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Observations on Madagascan Amyrea Leandri and Tannodia Baill. (Euphorbiaceae)

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Abstract

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Seven names for currently recognized taxa within Madagascan *Amyrea* Leandri and *Tannodia* Baill. *(Euphorbiaceae)* are discussed and reduced to synonymy, and in some cases in a different genus. *Amyrea celastroides* Radcl.-Sm. is synonymized under *Amyrea humbertii* Leandri, *Amyrea eucleoides* Radcl.-Sm. under *Cleistanthus occidentalis* (Leandri) Leandri, *Amyrea maprouneifolia* Radcl.-Sm. under *Tannodia cordifolia* Baill., *Amyrea myrtifolia* Radcl.-Sm. under *Thecacoris perrieri* Leandri, *Amyrea stenocarpa* Radcl.-Sm. under *Amyrea humbertii* Leandri, *Tannodia grandiflora* var. *myrtifolia* Radcl.-Sm. under *Tannodia cordifolia* Baill., and *Tannodia nitida* Radcl.-Sm. under *Tannodia perrieri* Baill.

Résumé

McPHERSON, G. (2015). Observations sur les genres Amyrea Leandri and Tannodia Baill. (Euphorbiaceae) à Madagascar. *Candollea* 70: 141-144. En anglais, résumés anglais et français. DOI: http://dx.doi.org/10.15553/c2015v701a11

Sept noms de taxons actuellement reconnus dans les genres *Amyrea* Leandri et *Tannodia* Baill. *(Euphorbiaceae)* à Madagascar sont discutés, mis en synonymie, et suivant les cas dans un genre différent. *Amyrea celastroides* Radcl.-Sm. est mis en synonymie sous *Amyrea humbertii* Leandri, *Amyrea eucleoides* Radcl.-Sm. sous *Cleistanthus occidentalis* (Leandri) Leandri, *Amyrea maprouneifolia* Radcl.-Sm. sous *Tannodia cordifolia* Baill., *Amyrea myrtifolia* Radcl.-Sm. sous *Thecacoris perrieri* Leandri, *Amyrea stenocarpa* Radcl.-Sm. sous *Amyrea humbertii* Leandri, *Tannodia grandiflora* var. *myrtifolia* Radcl.-Sm. sous *Tannodia cordifolia* Baill., et *Tannodia nitida* Radcl.-Sm. sous *Tannodia perrieri* Baill.

Keywords

EUPHORBIACEAE – *Amyrea* – *Cleistanthus* – *Tannodia* – *Thecacoris* – Madagascar

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Introduction

A review of the taxonomy of the genera *Amyrea* Leandri *(Euphorbiaceae, Acalyphoideae)* and *Tannodia* Baill. *(Euphorbiaceae, Crotonoideae)*, done as part of an attempt to identify an accumulation of undetermined Madagascan specimens, has convinced me of the need to place into synonymy seven relatively recently published taxa. The two genera are considered together because they are often confused in the field, and sometimes in the herbarium, due to their similarly elongate, axillary, racemose to subspicate inflorescences and superficially similar leaves (Schatz, 2001). In practice, flowering specimens can be separated generically by the presence in *Tannodia* of petals, whereas *Amyrea* lacks petals; fruiting specimens of *Tannodia* bear capsules covered by a short indument, but in *Amyrea* the capsules are glabrous. As well, the leaf blades in *Tannodia* are triplinerved (with one known exception), whereas in *Amyrea* the first pair of secondary veins does not usually arise at the base of the blade.

The new synonyms, all originating as currently recognized taxa within these two genera, are established and discussed below under the appropriate accepted species names. Data concerning all specimens examined can be consulted in the Madagascar Catalogue (2015).

Taxonomy and nomenclature

Amyrea humbertii Leandri in Notul. Syst. (Paris) 9: 169. 1941.

Typus: Madagascar. Prov. Toamasina: Analamazaotra, 800 m, II.1919, *Perrier de la Bâthie 9742* (lecto-: P [P00098119] image seen; isolecto-: P [P00098120] image seen) (lectotypified by Radcliffe-Smith, 1998b).

= *Amyrea celastroides* Radcl.-Sm. in Kew Bull. 53: 440. 1998. **Typus: Madagascar. Prov. Toamasina:** Forest reserve at Andasibe; wet evergreen forest, 20.XII.1988, *Miller 3773* (holo-: P [P00098107] image seen; iso-: MO-3651586!), *syn. nov.*

= *Amyrea stenocarpa* Radcl.-Sm. in Kew Bull. 53: 451. 1998. **Typus: Madagascar. Prov. Toamasina:** Sahamamy, Perinet, 28.XII.1950, *Service Forestier 2531* (holo-: P [P00098135] image seen; iso-: K [K000425610] image seen, MO-6570918!, P [P00098136] image seen, TEF [TEF000201] image seen), *syn. nov.*

Distribution and habitat. – *Amyrea humbertii* is widespread in Madagascar, from low to mid elevations in the eastern evergreen forests as well as from scattered localities in the central highlands and the western dry forests around Bemaraha.

Observations. – The diagnosis of *A. celastroides* states that it contrasts with *A. humbertii* in that it has wider leaves that are entire and thinly coriaceous, with thicker veins, as well as having longer inflorescences and smaller staminate disk glands. The holotype of *A. celastroides* does exhibit leaves in the stated 3-5 cm range, but in the lectotype of *A. humbertii* the leaves are up to 4.8 cm wide, and thus not significantly different. The leaf margins of this lectotype appear to be as near to entire as do those of *Miller 3773*, although specimens of *A. humbertii* often do have evident marginal teeth. The thickness of the leaf venation of the two specimens does not appear to differ. Inflorescence lengths in specimens not otherwise distinguishable from *A. humbertii* sometimes attain 9 cm, the maximum attributed to *A. celastroides*, and no difference in staminate disk gland size was observed in the 4 staminate flowering specimens examined.

In its diagnosis *A. stenocarpa* is distinguished from *A. celastroides* (placed above in the synonymy of *A. humbertii*) by its narrow fruit, 12 × 7 mm. The isotype at MO bears fruits that measure 8-11 × 6-7 mm and are almost certainly immature, with longitudinally collapsed walls and locule apices that project above the central axis of the fruit. The immature fruits of *A. humbertii* sometimes show the same longitudinally collapsed walls and extended locule apices, and its mature fruits measure c. 11 × 11 mm. Given that *Service Forestier 2531* is not otherwise distinct from *A. humbertii*, which is common in the forests near Perinet, I have no doubt that this type specimen represents *A. humbertii*.

Cleistanthus occidentalis (Leandri) Leandri in Nat. Malgache 9: 45. 1957.

≡ *Cleistanthus stenonia* var. *occidentalis* Leandri in Notul. Syst. (Paris) 11: 153. 1944.

Typus: Madagascar. Prov. Mahajanga: Plateau d'Antanimena (Boina), I.1924, *Perrier de la Bâthie 15928* (holo-: P [P00539586] image seen; iso-: P [P00252774]!).

= *Amyrea eucleoides* Radcl.-Sm. in Kew Bull. 53: 440. 1998. **Typus: Madagascar. Prov. Mahajanga:** Forêt à feuilles caduques sur calcaires de l'Antsingy, vers Ambodiriana (E. d'Antsalova), 21-27.I.1960, *Leandri & Saboureau 2765* (holo-: P [P00098111] image seen; iso-: G [G00018199] image seen, K [K000425608] image seen, MO-04954355!, P [P00098112] image seen, WAG [WAG0004318] image seen), *syn. nov.*

Distribution and habitat. – *Cleistanthus occidentalis* is distributed in the western dry forests from Bemaraha to Boina.

Observations. – The type specimen of the new synonym is in fruit and bears infructescences from which the capsules have fallen, leaving remnants of the calyx and disk as well as the columns of the fallen fruit. On the MO isotype, several of these columns clearly display pairs of scars where two ovules were originally attached within each locule; the specimen thus

represents a species belonging to either the *Phyllanthaceae* or the *Picrodendraceae* sensu APGIII (2009), rather than the *Euphorbiaceae* (where *Amyrea* is placed). The apparently fasciculate inflorescence type, the pubescent disk, and the stout column suggest *Cleistanthus*, and in fact this type specimen matches the rarely-collected *C. occidentalis*, known only from the region in which the specimen was found. It appears to be the first fruiting collection of that species.

Tannodia cordifolia Baill. in Adansonia 1: 251. 1861.

Typus: Comoro Islands. Mayotte: M'sapéré Falls, 1850, *Boivin s.n.* (holo-: P [P00048240] image seen; iso-: P [00048241] image seen).

= *Amyrea maprouneifolia* Radcl.-Sm. in Kew Bull. 53: 447. 1998. **Typus: Madagascar. Prov. Antsiranana:** Sables à l'Ouest d'Ankerika (au S de l'embouchure de la Saharenana), 7.II.1966, *Service Forestier 24533* (holo-: P [P00098122] image seen; iso-: MO-6570917!, P [P00399331 spirit]), *syn. nov.*

= *Tannodia grandiflora* var. *myrtifolia* Radcl.-Sm. in Kew Bull. 53: 184. 1998. **Typus: Madagascar. Prov. Antsiranana:** Massif forestier, au SW de Marotaolana (Anivorano-Nord), 3 & 6.III.1964, *Service Forestier 23353* (holo-: K [K000422730] image seen; iso-: MO-04954357!, P [P00105931, P00105932] images seen, [P00399333 spirit]), TEF [TEF000223] image seen), *syn. nov.*

Distribution and habitat. – *Tannodia cordifolia* occurs in Madagascar and in the Comoro Islands (Mayotte). In Madagascar, it occurs in the North around the Marojejy massif, Daraina and Ankarana, and also in the Southwest around the Analavelona massif. This species is present in dry and subhumid tropical forest.

Observations. – The type specimen of *Amyrea maprouneifolia* bears only fruit, and thus has lost the petals that serve to most easily distinguish *Tannodia* from *Amyrea*. However, the specimen's tripliveined leaves and slightly verrucose, densely pubescent fruit would be unique in *Amyrea* but are typical of nearly all species of *Tannodia*. The 5 calyx lobes persisting beneath the fruit and the broadly obtuse leaf base mark the specimen as a small-leafed example of *T. cordifolia*.

On one fruit of the isotype of *T. grandiflora* var. *myrtifolia* at MO, parts of the 5 calyx lobes diagnostic (within Madagascan *Tannodia*) of *T. cordifolia* can be discerned, pubescent and ciliate as in typical specimens, whereas *T. grandiflora* was described as having two glabrous sepals. All other morphological features of *Service Forestier 23353* also accord with *T. cordifolia* Baill.

Tannodia perrieri (Leandri) Radcl.-Sm. in Kew Bull. 53: 177. 1998.

≡ *Domohinea perrieri* Leandri in Bull. Soc. Bot. France 87: 285. 1940.

Typus: Madagascar. Prov. Toamasina: Forêt d'Analamazaotra, 800 m, XII.1911, *Perrier de la Bâthie 9641* (lecto-: P [P00048239] image seen; isolecto-: K [K000422734, K000422735] images seen, P [P00098105, P00098106] images seen) (lectotypified by Radcliffe-Smith, 1998a).

= *Tannodia nitida* Radcl.-Sm. in Kew Bull. 53: 178. 1998. **Typus: Madagascar. Prov. Toamasina:** Forêt orientale, Massif de l'Ambohitsitondroina de Mahalevona (N. de la presqu'île Masoala), 3.XII.1954, *Service Forestier 8710* (holo-: P [P00098102] image seen; iso-: K [K000422731] image seen, MO-6588150!, P [P00105978] image seen), *syn. nov.*

Distribution and habitat. – *Tannodia perrieri* is distributed throughout the east of Madagascar in mid to low elevation tropical evergreen forest.

Observations. – *Tannodia nitida* was distinguished by its author as having glossier, more markedly bi-coloured, and more strongly triplinerved leaves. However, the widely distributed *T. perrieri* displays enough variation in leaf lustre, colour, and venation to easily accommodate *Service Forestier 8710*, the type of *T. nitida*.

Thecacoris perrieri Leandri in Notul. Syst. (Paris) 6: 19. 1937.

Typus: Madagascar. Prov. Toamasina: Forêt d'Analamazaotra, 1400 m, 1911, *Perrier de la Bâthie 2203* (holo-: P [P04778878] image seen; iso-: TAN [TAN000565] image seen).

= *Amyrea myrtifolia* Radcl.-Sm. in Kew Bull. 53: 447. 1998. **Typus: Madagascar. Prov. Toamasina:** Ilôt boisé du sommet de la montagne appelé Analavorikely, 29.XII.1944, *Cours 2149* (holo-: P [P00098123] image seen; iso-: MO-5957215!, P [P00098124] image seen), *syn. nov.*

Distribution and habitat. – *Thecacoris perrieri* is widespread in Madagascar. The species is distributed along the east of Madagascar and in the Sambirano region, in tropical evergreen forest, and has also been identified from riverine and dry forest in the west and the north.

Observations. – The type specimen of *Amyrea myrtifolia* consists of a leafy twig bearing a few, somewhat weathered, infructescence axes and is accompanied by some unattached fruits. The biovulate nature of each locule, which would preclude the placement of the specimen in the *Acalyphoideae* with

Amyrea, is thus not apparent. However, as in *Thecacoris*, the type has leaves that have an entire margin (vs at least obscurely dentate in *Amyrea*), lack a pair of small stipel-like structures at the base of the blade (present in *Amyrea*), and also lack scattered crater-like glands in the blade (present in *Amyrea*); as well, the column of the fruit is divided roughly equally into a thicker proximal portion and a thinner distal portion (the proximal portion is much shorter than the distal in those species of *Amyrea* for which the mature fruit is known). Furthermore, in leaf shape, indument, and other details this type specimen falls easily with the variation of *Thecacoris perrieri*.

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