chemical, causing disintegration of the chloroplast in a disturbed oxidation-reduction state of the protoplasm. Arnon[9] suggested that ascorbic acid plays an important role in the protection of chloroplast. Lycorine reduced ascorbic acid content rendering the chloroplasts vulnerable and subsequent oxidation of the pigments causes decolorization[10]. Retardation of cellular growth occurs by inhibition of ascorbic acid biosynthesis which results in the accumulation of dehydroascorbic acid in the ascorbate system. RNA and protein synthesis responsible for the cell elongation and initiation of 2D growth were affected by lycorine and 10^{-5} M concentration inhibited gametophytic growth of *P. verrucosum*, completely leading to eventual death of protonema. Likewise, rhizoidal number, rhizoidal length mean cell number, protonemal width and length decreased with the increasing concentration of the chemical.

19 August 1986

1. Amico, A., Bruno, S. and Papa, S., *Flora Salutaris*, 1977, **5**, 1.
2. Kumar, G. and Roy, S. K., *Indian J. Exp. Biol.* 1985, **23**, 356.
3. Perrone, C. and Garuccio, I., *Phycologia*, 1983, **23**, 395.
4. Arrigoni, O., Santos, A., Alanso, G. and Vazquez, D., *Biophys. Acta*, 1975, **425**, 342.
5. Liso, Rosalla, Calabrese, G., *Phycologia*, 1975, **14**, 9.
6. Carrasco, L., Fresno, M. and Vazquez, D., *FEBS Lett.*, 1975, **52**, 236.
7. Klekowaski, E. J. Jr., *Bot. J. Linn. Soc.*, 1969, **62**, 361.
8. Kato, Y., *Bot. Mag. Tokyo.*, 1957, **70**, 209.
9. Arnon, D. I., *Brookhaven. Symp. Biol.*, 1969, **11**, 18.
10. Stern, H. and Timonsen, S. J., *Gen. Physiol.* 1961, **48**, 21.

GARCINIA DARWINIANA—A NEW SPECIES OF CLUSIACEAE FROM COORG DISTRICT, KARNATAKA

K. R. KESHAVA MURTHY,
S. N. YOGANARASIMHAN and
K. VASUDEVAN NAIR
Regional Research Centre, Jayanagar, Bangalore 560 011, India.

DURING the course of floristic surveys in Coorg District, Karnataka, an interesting taxon of *Garcinia* L., was collected which on critical studies and comparison at the herbaria of Botanical Survey of India, Coimbatore (MH), Central National Herbarium, Calcutta (CAL) and at Pune (BSI), was found to be a new taxon. A detailed description and illustrations are provided.

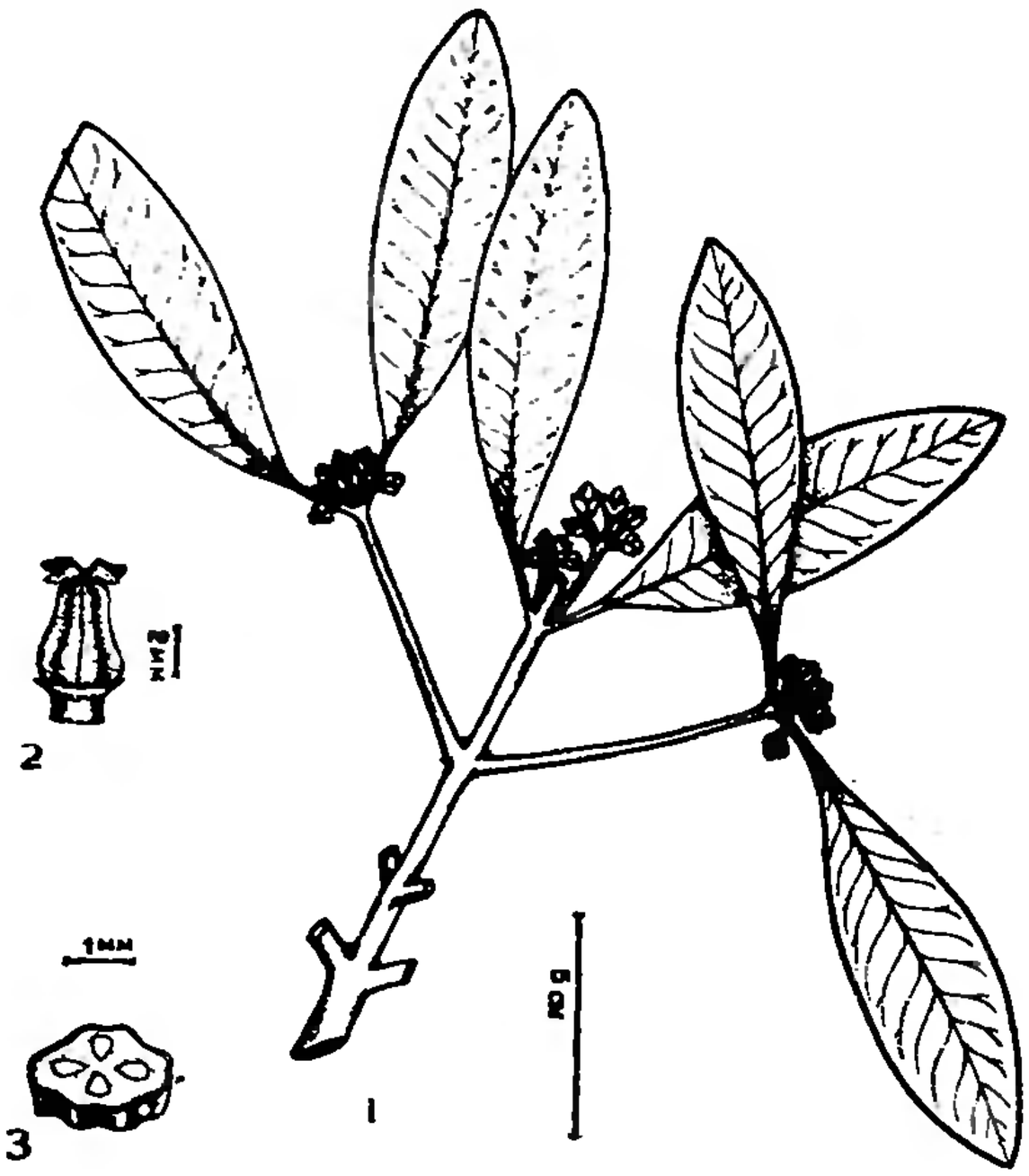
Garcinia darwiniana sp nov

Garcinia gummi-gutta (L.) Robson affinis sed foliis oblongo-lanceolatis et ovario 4-sulcato, 4-loculato differt.

Allied to *Garcinia gummi-gutta* (L.) Robson but differs in having oblong-lanceolate leaves and 4-grooved, 4-locular ovary.

Trees, 10 to 15 m tall, with obscurely quadrangular branches and fissured greyish-black bark. Leaves 6.5–12 × 2.5–4 cm, oblong-lanceolate, apex variable, acute, emarginate or rarely rounded, base cuneate, margins entire, glabrous on both surfaces; main nerves 8 to 14, slender, looped along the margin; petiole 1 to 2 cm long. Flowers surrounded by minute, caducous bracts, in axillary, pseudo-terminal umbellate fascicles; pedicels 2 to 6 mm long. Calyx lobes 4, outer 3–5 × 3–4 mm long, inner 5–7 × 5–7 mm, orbicular to suborbicular, brownish-hairy when young, glabrous with age, margins membranous, slightly transparent, waxy. Corolla lobes 4, each 7–9 × 6–8 mm, orbicular, when young matted with brown tomentum without. Staminate flowers with many stamens in a globular mass, slightly raised above the receptacle (about 1 mm); anthers 2-celled, erect, dehiscing longitudinally; filaments very short; pistillode with 4 stigmas. Pistillate flowers with almost globose ovary. Ovary grooved without, 4-locular, with solitary axile ovule in each locule; stigmas 4, crowned on top of the ovary. Fruits not seen (figures 1 to 3).

Holotype K. R. Keshava Murthy and party 4828A and *Isotypes* 4828 B–C, collected in flowers near Kootuhole, Mercara, on 19th March, 1984, at an altitude of 1200 m are deposited at the Herbarium



Figures 1–3. *Garcinia darwiniana* Keshav. et Yog. sp. nov. **1.** flowering twig. **2.** ovary; **3.** t. s. ovary.

of the Regional Research Centre, Bangalore (RRCBI).

This species is named after the famous biologist Charles Darwin.

The authors are thankful to Dr V. J. Nair for latin diagnosis; to Drs. B. V. Shetty and A. N. Henry of BSI, Coimbatore for facilities, comments and suggestions; to the Karnataka Forest Department staff for help during field work; to Mr. Gurudev for assistance.

NOTES ON *CYTOSPHAERA MANGIFERAE* DIED

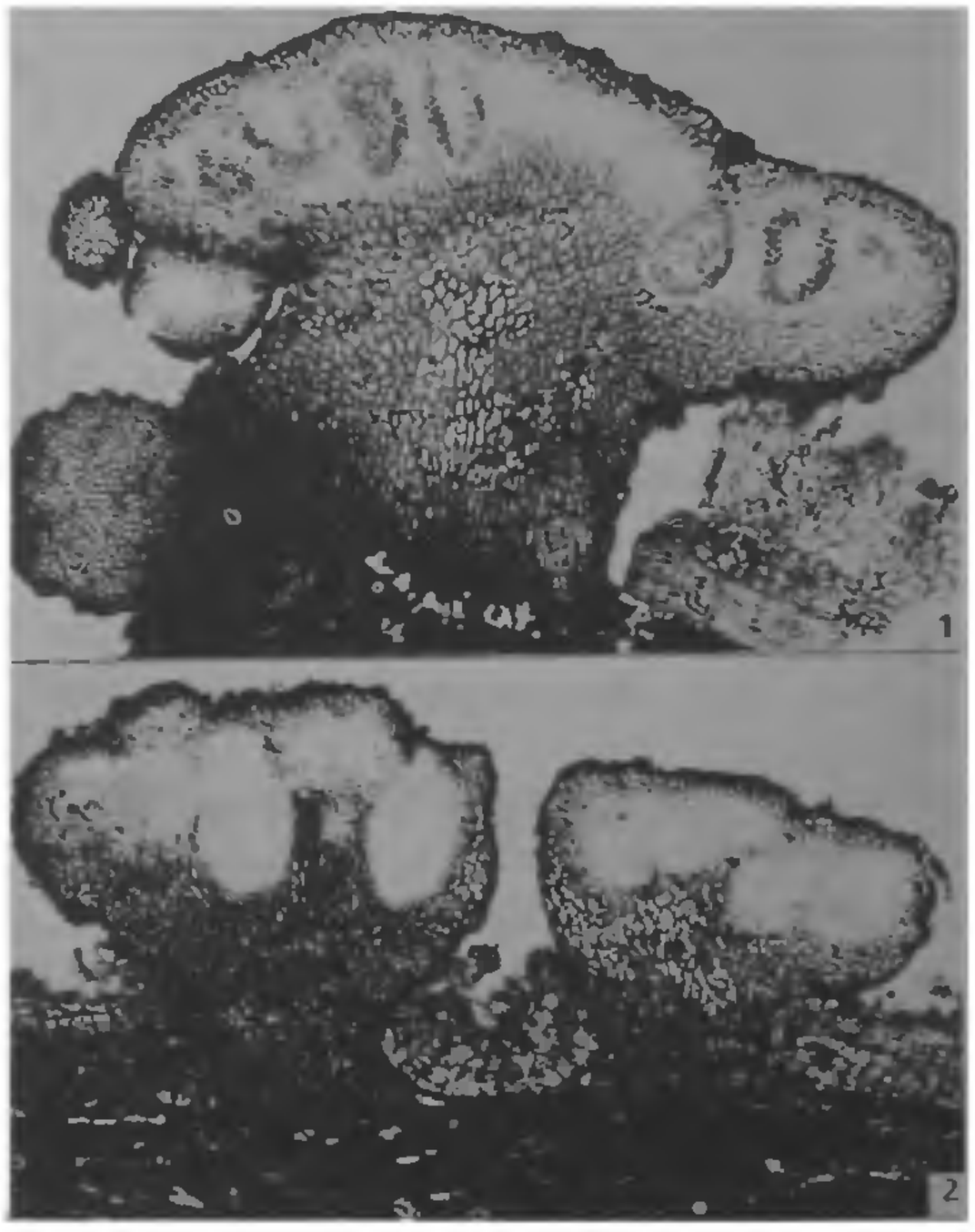
J. MUTHUMARY (ALIAS) KALAIVANI

CAS in Botany, University of Madras, Madras 600 025, India.

DURING our studies on the South Indian Coelomycetes an interesting stromatic conidiomatal fungus was collected on twigs of *Acrocarpus fraxinifolius* Wight (Leguminosae). The fungus was identified as *Cytosphaera mangiferae* Died. The genus is characterized by multilocular stromatic conidiomata in which two types of conidia are produced within the same conidioma, a rare feature found among Coelomycetes[1]. The fungus was found to agree with the diagnosis given by Sutton in all essential details and was therefore disposed under *C. mangiferae*. Although, the present collection was assigned to this species, it was found to differ from the type in having separate conidiomata for microconidia and macroconidia. Therefore a short narration of the Indian collection is given here.

Conidiomata producing macroconidia are larger when compared to those producing microconidia, measuring 1500–1800 μm in diameter with 8–9 locules in the peripheral region of the upper part of stromata (figure 1). Conidiogenous cells are holoblastic, 8–10 × 3–5 μm. Macroconidia are spherical to subspherical, aseptate, thick-walled hyaline, smooth, guttulate, base truncate, 18–28 × 10–13 μm.

Conidiomata producing microconidia 500–600 μm in diameter with 3–5 locules (figure 2). Conidiogenous cells phialidic, 6–14 × 2–2.5 μm. Microconidia ellipsoid to oblong, aseptate, hyaline smooth, thin-walled, 3–4 × 1.0–1.5 μm.



Figures 1 and 2. (× 100). Vertical section of Conidioma producing **1.** macroconidia, and **2.** microconidia.