

A JOURNAL ON TAXONOMIC BOTANY
PLANT SOCIOLOGY AND ECOLOGY

REINWARDTIA

Editors

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Published by

HERBARIUM BOGORIENSE

BALAI PENELITIAN DAN PENGEMBANGAN BOTANI
PUSAT PENELITIAN DAN PENGEMBANGAN BIOLOGI — LIPI
BOGOR, INDONESIA

Reinwardtia Vol. 11, Part 1, 1 - 55

5 February 1992

IO ISSN 0034 - 365 X

**DURIO MACRANTHA KOSTERM., SPECIES NOVA
(BOMBACACEAE) FROM NORTH SUMATRA**

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ABSTRACT

An interesting species of *Durio* from Sumatra is described and illustrated from a living specimen growing in Bogor.

ABSTRAK

Sebuah jenis *Durio* dari Sumatra diuraikan dan digambarkan dari tanaman hidup yang ditanam di Bogor.

In 1981 I received from Mr. H. Rijkssen a young durian plant, which he had collected in the Mt. Leuser National Park in North Sumatra. Now, 10 years later the plant has grown to a tree of 10 m high in my private garden in Gadok near Bogor and in July 1991 it started to come into bloom. The flower bunches appeared on the bare branches; it took 4–6 weeks from the initial bud to the mature flower. The tree flowered profusely and within three months new buds appeared continuously.

It proved to be an undescribed species of durian.

Durio macrantha Kosterm., *spec. nov.* Fig. 1–10

Arbor mediocris ramulis minute dense lepidotis, laxis alternantibus, concavis, chartaceis oblongis breviter acuminatis vel sensim acutis, basi obtusis. petiolis gracilibus lepidotis, supra glabra atro-viridia sat obscure minute reticulata, nervo mediano tenuibus impressis, subtus dense minute lepidota nervo mediano valde prominentibus, costis gracilibus sat patentibus, margine non attingentibus, paniculis ramifloris paucifloris dense lepidotis, pedicellis crassis longis, epicalyx magnis, sepalis 5 in tubum connatis, lobis triangularibus acutis, basi conspicue saccatis, phalangis staminibus 5, parte apicalibus filamentorum liberis, petalis 5 liberis albis magnis reflexis, ovario lepidotis, stylus longis, stigmatibus conspicuis.— TYPUS: *Kostermans 30.000* (BO).

Tree, 10 m tall, dbh. 20 cm. Bark smooth, grey. Crown pyramidal, lowest branch 1 m above the forest floor, somewhat drooping. Leaves alternate, in one plane, chartaceous, lower side concave, oblong, 5–7.5 x 16–22 cm, gradually acuminate or sub-acuminate, base rounded, above

very dark glossy green with minute reticulation, midrib slender, impressed, ribs filiform, prominulous in a groove; below very densely light golden brown lepidote, scales minute, flat with rather irregular margin, midrib stout, strongly prominent, ribs 12—15 pairs, rather patent, slender, prominent, arcuate,, not reaching the margin, in between often thinner, shorter parallel ribs, reticulation dense, minute. Petiole 10—15 mm, slender, slightly thickened apically, densely minutely lepidote, somewhat sub-peltate. Flowers on the bare branches, consisting of a short thick main peduncle with few, 2—3 cm long thick branches, each bearing 2—4 flowers. Pedicels stout. 4—5 cm long, gradually thickened apically. Flower buds initially depressed globose, apiculate, becoming globose and ultimately subovoid-globose, completely covered by the dark densely lepidote epicalyx (inside white, glabrous), thin, tearing into 2—3 parts, at anthesis, up to 2—2.6 cm long. Calyx urn-shaped, the 5 sepals connate, apically with 5 triangular, acute, 5—7 mm long broad lobes, lepidote outside, the bases of the sepals widened into large, horizontal pouches, continuing inside the tube by forming 5 bulbous white knobs, ultimately curving down and ending outside the tube into 5 tiny reflexed appendages; the entire tube up to 2 cm long and 1.5 cm in diam. at the base. Petals free, white, glabrous, large (in bud imbricate), consisting of a thick, flat, stiff, wide, clawlike part, gradually widened apically and ending in a strongly reflexed much thinner, spatulate-orbicular apical part, the whole 3—4 cm long, the margin fringed. Stamens in 5 phalanges of 5—7 stamens each, the filaments fused in their basal half, the free parts 2—3 cm long bearing clumps of one-celled anthers. Ovary oblong, densely minutely lepidote, showing a slight longitudinal furrow. Style reddish, glabrous, rather fleshy, up to 5 cm long, surpassing the stamens, cylindrical with conspicuous capitate stigma. Fruit (Nov. 1991) immature with numerous very hard and sharp, sub pyramidal thorns, the latter covered by numerous very tiny fimbriate scales.

DISTRIBUTION : Mt. Leuser National Park. North Sumatra, described after a cultivated specimen in the private garden of Dr. Kostermans in Gadok near Bogor, Java.

PHENOLOGY : Flowers open in the afternoon and drop in pieces during the night. They have no smell and no nectar. Pollinators are perhaps bats and night months. The flowers had always a few black ants.

The branch bases are surrounded by a high annulus of tissue, free from the branch, as if they had to push the bark aside when developing.

The species is outstanding among the 3 other species so far known by the very large flowers.

Cultivated tree in the private garden of Dr. Kostermans in Gadok near Bogor, July, fl. *Kostermans* 30.000 (A,AAU,BM,BO,G,K,L,NY,P).

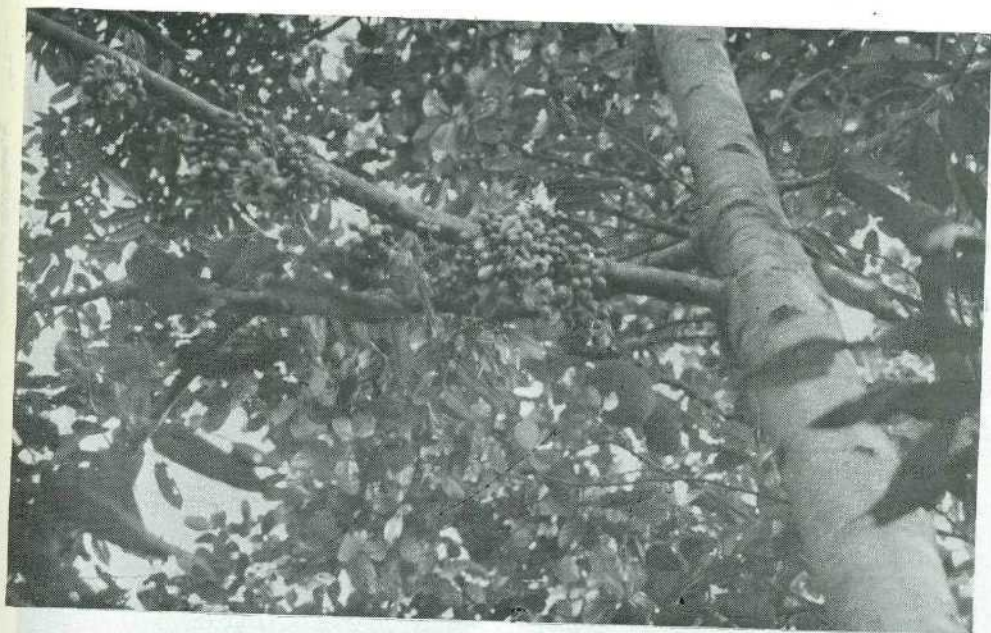


Fig. 1. ——— *Durio macrantha* Kosterm.
Photo : L. Anema



Fig. 2 ——— Branch insertion.———Photo : L. Anema

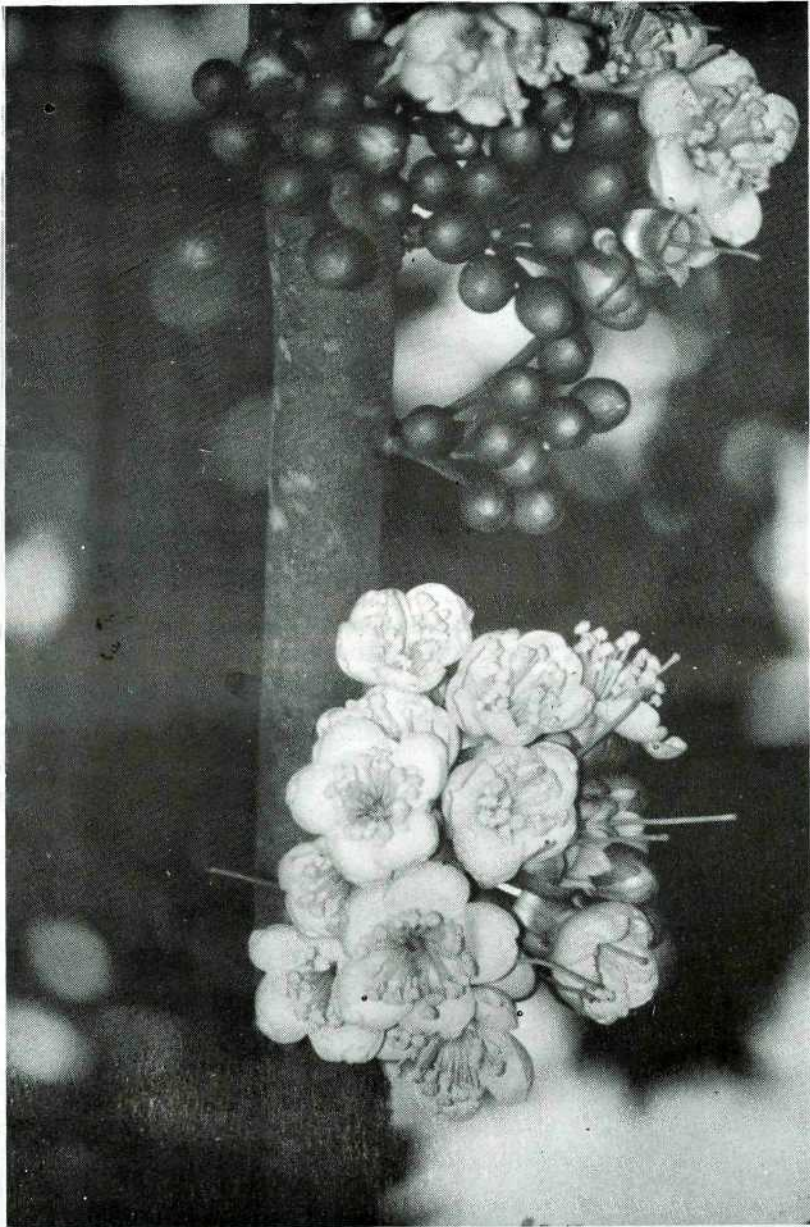


Fig. 3——Flower bunches——Photo : J.-U. Nieser

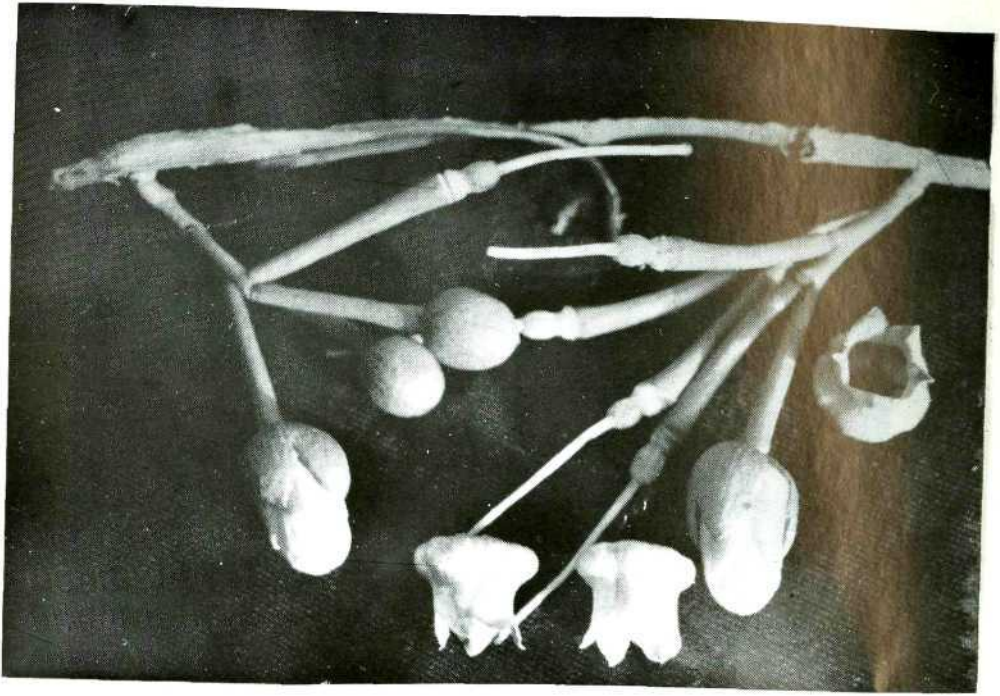


Fig. 4.———Inflorescence——— Photo : L. Anema

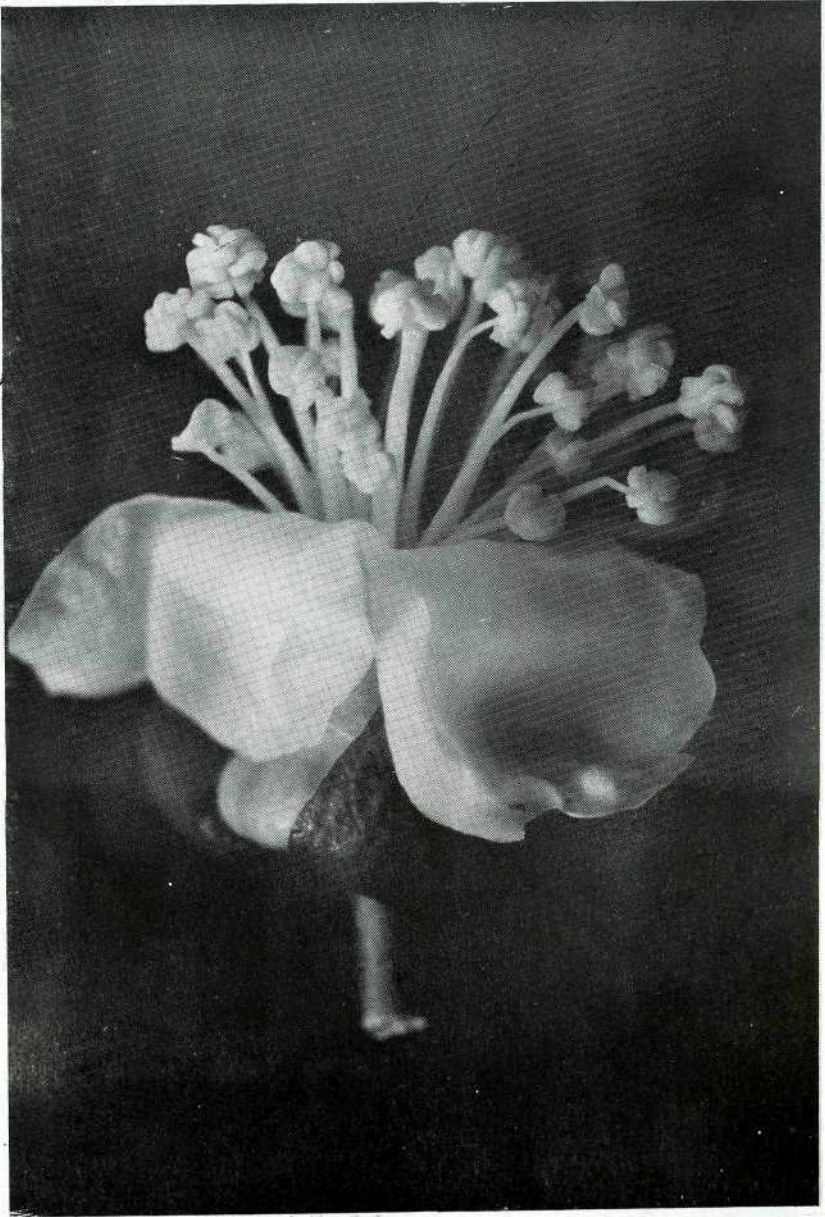


Fig. 5 _——Flower (style missing)——Photo : J.U. Nieser

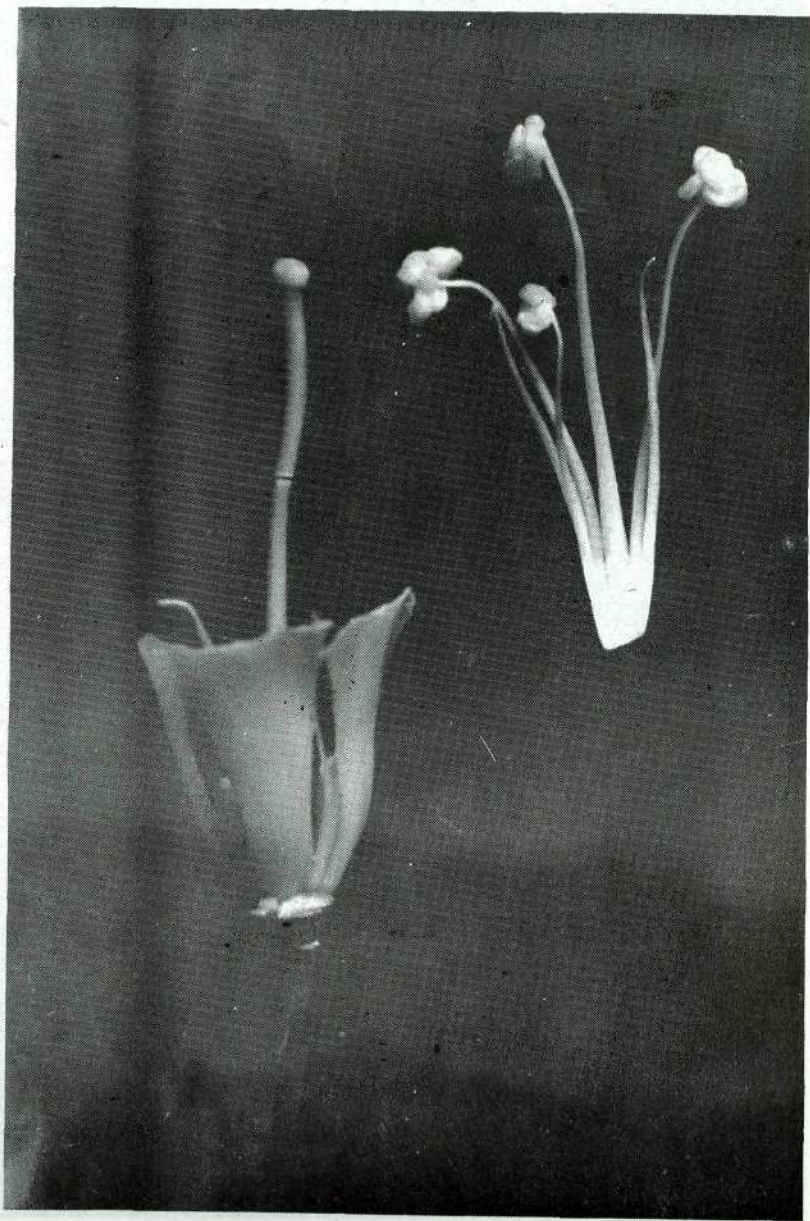


Fig. 6 ——— Insertion of petal ——— Photo : J. U. Nieser

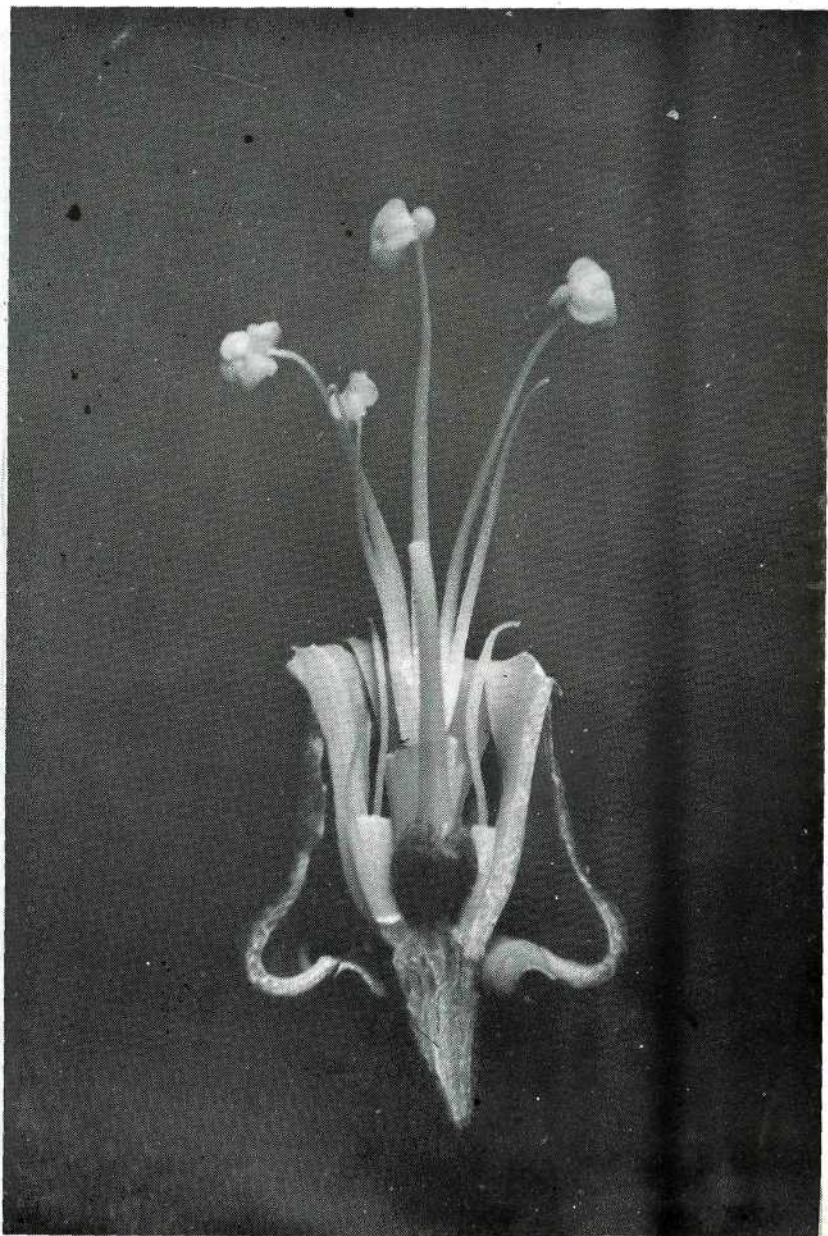


Fig. 7 — Cross section flower — Photo : J.-U. Nieser

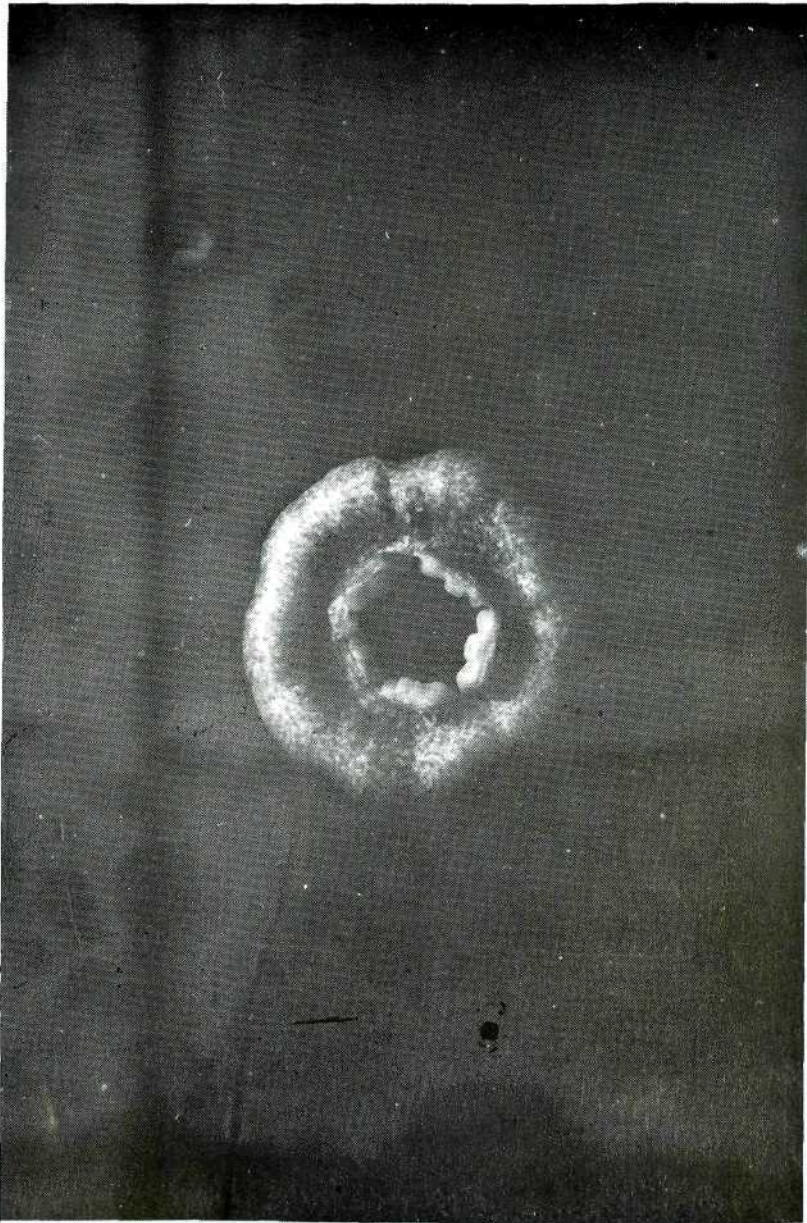


Fig. 8——Calyx from below——Photo : J.-U. Nieser

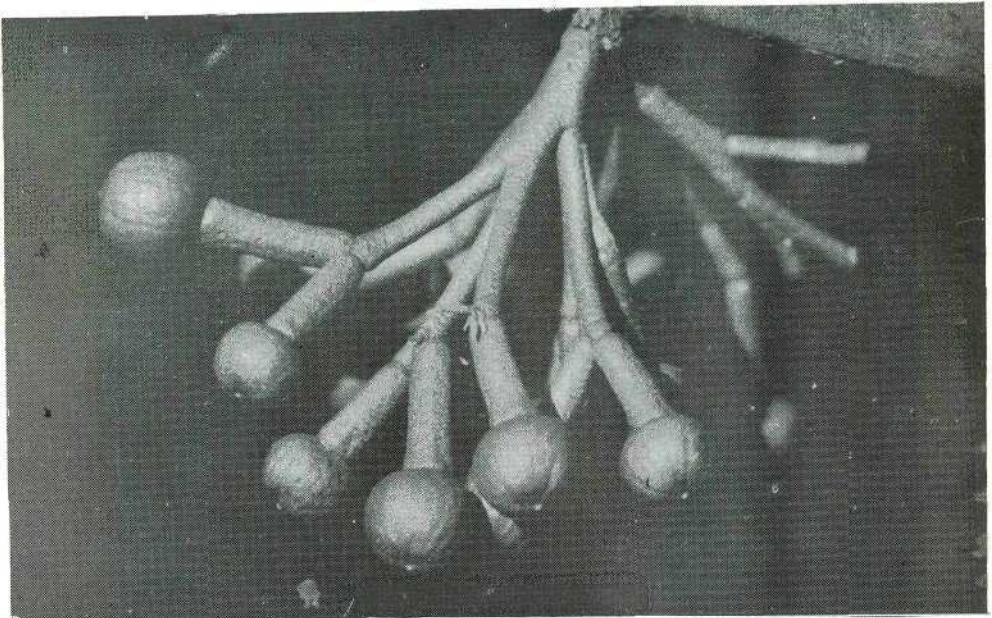


Fig. 9 — Buds. — Photo : J.-U. Nieser

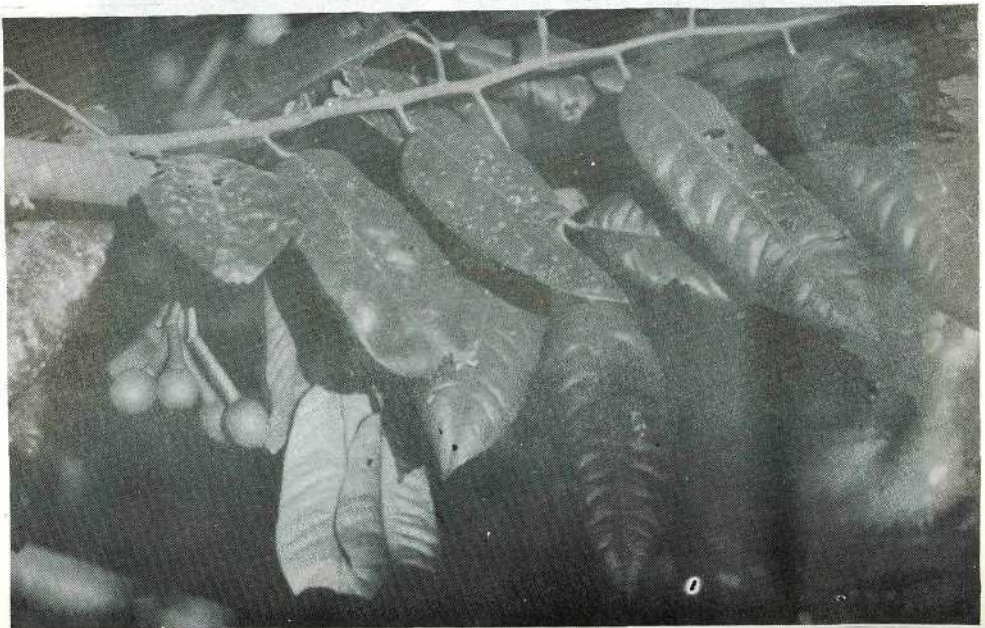


Fig. 10 — Branch — Photo : L. Anema

During the long delay in printing this issue of *Reinwardtia*, the type tree in Dr. Kostermans' private garden produced mature fruit. They are dark green with big, pyramidal hard spines with a very sharp tip and covered by a dense layer of microscopical scales. The fruit, of which the largest was 15 x 23 cm, drops unopened at maturity and dehisces slightly after one or two days on the ground. The large yellowish brown seeds are completely surrounded by a white, thick, juicy, fragrant aril, not much different from that of the common *Durio zibethinus*.

The species is economically important, because the small size of the tree, which makes manipulation of flowers and fruit possible; in *D. zibethinus*, a tree of 20—30 m high, this was almost impossible.

Dr. and Mrs de Wilde of the Rijksherbarium, Leiden, during their collecting trips in northern Sumatra, never saw this tree.

We are trying to prevent its extinction by establishing a nursery, we have no experience about germination and viability.

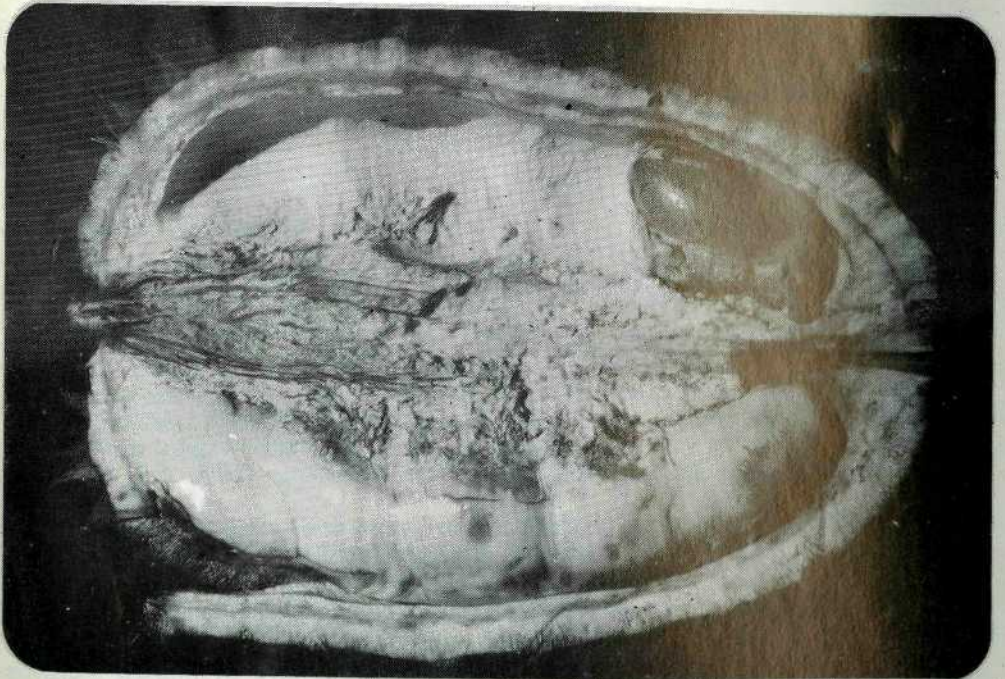


Fig. 11. *Durio macrantha* Kosterm. Fruit from type tree

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