overcome the selfing barrier. Hence, the pollen could pass through style without any inhibition to effect fertilization. It was observed that in both control and UV treated, the pollen germination was low and there was no significant difference in pollen tube elongation (t = 1·0913 NS). This shows that the treatments did not affect pollen tube elongation.

In orchids, the phenomenon of self-incompatibility is widely operating. Crossing difficulties reported in the genus *Dendrobium* especially in intra-sectional crosses, like *Callista* × *Callista* and *Eugenanthe* × *Eugenanthe*[2], might be due to the phenomenon of incompatibility which is yet to be investigated. The recent study on *Dendrobium aggregatium* Var. *Majus*[3], and the present study support this theory. The selfing barrier observed in *D. aggregatum* was successfully overcome by gamma irradiation of pollinia. In such cases, ultraviolet irradiation is useful in understanding genome relationship of a genera.

1 *December* 1981

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A NEW RECORD OF *THALASSIA HEMPRICHII* (EHRENB.) ASCHERS. FROM THE MAIN COAST OF INDIA

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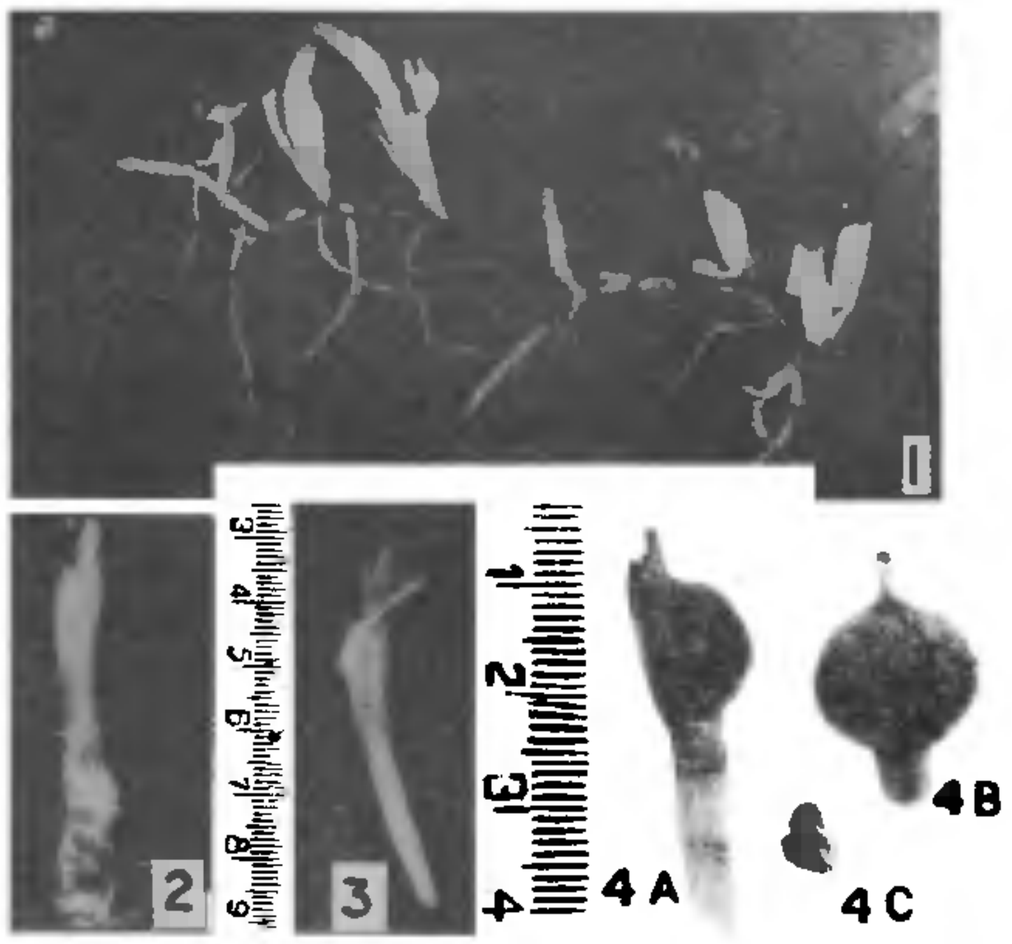
THE first record of occurrence of *Thalassia hemprichii* (Ehrenb.) Aschers; belonging to the sub-family Thalassioideae of Family Hydrocharitaceae from Krusadai and Rameswaram islands near the main coast of India is presented here.

Thalassia hemprichii (Ehrenb.) Aschers. in Petermann's Geogr. Mitth. 17 (1871) 242.

Perennial aquatic herb; rhizome creeping; monopodial, 4–5 mm thick. Internodes 5–10 cm long, covered by triangular membranous scales. Root one at each node, unbranched (figure 1). Leaves ribbon-shaped; 4–8, distichously arranged on short lateral branches, 10-20 cm long; 10–12 nerves, margin entire, obtuse tip. Leaf sheath 6–9 cm long. Inflorescence pedunculate; uniflorous. Female flowers sub-sessile. Perianth segments 3, (figures 2, 3) elliptic. Ovary muricate, trilocular. Style 6. Fruit green in colour, globose, echinate, beaked, pericarp fleshy, covered by numerous stiff outgrowths (figures 4a, 4b). Seeds 10–12. Embryo at the shoot pole with conical, green cotyledon and lateral epicotyl (figure 4c). Hypocotyl disc-like with a primary rudimentary root at the distal end.



Figures 1–4C. *Thalassia hemprichii*: **1.** Habit. **2** and **3.** Young and mature female flowers. **4a, 4b.** Young and mature, warty fruits. **4c.** Mature embryo.

Distribution: Sudan, Eritrea, French Somaliland, Kenya, Tanzania, Mozambique, Seychelles, Aldabra Group, Madagascar, Saudi Arabia, Yemen, Thailand, Vietnam, Ryukku islands, Phillippines, Malayan Peninsula, North Borneo, Indonesia, Australian New Guinea, Carolines, Marshall islands, Bismark Archipelago, New Caledonia, Queensland[2].

Andamans (India): South Andamans, Reefland Island, December 1890. D. Prain (BM) Rangachang reefs April 1891, D. Prain (CAL) Great Cocos Island, 1890, D. Prain (CAL, K); idem 4-12-1895, D. Prain (BM)[2].

Krusadai island : Vegetative, fruit (MH; K; Department of Botany, P. G. Centre, Coimbatore) September 1979; Vegetative, female flower (K) September 1979; Vegetative, fruit (Department of Botany, P. G. Centre, Coimbatore) February 1981.

Rameswaram island: Vegetative (MH) September 1979; Vegetative, fruit (Department of Botany, P. G. Centre, Coimbatore) February 1981.

N.B. K– Kew Herbarium; MH– Madras Herbarium, India.

Authors gratefully acknowledge the Director, Royal Botanical Gardens, Kew, England for confirming the identifications. One of the authors (M R) is thankful to the University Grants Commission, India for the award of a fellowship.

27. *October* 1981

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OCCURRENCE OF NUCELLAR POLYEMBRYONY IN *TODDALIA ASIATICA* LAMK.

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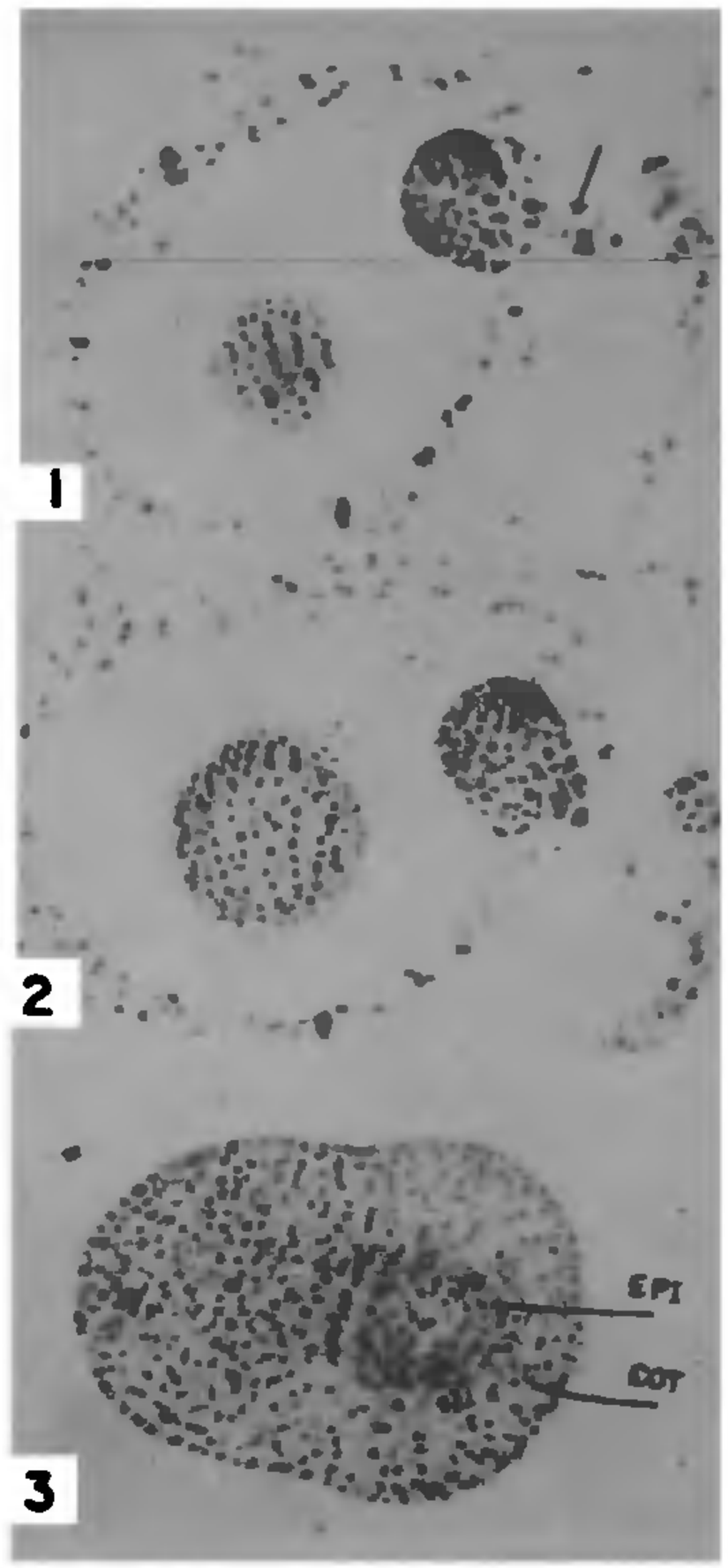
NUCELLAR polyembryony has been reported in few members of the Rutaceae. Polyembryony is reported to have three different modes of origin resulting in nucellar polyembryony, cleavage polyembryony and, through the occurrence of more than one normal gametophyte in the same ovule. All the above three categories of polyembryony are reported to occur in *Citrus paradisi* and *C. aurantium*[1].

In the majority of the cases where polyembryony is prevalent it has been observed that stimulation through pollination or fertilization or the development of the zygote up to a certain stage is a prerequisite for the development of nucellar embryos. *Xanthoxylum*[2] and *Aegle*[3] develop nucellar embryos without syngamy. It has been observed that in *C. trifoliata*[4], both zygotic and nucellar embryos attain maturity and establish seedlings.

Toddalia asiatica is a monoembryonate form where nucellar polyembryony has not been reported so far. Nucellar polyembryony, a rare occurrence, has been reported here. The zygotic embryo has developed normally and the nucellar embryo appears a little later after the zygotic embryo has produced 32 to 64 cells. The nucellar embryo arises more or less from the middle region of the embryo sac, separated from it, by 2 or 3 layers of nucellar cells. As it reaches the embryo sac, the rate of growth is much faster than the zygotic embryo and attains a massive form. The nucellar embryo severed from the nucellar tissue is positioned in the embryo sac. The embryo shows a very well-developed epicotyl and the cotyledons, whereas the zygotic embryo remains more or less pear-shaped.

One of the authors (V. N. B.) is grateful to the University Grants Commission, New Delhi, for the award of a fellowship.



Figures 1–3. 1. Zygotic embryo and the surface view of the nucellar embryo. (Arrow points to suspensor) (×170). **2.** Zygotic embryo with distinct suspensor (× 220). **3.** Nucellar embryo with well differentiated epicotyl and the cotyledons (× 475) COT–cotyledon, EPI––epicotyl).

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