Manilkara lososiana, a new species of *Sapotaceae* from Cameroon

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Summary. A new species, *Manilkara lososiana* (*Sapotaceae, Manilkareae*), is described and illustrated. The new species is narrowly endemic to the Korup National Park in the Southwest Province of Cameroon, and its habitat, distribution and conservation are discussed.

During the past decade, two long-term studies of tropical forest trees and lianas were initiated in the Korup National Park, Cameroon and in the Réserve de Faune à Okapis, Democratic Republic of Congo. These two large forest dynamics programs are part of a global network of research sites coordinated by the Smithsonian Tropical Research Institute, and are leading to the discovery of many new plant species (e.g., Gereau & Kenfack 2000; Ewango & Breteler 2001; Sonké *et al.* 2002). During the study of the Korup plot vouchers at BR, MO, K, SCA and YA, some specimens belonging to the genus *Manilkara* Adans. could not be matched, and did not fit any of the species described from western and central Africa (Aubréville 1961, 1964; Gautier 1997). Critical examination of the Korup specimens revealed sufficient differences to justify the description of a new species. Further surveys in the Korup area to collect additional specimens of this taxon have so far been unsuccessful. This description is therefore based on a very small number of individuals, and we have little data on intra-specific variation. However, since we have both flowering and fruiting material showing a suite of distinctive characters, there is no reason to delay publication. The new species clearly belongs in the genus *Manilkara* because of the calyx, which has two whorls of 3 sepals each. Although *Manilkara* species are often difficult to separate, ours does not resemble any other described species very closely. *M. pellegriniana* Tisser. & Sillans is the only other species from the region with persistent stipules and glabrous, laciniate staminodes, and the new species can be distinguished from it by a number of well-defined characters.

Manilkara lososiana *Kenfack & Ewango* **sp. nov.** *Manilkarae pellegrinianae* Tisser. & Sillans similis, sed stipulis triangularibus non filiformibus, petiolo breviore 5 – 15 non 20 – 40 mm longo, pedicello longiore, foliorum indumento brunneo (nec griseo-argenteo) distinguitur. Typus: Cameroon, Southwest Province, Korup National Park, *Kenfack* 625 (holotypus YA; isotypi SCA , MO, K).

Tree to 35 m tall, bole straight, 40 cm diameter; bark grey-brown, longitudinally fissured. *Leaves* spirally arranged, clustered at shoot apex; stipules triangular, coriaceous, persistent, 4 – 7 mm long, to 2 mm wide at base, shortly ferrugineous-tomentulose; petiole 5 – 15 mm long, rather stout, pulvinate at the base, tomentulose; blade coriaceous, completely glabrous and glaucous above, covered with ferrugineous-tomentulose scales to glabrescent beneath, obovate to oblong-elliptic, 4.5 – 20.0 × 1.5 – 7.5 cm, apex rounded with a short, broad acumen, 0.2 – 0.5(– 1.0) cm long; midrib impressed and glabrous above, prominent and dark-brown pubescent beneath; secondary veins 12 – 20, occasionally more, brochidodromous, visible but not conspicuous, spreading from costa at angle of 60°, looping about 1 mm from margin, slightly impressed on both surfaces; intersecondary nerves 1 to 3 between each pair of secondaries, parallel. *Inflorescence* fasciculate, in axils of leaves or fallen leaves, (1 –)4 – 8 flowered. *Flowers* with slender pedicels 1.9 – 3.0 cm long, not or hardly elongating in fruit, shortly ferrugineous-tomentulose; calyx of six sepals arranged in 2 whorls of 3, shortly brown-tomentulose outside, glabrous inside, those of outer whorl 4 – 6 × 3 mm wide, those

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of inner whorl to 6 × 1 mm, persistent in fruit; corolla whitish, glabrous, sweet-scented when fresh, drying reddish-brown, petals 6, united at the base into a short tube about 1 mm long, petals deeply 3-lobed, lateral lobes oblong, 4 – 5.3 × 1 – 1.7 mm, median lobe generally less developed, erect, about 4 × 0.6 mm, clawed; stamens 6, glabrous, in a single whorl, united basally with the staminodes and forming a ring that is united with the corolla tube, filaments c. 2 mm long, about twice as long as anthers, anthers to 1 mm long, sagittate at base, apiculate at apex; staminodes 6, alternating with and shorter than the stamens, about 3 mm long, laciniate, and sometimes more deeply divided into two laciniate lobes; ovary globose to conical, 1.0 – 1.5 mm long, pilose, attenuated into an exserted, glabrous, persistent white style c. 4 mm long; stigma punctiform. *Fruit* (immature) oblong, with an apiculus formed by the persistent style and with the persistent sepals at the base, 1.0 – 2.5 cm long, 0.9 – 1.5 cm thick, densely ferrugineous-tomentulose; seeds unknown.

CAMEROON. Southwest Province, near Mundemba, Korup National Park, north end of Chimpanzee Camp, 5°04'09"N, 8°51'35"E, alt. c. 180 m, fl. 4 April 1997, *Kenfack* 625 (holotypus YA; isotypi SCA , MO, K); l.c., fr. 26 Jun. 1997, *Kenfack* 839 (MO, SCA, YA); l.c., 14 Feb. 2004, *Sainge* 1297 (MO, SCA, YA); l.c. fl. 22 March 2004, *Sainge* 1340 (LBV, MO, SCA, YA).

HABITAT. *Manilkara lososiana* Kenfack & Ewango is so far known only from lowland evergreen forest in the southern part of the Korup National Park in Cameroon, at an altitude of about 180 m. The mean maximum annual temperature is 30.6°C and mean annual rainfall exceeds 5000 mm (Chuyong *et al.* 2004). Letouzey (1985) describes the area as dominated by Biafran coastal forest. Letouzey mapped the forest vegetation types found in Korup as widespread along the Cameroon coast, but research by D. W. Thomas (cited in Chuyong *et al.* 2004) shows that the forests of the southern Korup area are a unique type, dominated by *Oubanguia alata* Baker f. (*Lecythidaceae*) and limited to a small area in Southwest Cameroon and Southeast Nigeria with very high seasonal rainfall. The uniqueness of this forest environment may explain the presence of the numerous narrowly endemic taxa that are being discovered there.

ETYMOLOGY. *Manilkara lososiana* is dedicated to Elizabeth Losos, Director of the Center for Tropical Forest Science of the Smithsonian Tropical Research Institute and a Principal Investigator of the Korup Forest Dynamics Plot Program.

CONSERVATION. Although several botanical surveys have been carried out in the southern part of the Korup National Park and many more in Southwestern Cameroon in general, the new species has not been found elsewhere. It is not only rare in Cameroon but is also narrowly endemic to the Korup National Park and rare locally. Only one population with two adult trees and fifteen saplings is known, of which one sapling occurs in the 50 ha Korup Forest Dynamics Plot. Current information shows that the population size of this species is fewer than 50 mature individuals. We therefore assess *M. lososiana* as critically endangered CR D using the IUCN categories and criteria (IUCN 2001). However, the area where it is found is still very poorly known botanically, so future inventory may change this assessment.

Manilkara lososiana can be distinguished from *M. pellegriniana* and other species from Cameroon and Gabon as follows:

1. Staminodes glabrous and laciniate, leaves with persistent stipules:
   2. Stipules 20 – 25 mm, filiform, petioles 20 – 40 mm, flowering pedicels normally less than 20 mm long, leaf undersurface glabrous, grey or silver, in riparian forest · · · · **M. pellegriniana** *Tisser. & Sillans.*
   2'. Stipules 4 – 7 mm long, triangular, petioles 5 – 15 mm, flowering pedicels mostly > 20 mm long, leaf undersurface brown-tomentose to glabrescent, in high forest · · · · **M. lososiana** *Kenfack & Ewango.*
1'. Staminodes various, persistent stipules lacking · · · (8 species in Cameroon and Gabon listed by Gautier 1997)

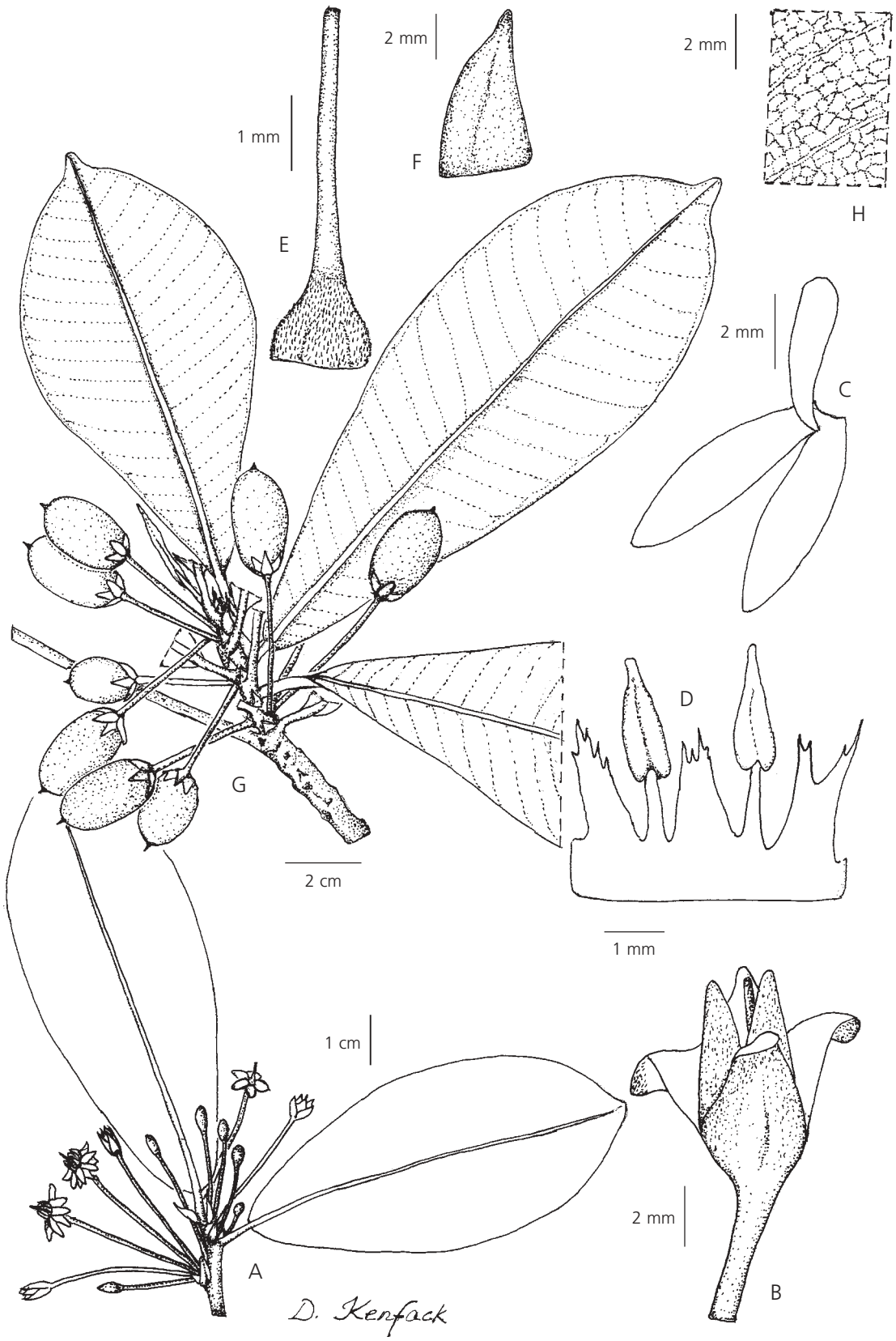

Fig. 1. *Manilkara lososiana*. **A** habit of flowering branchlet; **B** calyx; **C** detail of a petal; **D** portion of stamens and staminodes from outside; **E** gynoecium; **F** stipule; **G** fruiting branchlet; **H** detail of the venation of the leaf upper surface. **A – F** and **H** drawn from *Kenfack* 625, **G** from *Kenfack* 839. DRAWN BY DAVID KENFACK.

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