthus was merged with the African genus Melleria S. Moore whereas Benoicanthus, Eusiphon and Pseudoruellia were merged with the very large and widespread genus Ruellia L. New species combinations were provided as needed.

In the course of updating the Acanthaceae treatment for the “Catalogue of the Vascular Plants of Madagascar” (MADAGASCAR CATALOGUE, 2014) to reflect the changes outlined above, we noticed that a new combination proposed by TRIPP & al. (2013a) for Eusiphon longissimum Benoist in Ruellia was already occupied by the earlier homonym Ruellia longissima D. N. Gibson. In this note, we therefore propose a new name for this species: R. quartziticola Callm., E. Tripp & Phillipson. Preliminary conservation threat assessments for this species following IUCN Red List Categories and Criteria (IUCN, 2012) and a distribution map are additionally presented.


Observations. – Ruellia quartziticola is a striking species with its exceptionally long white corollas (up to 18 cm), which are densely covered by a greyish indumentum. This species possesses the longest corolla of all known Acanthaceae in Madagascar (BENOIST, 1955). Crossandra nobilis Benoist also has exceptionally long white corollas and interestingly, both of these species are restricted to quartzite substrates of the highlands of Madagascar. Several species in other families are also endemic to this substrate including Ipomoea perrieri Deroin (Convolvulaceae), Perrierodendron quartzitorum J.-F. Leroy, Lowry, Haev., Labat & G. E. Schatz (Sarcolaenaceae), Psidia quartziticola Humbert, Senecio quartziticolus Humbert and Vernonia quartziticola Humbert (Asteraceae).

Conservation status. – Ruellia quartziticola is apparently very rare in its natural habitat. H. Perrier de la Bâthie collected the type nearly a hundred years ago, and P. Morat collected it 50 years later (Morat 3139). Both known localities are on the quartzite outcrops of the Malagasy highlands to the south-west of the town of Antsirabe (Fig. 1). Two important quartzite outcrops in this area, the Ibity and Iremo massifs, currently hold temporary protection status and are in the process of being established as new protected areas. However, despite intensive collection efforts at these sites, the species has not been located. With only two known collections, an “Area of Occupancy” (AOO) of 18 km² (following CALLMANDER & al., 2007), neither of which are within Madagascar’s protected area network, Ruellia quartziticola can be assessed as “Critically Endangered” (CR A3c) following the IUCN Red List Categories and Criteria (IUCN, 2012).

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References


Taxonomy

Ruellia quartziticola Callm., E. Tripp & Phillipson, nom. nov.


**Fig. 1.** Detailed map of the Central Highlands including quartzite substrate in the region (grey) and proposed new protected areas (hatched), collections of *Ruellia quartziticola* Callm., E. Tripp & Phillipson (squares: Perrier de la Bâthie 12374 [P]; Morat 3139 [M]).