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

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**ABSTRACT**

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

**KEY WORDS**

*Ephippiandra masoalensis*,
*Monimiaceae*,
Madagascar.

**RESUME**

Une nouvelle espèce d'*Ephippiandra* (Monimiaceae : Monimioideae) de Madagascar. Description et illustration de *Ephippiandra masoalensis* Lorence de la presqu'île de Masoala. Il est comparé avec six autres espèces de ce genre endémique de Madagascar.

**MOTS CLÉS**

*Ephippiandra masoalensis*,
*Monimiaceae*,
Madagascar.

*Ephippiandra* 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 *Ephippiandra* (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 Ephippiandra described below.

**Ephippiandra masoalensis** Lorence, sp. nov.

*Species Ephippiandraceae madagascariensis* (Danguy) Lorence affinis, differt pubescence 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.


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

![Leafy twig](image1.png)

![Pistillate flowers](image2.png)

![Ramigerous staminate inflorescence](image3.png)

![Staminate flower in late bud](image4.png)

![Staminate flower at anthesis](image5.png)

**Fig. 1.**—*Ephippiandra 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).
Ephippiandra masoalensis (Monimiaceae)
caliculate, sparsely strigillose, glabrescent; lamina 3.9-3.3 × 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, prominently 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 dichasium 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 strigillose, 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.**—*Ephippiandra 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.—*Ephippiandra 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.—*Ephippiandra 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. tsaratanesis* (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. tsaratanesis* 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


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