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The transfer of the Malagasy species of *Strobilanthes* Blume to *Acanthopale* C. B. Clarke (Acanthaceae)

Martin W. Callmander & Peter B. Phillipson

Abstract

CALLMANDER, M. W. & P. B. PHILLIPSON (2015). The transfer of the Malagasy species of *Strobilanthes* Blume to *Acanthopale* C. B. Clarke (Acanthaceae). *Candollea* 70: 253–256. In English, English and French abstracts. DOI: <http://dx.doi.org/10.15553/c2015v702a12>

Five *Acanthaceae* species originally described in the genus *Strobilanthes* Blume are formally transferred to the genus *Acanthopale* C. B. Clarke, following currently accepted generic delimitation in the family. The necessary combinations: *Acanthopale breviceps* (Benoist) Callm. & Phillipson, *Acanthopale cuneifolia* (Benoist) Callm. & Phillipson, *Acanthopale humblotii* (Benoist) Callm. & Phillipson, *Acanthopale perrieri* (Benoist) Callm. & Phillipson and *Acanthopale ramiflora* (Benoist) Callm. & Phillipson are established.

Résumé

CALLMANDER, M. W. & P. B. PHILLIPSON (2015). Transfert des espèces malgaches de *Strobilanthes* Blume à *Acanthopale* C. B. Clarke (Acanthaceae). *Candollea* 70: 253–256. En anglais, résumés anglais et français. DOI: <http://dx.doi.org/10.15553/c2015v702a12>

Cinq espèces d'*Acanthaceae* décrites dans le genre *Strobilanthes* Blume sont formellement transférées dans le genre *Acanthopale* C. B. Clarke, en accord avec les délimitations génériques qui prévalent actuellement dans la famille. Les nouvelles combinaisons nécessaires: *Acanthopale breviceps* (Benoist) Callm. & Phillipson, *Acanthopale cuneifolia* (Benoist) Callm. & Phillipson, *Acanthopale humblotii* (Benoist) Callm. & Phillipson, *Acanthopale perrieri* (Benoist) Callm. & Phillipson and *Acanthopale ramiflora* (Benoist) Callm. & Phillipson sont établies.

Keywords

ACANTHACEAE – *Acanthopale* – *Strobilanthes* – New combinations – Madagascar

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Introduction

Phylogenetic studies have greatly improved our understanding of the large family *Acanthaceae* (McDADE et al., 2000 and references herein) and were discussed in the last comprehensive review of the generic level taxonomy of the family by SCOTLAND & VOLLESEN (2000). Several major well-supported phylogenetic lineages have been revealed and these have been discussed on the basis of morphological and molecular evidence. Expanded investigations have subsequently permitted the delimitation and generic circumscriptions within certain tribes to be further refined, such as in the case of the largest of these, the *Ruellieae* Nees (c. 1200 spp.) (TRIPP, 2007; TRIPP et al., 2009; TRIPP et al., 2013). The *Ruellieae* is well-represented in Madagascar, and while some of the necessary nomenclatural changes following the revised generic circumscription have already been effected (CALLMANDER et al., 2014; TRIPP, 2007; TRIPP et al., 2013), others require further investigation.

CLARKE (1899) described the genus *Acanthopale* C. B. Clarke in his treatment of the *Acanthaceae* for “Flora of Tropical Africa” to accommodate all the African species formerly included in *Strobilanthes* Blume, from which it differed notably in pollen morphology. BENOIST (1939) retained in the latter genus the only species of this group previously known from Madagascar, *S. madagascariensis* Baker, and described two new species. However, *S. madagascariensis* (but not the other species) was later transferred to *Acanthopale* by BREMEKAMP (1943), who described additional species from Continental Africa and argued that the two genera are distinct. BENOIST (1945, 1946, 1947) nevertheless continued to regard the two genera as synonyms and described six additional species and one variety from Madagascar in *Strobilanthes*. One of these species, *S. gracilicaulis* Benoist, was later transferred to the genus *Dyschoriste* Nees (BENOIST, 1967).

A pragmatic approach to the systematics of *Strobilanthes* has been adopted recently and provides geographical, morphological and molecular phylogenetic coherence (CARINE & SCOTLAND, 2002; MOYLAN et al., 2004). This approach has been adopted in all recent taxonomic revisions (e.g., WOOD & SCOTLAND, 2003, 2006, 2009; DENG et al., 2006, 2010). The genus *Strobilanthes* as currently defined includes more than 450 spp. and is distributed from South Asia to Northern Australia through Southeast Asia and Malesia (MOYLAN et al., 2004), whereas *Acanthopale* is restricted to Africa and Madagascar (BREMEKAMP, 1943, 1944; SCOTLAND & VOLLESEN, 2000; TRIPP et al., 2013).

In the course of reviewing the genera of *Acanthaceae* for the “Catalogue of the Vascular Plants of Madagascar” (MADAGASCAR CATALOGUE, 2015), we noticed that only a single species of *Strobilanthes* from Madagascar had an available combination in *Acanthopale*, despite the general acceptance that the genus *Strobilanthes* is absent from Africa and

Madagascar. For the preparation of this note we examined all of the material cited by BENOIST (1967) as well as additional collections known from Madagascar and deposited at G, K, MO and P, mostly more recent, and reviewed the eight species of *Strobilanthes* that he recognised in the Flora. In this note we establish the five necessary new combinations for the Malagasy species recognized in *Strobilanthes* by BENOIST (1967) and place two species and one variety in synonymy. We also provide brief explanatory observations for certain species, and a full list of specimens examined and distribution maps for all the accepted species of *Acanthopale* can be found in the MADAGASCAR CATALOGUE (2015).

Recent taxonomic treatment for Continental Africa accepts 6 to 8 species (VOLLESEN, 2008), and the 6 species accepted here for Madagascar therefore nearly double the number of species in the genus. A complete revision of the genus may reveal that certain African and Malagasy species should be regarded as synonyms, but will also likely reveal new species endemic to Madagascar. TRIPP (2007) has suggested that two Malagasy species currently placed in *Ruellia* L. with echinate pollen grains (typically coarsely reticulate in *Ruellia*) may also be better included in *Acanthopale*: *Ruellia cyanea* Benoist and *R. dissidens* Benoist. Further taxonomic and molecular work is needed to determine the systematic position of these two species and indeed to fully understand the diversity of the genus in Madagascar as a whole and its relation with the African species. A complete revision of *Acanthopale* is clearly needed (see also CLARKE, 1899; VOLLESEN, 2008).

Nomenclature

Acanthopale breviceps (Benoist) Callm. & Phillipson, **comb. nova.**

≡ *Strobilanthes breviceps* Benoist in Not. Syst. (Paris) 12: 7. 1945.

Typus: MADAGASCAR. **Prov. Toamasina:** sur la rivière Anova, c. 200 m, IX.1912, *Perrier de la Bâthie* 9460 (holo-: P [P00089257]!; iso-: P [P00089258]!).

Acanthopale cuneifolia (Benoist) Callm. & Phillipson, **comb. nova.**

≡ *Strobilanthes cuneifolia* Benoist in Not. Syst. (Paris) 12: 6. 1945.

Typus: MADAGASCAR. **Prov. Antsiranana:** Massif du Tsaratanana, 1700 m, XII.1923, *Perrier de la Bâthie* 15270 (holo-: P [P00089259]!; iso-: K [K000394193]!, P [P00089260, P00089261]!).

= *Strobilanthes mediocris* Benoist in Not. Syst. (Paris) 12: 8. 1945. **Typus:** MADAGASCAR. **Prov. Antsiranana:** Massif du Tsaratanana, c. 2000 m, I.1923, *Perrier de la Bâthie* 15589 (holo-: P [P00089272]!).

Observations. – *Strobilanthes cuneifolia* and *S. mediocris* were described from the same locality in the Tsaratanana massif in north-eastern Madagascar. The two taxa have been segregated on the basis of the presence of trichomes on the sepals “au moins dans la partie terminale” in *S. mediocris* and their absence in *S. cuneifolia*: (BENOIST, 1967: 98). Examination of the herbarium collections available now shows that this character is not clear-cut and we therefore prefer to recognize a one species at mid to high elevation in the Tsaratanana and Manongarivo massifs and further north in Montagne d'Ambre.

Acanthopale humblotii (Benoist) Callm. & Phillipson, **comb. nova.**

≡ *Strobilanthes humblotii* Benoist in Not. Syst. (Paris) 13: 13. 1947.

Typus: MADAGASCAR. **Prov. Toamasina:** *sine loc.*, s.d., *Humblot 444* (holo-: P [P0089266]!; iso-: K [K000394192]!, P [P0089265]!).

Acanthopale perrieri (Benoist) Callm. & Phillipson, **comb. nova.**

≡ *Strobilanthes perrieri* Benoist in Not. Syst. (Paris) 8: 145. 1939.

Typus: MADAGASCAR. **Prov. Mahajunga:** bois sablonneux Ankaladina sur la Betsiboka (Boeny), VI.1902, *Perrier de la Bâthie 9441* (holo-: P [P00089273]!; iso-: P [P00089274, P00089275]!).

Acanthopale ramiflora (Benoist) Callm. & Phillipson, **comb. nova.**

≡ *Strobilanthes ramiflora* Benoist in Not. Syst. (Paris) 12: 7. 1945.

Typus: MADAGASCAR. **Prov. Antanarivo:** Mt. Angavokely, 1450 m, III.1924, *Perrier de la Bâthie 16075* (holo-: P [P00089276]!; iso-: P [P00089277, P00089278]!).

= *Strobilanthes curviflora* Benoist in Not. Syst. (Paris) 12: 6. 1945. **Typus:** MADAGASCAR. **Prov. Toamasina:** Massif de l'Andrangovalu au SE du lac Alaotra, Zahamena RN, c. 1200 m, X.1937, *Humbert & Cours 17951* (holo-: P [P00089262]!; iso-: K [K000394187, K000394188]!, P [P00089263, P00089264]!).

= *Strobilanthes madagascariensis* var. *calvescens* Benoist in Not. Syst. (Paris) 12: 138. 1946. **Typus:** MADAGASCAR. **Prov. Fianarantsoa:** bois humide de la rivière Raimany, bords du Matitana, 700 m, IX.1910, *Perrier de la Bâthie 9475* (holo-: P [P00089269]!; iso-: P [P00089270, P00089271]!).

Observations. – *Strobilanthes ramiflora* and *S. curviflora* were distinguished on the basis of the shape and the pubescence of the bracts and on the number of flowers of the inflorescences (BENOIST, 1956, 1967). Those characters vary in the collections now available and we currently prefer to recognize a single taxon. *Strobilanthes madagascariensis* var. *calvescens* has been segregated on the basis of a single collection (*Perrier de la Bâthie 9475*) due to the sparser pubescence on its bracts and sepals. However, in our opinion, this collection matches *Acanthopale ramiflora* very well. We therefore recognize only one species at mid elevation (700-1200 m) in the highlands and eastern region of Madagascar.

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