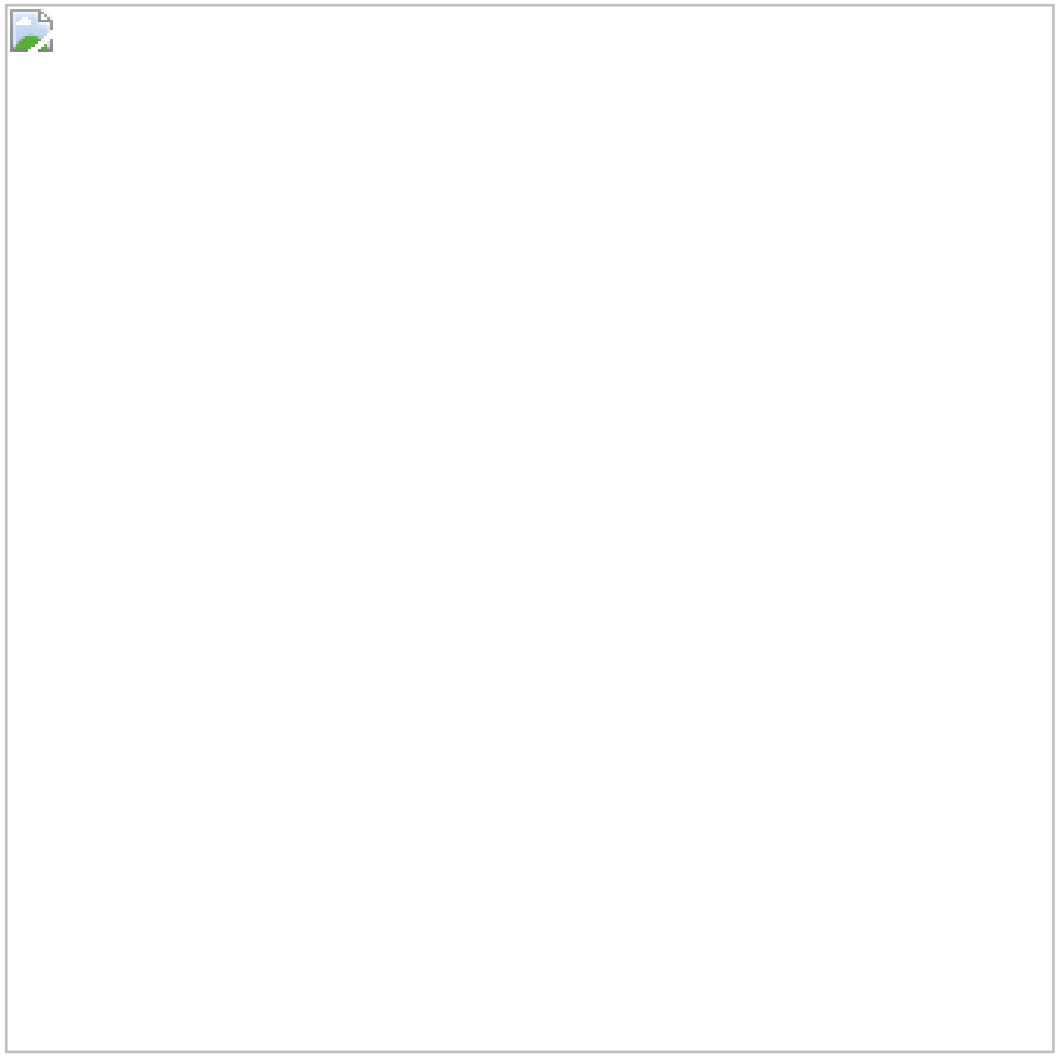

Mimusops Coriacea (A. DC.) Miq. (Sapotaceae): Nomenclature, Distribution and Ecology

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Mimusops coriacea (A. DC.) Miq. (Sapotaceae): nomenclature, distribution and ecology

Introduction

Mimusops coriacea (A. DC.) Miq. is a tree well-known for its edible fruits (Fig. 1A) that are sometimes sold on local markets in eastern Madagascar. It is also the only *Mimusops* L. species native to Madagascar whose fruits are not single-seeded, although it has a typical *Mimusops* flower (Fig. 1B), with two alternate cycles of 4 sepals, a corolla with a short tube and 8 lobes each having two lateral appendages, all of them profoundly divided, 8 staminodes, 8 stamens.

In ENGLER's monograph (1904) of African Sapotaceae, the species is referred as *Mimusops commersonii* (G. Don) Engler (≡ *Imbricaria commersonii* G. Don). The description and the illustration he provided, as well as all the Madagascar specimens he cited, are all clearly *Mimusops coriacea*, a name he cited in synonymy. However, as correctly pointed out by FRIEDMAN (1981), *Imbricaria commersonii* is based on *Mimusops imbricaria* Willd. which is a later synonym of *Imbricaria maxima* Poir. (≡ *Mimusops maxima* (Poir.) R. E. Vaughan), and represents a different species, native to the Mascarenes and never recorded from Madagascar. This misapplication has been unfortunately perpetuated in subsequent treatments, notably in AUBRÉVILLE's treatment (1974) of *Sapotaceae* for the *Flore de Madagascar et des Comores*. The name *Mimusops commersonii* is still widespread on herbarium labels and in popular books.

In this note we confirm the circumscription of *M. coriacea*, and its lectotypification, and provide information regarding its distribution and ecology.

Nomenclature

Mimusops coriacea (A. DC.) Miq. in Mart. Fl. Bras. 7: 44.

≡ *Imbricaria coriacea* A. DC. in Prodr. 8: 200. 1844.

Typus: "Hab. in sylvis insulae Madagascar. Cult. in Mauritius", received 1839, fl., *Bojer s.n.* (lecto-: G-DC [G00 142023]!) (lectotype implicitly designated by FRIEDMANN, 1981). "Mimusops hexandra", received 1839, fl., *L. Bouton s.n.* (syn-: G-DC [G00142033]!); "4157 Mimusops imbricaria Willd. UBL[?] e Mauritio; Comp. angl. des Indes 1831", fl., *anon. s.n.* (syn-: G-DC [G00142032]!); "Mimusops elengi, Fl. Maurit. II", s.d., fl., *Sieber 329* (syn-: G-DC [G00142034]!).

– *Mimusops commersonii* auct. non (G. Don) Engl.: Engler, Mon. Afr. Pflanzenf. 8: 77. 1904 (for Madagascar collections); Aubréville, Adansonia ser. 2, 4: 380. 1964; Humbert, Fl. Madagascar Comores 164: 44. 1974.

Observations. – The *Imbricaria coriacea* folder of the G-DC herbarium contains four specimens. The only one which gives a vague indication of locality is a specimen of *Bojer* cultivated in Mauritius and believed to have originated from material collected in Madagascar. The date on the label is not to be considered as a collection date, it is very probably the year of accession in G-DC. There is little doubt that all 3 other specimens were collected form cultivated plants in Mauritius or in Asia, but their original provenance is not indicated. The *Bojer* collection was cited as the "holotype" by FRIEDMANN (1981), and although this is technically not the case, this should be considered to be an effective lectotypification according to art. 7.11 of ICBN (MCNEILL & al., 2006).

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Fig. 1. – *Mimusops coriacea* (A. DC.) Miq. **A.** In fruit near Masoala, Eastern Madagascar; **B.** Flower in Orangea, Antsiranana.
[Photo: **A:** L. Gautier; **B:** R. Randrianaivo]

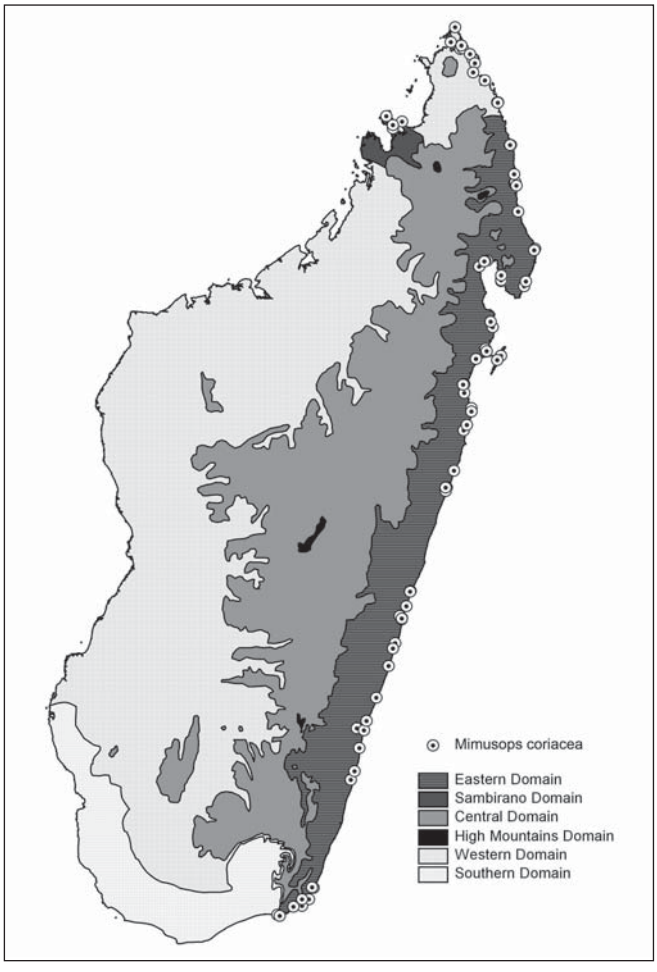

Fig. 2. – Natural range of *Mimusops coriacea* (A. DC.) Miq. in Madagascar, plotted on HUMBERT (1955) map of phytogeographical domains (102 specimens georeferenced with < 5 km incertainity).

Distribution

Although *Mimusops coriacea* has been cultivated widely in the tropics for centuries, it is native only to Madagascar and the Comoro Islands. It is reported as naturalized on Réunion Island. In Madagascar (Fig. 2) it is found exclusively along the east coast from Antsiranana (Diégo-Suarez) in the North down to Tolagnaro (Fort Dauphin) in the south, and on the west coast where it is restricted to the Sambirano Domain (*sensu* HUMBERT, 1955). In this area, it has not been recorded from the Ampasindava Peninsula, but this is probably a sampling artefact, the peninsula has been very inadequately explored.

Ecology

Mimusops coriacea is typically reported to grow on sands as a common component of coastal forests. Out of 47 collections that could be georeferenced with < 30 m incertainity, the average distance to the sea was 1.3 km, with less than 5% of collections made more than 3.6 km from the sea (maximal value 11 km). Accordingly, based on data obtained from the available specimen labels it is always found at low altitude (avg.: 17 m; 5% above 32 m, max value 134 m). With respect to humidity, it appears to be present in all coastal areas with high rainfall and a poorly marked dry season. It seems to be absent from the west coast south of the Sambirano, that experiences a drier climate with a pronounced dry season, but it is found along the coast in the extreme north of the island - an area that also has a low annual rainfall. It is hypothetized that its presence in this area could be related to the shorter duration of the dry season compared with the main part of the west coast south of the Sambirano (CORNET, 1974).

Phenology

For the 91 collections for which a month of collection was available, we recorded whether specimens bore flower buds, flowers, young fruits or mature fruits (or sub-mature fruits). On a monthly basis, the number of specimens were summed (Fig. 3). Flowering occurs throughout the season with maximum rainfall, from October to May. Flower buds and flower are apparently often present simultaneously. Presence of fruits is observed throughout the year, with peaks in March, June and October.

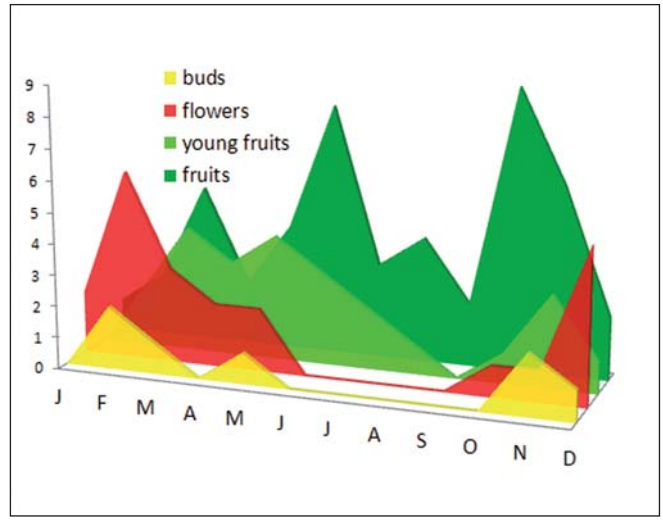

Fig. 3. – Phenology of *Mimusops coriacea* (A. DC.) Miq. in Madagascar (number of specimens having flower buds, flowers, young fruits or fruits per month)

Fig. 4. – A tree of *Mimusops coriacea* (A. DC.) Miq. preserved in the city of Masoala, Eastern Madagascar.
[Photo: L. Gautier]

Conservation status

With an extent of occurrence (EOO) of 233 137 km^2, an area of occupancy (AOO) of 693 km^2 and 46 subpopulations, six of them one encompassed within protected areas (Lokobe, Orangea, Masoala, Mandena, Petriky, St. Luce), *M. coriacea* is assigned a preliminary status of Least Concern following the "IUCN Red List Categories and Criteria" (IUCN, 2001) (calculation following CALLMANDER & al., 2007). Habitat transformation is only a relative threat for the species: when coastal forests are cleared by the local population, trees of *Mimusops coriacea* are usually preserved for their edible fruits. Even when coastal cities develop, trees are still preserved in the urban landscape (Fig. 4).

Common names

In Madagascar: Voranto, Natondriaka, Anganahara, Moroganamara (AUBRÉVILLE, 1974). In the Mascarenes: Pomme Jacot (FRIEDMAN, 1981).

Acknowledgements

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