

**ILLIGERA ELEGANS (HERNANDIACEAE),  
A NEW SPECIES FROM CHRISTMAS ISLAND, INDIAN OCEAN**

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SUMMARY

*Illigera elegans* (Hernandiaceae) is described as a new species. The species is remarkable because it has unclt staminal appendages, a condition up till now only found in two other species, from New Guinea and East Africa (Madagascar, Tanzania), respectively.

The present brief publication proceeds from the preliminary studies in Hernandiaceae for the treatment of this family in Flora Malesiana.

The genus *Illigera* Blume is represented in the Malesian area with 9 species, all woody lianas with trifoliolate leaves with twining petioles. The fruit is notable because of mostly two conspicuous wings, the pentamerous flowers are smallish and rather inconspicuous. Remarkably, the stamens are provided with two small staminal appendages, one at each side at the base of the filament. Between two neighbouring staminal appendages, inserted on the receptacle, a very small interstaminal gland is present or not. Characters for species delimitation can be found in the outline of the wings of the fruit and in the staminal appendages, whether clavate and solid, or petaloid and inflated and hollow, and in the latter case with a dorsal cleft (the greater part of the species) or unclt (a rare condition, see note).

The difficulties in preparing the treatment of the genus for Flora Malesiana were twofold. Firstly, although flowers are hermaphrodite, strangely enough all collections studied are exclusively either flowering or fruiting, making it often hard to match such plants. Secondly, some species seem very rare and have not been recollected in recent times. An example is *I. novoguineensis*, of which only 3 collections are known, all collected around 1900.

In view of the foregoing it was fortunate that two collections from Christmas Island – the first of *Illigera* from that Island, as far as I know – were recently made, one with flowers, the other with fruit. They appeared to be very interesting and to represent a new species.

I thank the Keeper of the Herbarium, Royal Botanic Gardens Kew, for lending me the material studied. The late Dr. H. O. Sleumer (Oegstegeest) kindly provided the Latin translation of the species diagnosis.

***Illigera elegans* Duyfjes, spec. nov.**

Repens. Foliola suborbiculata chartacea. Flores in gemma ovoidei. Perianthii segmenta inaequalia, 5–6 mm longa; staminodiorum appendices inflati, dorso haud incisi, stipite c. 0.5 mm longo incluso c. 2 mm longi, secus marginem excrescentiis digitos aemulantibus c. 0.5 mm longis instructi; glandulae intrastaminales extant. Fructus bi-alatus, utro alis duabus obsoletis instructus; alae  $\pm$  semiorbicularis, c. 2 cm diam. — Typus: *Powell 541* (K).

Creoper. *Leaves*: petiole c. 11 cm long, glabrous; petiolules 2–2.5 cm, glabrous; leaflets chartaceous, suborbicular, top with acumen c. 0.5 cm long, base shortly cuneate, rounded, or cordate, upper surface drying dull, glabrous, but nerves with short hairs, lower surface with domatia in nerve axils, nerves 4 or 5 per side, departing with an angle of 20–40° from the midrib. Thyrses shortly pubescent. *Flower buds* ovoid; stamens straight in bud. *Flowers*: outer and inner perianth segments unequal, slightly pubescent towards the tips, outer tepals largest, c. 6.5 × 2 mm, inner tepals c. 5 × 0.8 mm; filaments filiform; staminal appendages inflated, petaloid, dorsally not cleft, c. 2 mm long, including the c. 0.5 mm long stalk, the rim with distinct fringe of finger-like appendages; interstaminal glands present. *Fruit* 2-winged and with two obsolete wings, 2–2.5 cm long; wings more or less hemi-orbicular, c. 2 cm in diameter, the obsolete wings 0.2–0.7 cm wide.

Distribution — Christmas Island (Indian Ocean).

Habitat & Ecology — On cliffs and ridges and along railway, part of high marginal growth; 180–220 m altitude. *Powell 361*, fruit, in June; *Powell 541*, flowers, in January (both K).

Notes — *Illigera elegans* is the second species in the Malesian area with petaloid, inflated staminal appendages which are uncleft dorsally; the other species is *I. novoguineensis* Kubitzki from Papua New Guinea (Madang Prov.). Outside Malesia this character is found only in one other species, *I. madagascariensis* Perrier de la Bâthie, from Madagascar and Tanzania.

Kubitzki (1969) suggested that the two species with dorsally uncleft staminal appendages, *I. novoguineensis* and *I. madagascariensis*, represent a primitive state in the group with inflated and petaloid staminal appendages, which is supported by their disjunct distribution (New Guinea and East Africa). The greater part of the species have staminal appendages which are dorsally cleft.

## REFERENCE

Kubitzki, K. 1969. Monographie der Hernandiaceae. Bot. Jahrb. 89: 78–209.