

A new species of *Ehippiandra* (Monimiaceae: Monimioideae) from Madagascar

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KEY WORDS

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ABSTRACT

Ehippiandra masoalensis Lorence from the Masoala Peninsula of Madagascar is described and illustrated. It is compared with six other species of this Malagasy endemic genus.

RÉSUMÉ

Une nouvelle espèce d'*Ehippiandra* (Monimiaceae : Monimioideae) de Madagascar.

MOTS CLÉS

Ehippiandra masoalensis,
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Madagascar

Description et illustration de *Ehippiandra masoalensis* Lorence de la presqu'île de Masoala. Il est comparé avec six autres espèces de ce genre endémique de Madagascar.

Ehippiandra Decne. is a small genus of Monimiaceae (subfamily Monimioideae) endemic to Madagascar, occurring in tropical wet forest, cloud forest, and high elevation sclerophyllous forest and ericoid formations. The genus was named by DECAISNE (1858) in reference to the low, saddle-shaped stamens characteristic of staminate flowers in the type species, *E. myrtoidea* Decne. The genus was later treated for the Flore de Madagascar et des Comores by CAVACO (1959), who recognized three species. Based on morphological, anatomical, and palynological features, *Hedycaryopsis* Danguy was united with *Ehippiandra* (LORENCE et al. 1984; LORENCE 1985). Thus circumscribed, the genus

comprises six species of monoecious shrubs or small to large trees with opposite dentate or entire leaves, unisexual or sexually mixed inflorescences, staminate flowers with small tepals and 9-50 stamens covering the 4 (5)-fid receptacle, flat discoid pistillate flowers with numerous free, densely packed sessile carpels, and 10-75 free fruiting carpels immersed in cupules on a flat or convex torus.

Since 1986 a collaborative agreement between the Malagasy Government, Missouri Botanical Garden, and Muséum National d'Histoire Naturelle, Paris has facilitated botanical exploration and research efforts in Madagascar. These efforts have yielded collections of a number of

previously unknown Monimiaceae (JÉRÉMIE & LORENCE 1991), including the new species of *Ehippiandra* described below.

***Ehippiandra masoalensis* Lorence, sp. nov.**

Species Ehippiandrae madagascariensi (Danguy) Lorence affinis, differt pubescentia parcius strigulosa, foliis apice breve acuminato; floribus masculis expansis minoribus 5-6 mm diam., staminibus paucioribus, 8-12; floribus foeminis minoribus, 7-8 mm diam.

TYPUS.—MADAGASCAR. Prov. Toamasina: G.E. Schatz, J. & S. Dransfield, D. & B. Du Puy 2787, Masoala Peninsula, ca. 3 km NE of Antalavia, along Antalavia River, 380 m, 15°47'S, 50°02'E, 13-16 Nov. 1989, fl. (holo-, MO 3759727; iso-, EA, K, P, PRE, TAN, US, WAG).

Small monoecious tree 5 m tall with spreading canopy, new growth sparsely strigillose with pale hairs, mature leafy twigs 2-3 mm diam., glabrescent, bark becoming corky. Leaves opposite, petiolate; petioles 8-16 × 1-1.8 mm, adaxially

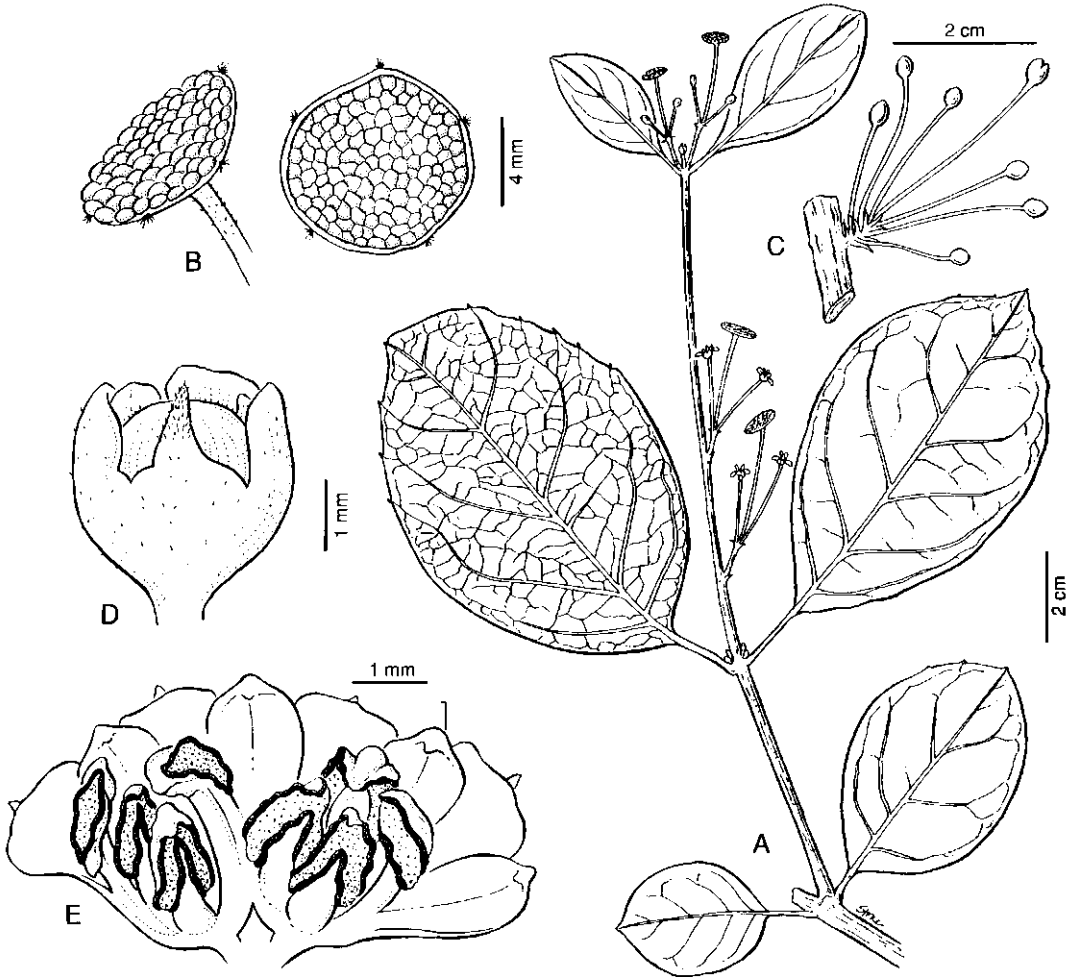


Fig. 1.—*Ehippiandra masoalensis* Lorence: A, leafy twig with mixed inflorescences; B, pistillate flowers, apical and lateral view; C, ramigerous staminate inflorescence (pleiochasium); D, staminate flower in late bud; E, staminate flower at anthesis, opened to show stamens and tepals. All from the holotype, Schatz et al. 2787 (MO).

canaliculate, sparsely strigillose, glabrescent; lamina 3-9.3 × 2.6-6.9 cm, elliptic to broadly elliptic or obovate-elliptic, apex obtuse with short-acuminate point 3-6 mm long, base cuneate to obtuse or rounded, chartaceous, adaxially punctate (from oil cells in hypodermis), strigillose along costa and veins when young, glabrescent, abaxially sparsely strigillose along costa, veins and margin, secondary veins 4-5 pairs, weakly brochidodromous, depressed adaxially, prominent abaxially with basal vein axils sparsely barbate, venation visible to 3° adaxially and to 4° abaxially, margin slightly sinuate-dentate with 2-8 pairs of minute teeth.

Inflorescences axillary or ramigerous on leafless stems, a 3-flowered dichasium with a terminal pistillate flower subtended by two staminate flowers, or staminate flowers in dichasia or pleiochasia of 5-7 flowers, or rarely solitary, axes sparsely strigillose, bracts linear-subulate, 1.3-2.5 mm long, peduncle 2-28 × 0.4-0.7 mm; staminate flower with pedicel 10-30 × 0.3-0.4 mm, globose in bud, 2.5-3 mm in diam, sparsely stri-

gillose, apically with 2 (3) pairs of obtuse tepals 0.5-1 mm long, at anthesis 5-6 mm diam., deeply 4-fid, lobes spreading flat, each lobe with 1 obtuse or truncate tepal 1-1.3 × 1.2-1.5 mm alternating with a smaller tepal between the lobes; stamens 8-12, subulate-ligulate, 1.2-1.5 mm long, filament thick, 0.3-0.5 mm long, loculi lateral, separate or confluent apically, occupying 2/3-3/4 length of stamen, connective slightly prolonged. Pistillate flower on strigillose pedicel 17-30 × 0.5-0.6 mm, at anthesis discoid, flat, 7-8 mm diam., externally strigillose, margin bearing 5-6 minute puberulent tepals; carpels lining the receptacle, ca. 100-125, 0.5-0.8 mm diam., sessile, columnar, 4-6-sided, interspersed with short dense hairs. Fruiting receptacle and carpels not seen.— Figs. 1, 2.

DISTRIBUTION AND HABITAT.—*Ehippiandra masoalensis* is known only from the type locality on the Masoala Peninsula, Madagascar, where it was collected in lowland tropical evergreen wet forest at 380 m elevation.



Fig. 2.—*Ehippiandra masoalensis* Lorence, photo of Schatz *et al.* 2787 showing staminate flower at anthesis and discoid pistillate flowers. From color transparency taken by David Du Puy in 1989.

AFFINITIES.—*Ehippiandra masoalensis* is readily distinguished from four of its congeners which have much smaller, usually entire leaves, i.e. *E. microphylla* (Perkins) Cavaco, *E. myrtoidea*, *E. perrieri* (Cavaco) Lorence, and *E. domatiata* Lorence (which has 1-3 pairs of small marginal teeth). Based on leaf morphology and venation, this new species seems most closely allied to *E. madagascariensis* (Danguy) Lorence and *E. tsaratanensis* (Cavaco) Lorence, both of which have equally large leaves with sinuate-dentate margins. The venation in *E. madagascariensis* is open and craspedodromous and in *E. tsaratanensis* it is transitional between brochidodromous and craspedodromous (LORENCE 1985: 22-24), whereas venation in *E. masoalensis* is weakly brochidodromous and the marginal teeth are not depressed apically as in the latter two species. The stamens are similar morphologically in all three species, although staminate and pistillate flowers in *E. masoalensis* are about half the size of those of the former two species.

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REFERENCES

- CAVACO A. 1959.—Monimiacées, in HUMBERT H. (ed.), *Flore de Madagascar et des Comores*, fam. 80. Firmin-Didot et Cie., Paris.
- JÉRÉMIE J. & LORENCE D.H. 1991.—Six nouvelles espèces de *Tambourissa* (Monimiaceae) de Madagascar. *Bull. Mus. Natl. Hist. Nat., B, Adansonia* 13: 131-146.
- LORENCE D.H. 1985.—A monograph of the Monimiaceae (Laurales) in the Malagasy region (Southwest Indian Ocean). *Ann. Missouri Bot. Gard.* 72: 1-165.
- LORENCE D.H., ZENGER V.E. & VINAY P. 1984.—Pollen morphological studies on the Monimiaceae of the Malagasy region. *Grana* 23: 11-22.

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