

***Kaempferia candida* Wall. (Zingiberaceae), a new record for Thailand**

THAYA JENJITTIKUL* & KAI LARSEN**

ABSTRACT. *Kaempferia candida*, a new record of Zingiberaceae from Thailand, is described from Kanchanaburi Province.

The genus *Kaempferia* L. comprises about 40 species and is distributed throughout tropical Asia. In Thailand the genus was first studied by Larsen (1962) who described one new species, *K. filifolia* K. Larsen. Later, Sirirugsa (1992) carried out a revision of the genus in Thailand. She recognized 15 species including three new ones, *K. larsenii* Sirirugsa, *K. siamensis* Sirirugsa and *K. spoliata* Sirirugsa. A collection of *K. candida* consisting of an inflorescence without leaves from Kanchanaburi Province, has long been known by the senior author. The material is in such a state that it is impossible to identify the floral structures. However, the size of the inflorescence, indicated that it was likely not to match any of the known Thai species. Recently, the first author found a large population of the plant and new material was collected, allowing precise determination and a comprehensive description to be prepared.

Kaempferia candida Wall., Pl. As. Rar. 1: 47, t. 56. 1830; Baker in Hook.f., Fl. Br. Ind. 6: 222. 1890; Gagnep. in Fl. Gén. I.-C. 6: 47. 1908; K. Schum. in Engl., Pflanzenr. 4(46), 20 Heft: 87. 1904. Type: Myanmar, *Wallich* 6585 (holotype K). Fig. 1–2.

Herb with short, upright rhizome, 1–3 cm long, 1–2.5 cm in diam. *Roots* pale brown, tuberous, oblong, elliptic or subglobose. *Leafy shoot* up to 60(–170) cm, usually appearing after anthesis lateral to the inflorescence, solitary or few together. *Leaves* with sheaths up to 45 cm long; ligule triangular; lamina lanceolate up to 30(–60) by 15(25) cm, base rounded, apex acuminate, glabrous on both sides, upper surface green with purplish midrib, lower green to purplish. *Inflorescence* straight, 8–12 cm, rarely terminal on the leafy shoot; peduncle 2–3 cm long with ca. 3, sterile, spirally-arranged sheaths at base, hairy with reddish to pink veins, apex acute or rounded, mucronate; Bracts oblong-lanceolate each subtending 4–6 flowers, bracteoles placed lateral to the flower, 15–18 by 1–3 mm; buds hairy with acuminate apex. *Flowers*: calyx ca. 2.7 by 1.3 cm, hairy with ciliate margin, split down one side with 3 unequal lobes, two lobes acute, ca. 6 mm with hooded tip, one ca. 4 mm, rounded; corolla tube ca. 8.5 cm, dorsal lobe oblong with acute, hooded apex, ca. 4.5 by 1.4 cm, sparsely hairy,

*Department of Plant Science, Faculty of Science Mahidol University, Bangkok, Thailand.

**Department of Systematic Botany, University of Aarhus, Nordlandsvej 68, DK-8240 Risskov, Denmark.

lateral lobes ca. 3.5 by 1 cm with rounded, incurved apex; lateral staminodes obovate, ca. 4.4 by 2.5 cm, white with a bright yellow patch at the base; labellum ? rectangular in outline, ca. 4 by 3.4 cm, bilobed for ca. 1/3–1/2 its length, white with bright yellow patches at base and along midvein; filament attached to the staminodes for ca. 2.5 mm, free part 5–6 by 5 mm; anther 6–7 by 2.5–3 mm, anther crest rectangular, bicornute with a small median tooth, 4–4.5 by 2.5–2.7 mm. *Ovary* 5–8 mm long, angular, hairy with long, rough hairs, each locule with many ovules; nectary glands 2, linear, 4–5 mm long. *Fruit* a fleshy, white, subglobose capsule dehiscent by 3 longitudinal slits, 1.2 by 1 cm. *Seeds* brown turning blackish brown, glossy, ca. 3 by 2.5 mm with a white, lacerate aril, germinating immediately.

Thailand.— SOUTH-WESTERN: Kanchanaburi [Hills between Sangkhla and Sri Sawat, 15 April 1968, *Beusekom & Phengkai* 468 (BKF, L), Kanchanaburi. BKF, L); Lintin, May 1995 *Tiptabiankarn* 1797 (Suan Luang Rama IX Herbarium) & 1797–1 (herb. Suan Luang Rama IX); Sangkhla, 18 April 1999, *Tiptabiankarn* 3230 (AAU, BKF, BK, herb. Suan Luang Rama IX)].

Distribution.— Myanmar.

Ecology.— Bamboo forest along roadside, burnt bamboo forest, deciduous dipterocarp forest and teak plantation in both shady and sunny habitats. Leafy shoots appearing May–October, flowering April–July. Insect pollination has been observed; both ants and beetles have been found in the flowers.

Vernacular.— Dok din (ดอกดิน).

Uses.— Locally young inflorescences are steamed and eaten as a vegetable with Nam Prik, fried or put in soup. Cultivated in southern Thailand; cultivated plants are generally larger, with leafy shoots up to 1.7 m long and the leaf lamina 60 by 25 cm).

ACKNOWLEDGEMENTS

We are grateful to Mr John D. Mood for photographing the illustration in Wallich's *Plantae Asiaticae Rariores* in the Singapore Botanic Garden.

REFERENCES

- Larsen, K. 1962. Studies in Zingiberaceae III. On a new species of *Kaempferia* from Thailand and its relatives. *Bot. Tidsskr.* 58: 191–203.
 Sirirugsa, P. 1992. Taxonomy of the genus *Kaempferia* (Zingiberaceae) in Thailand. *Thai For. Bull. (Bot.)* 19: 1–15.

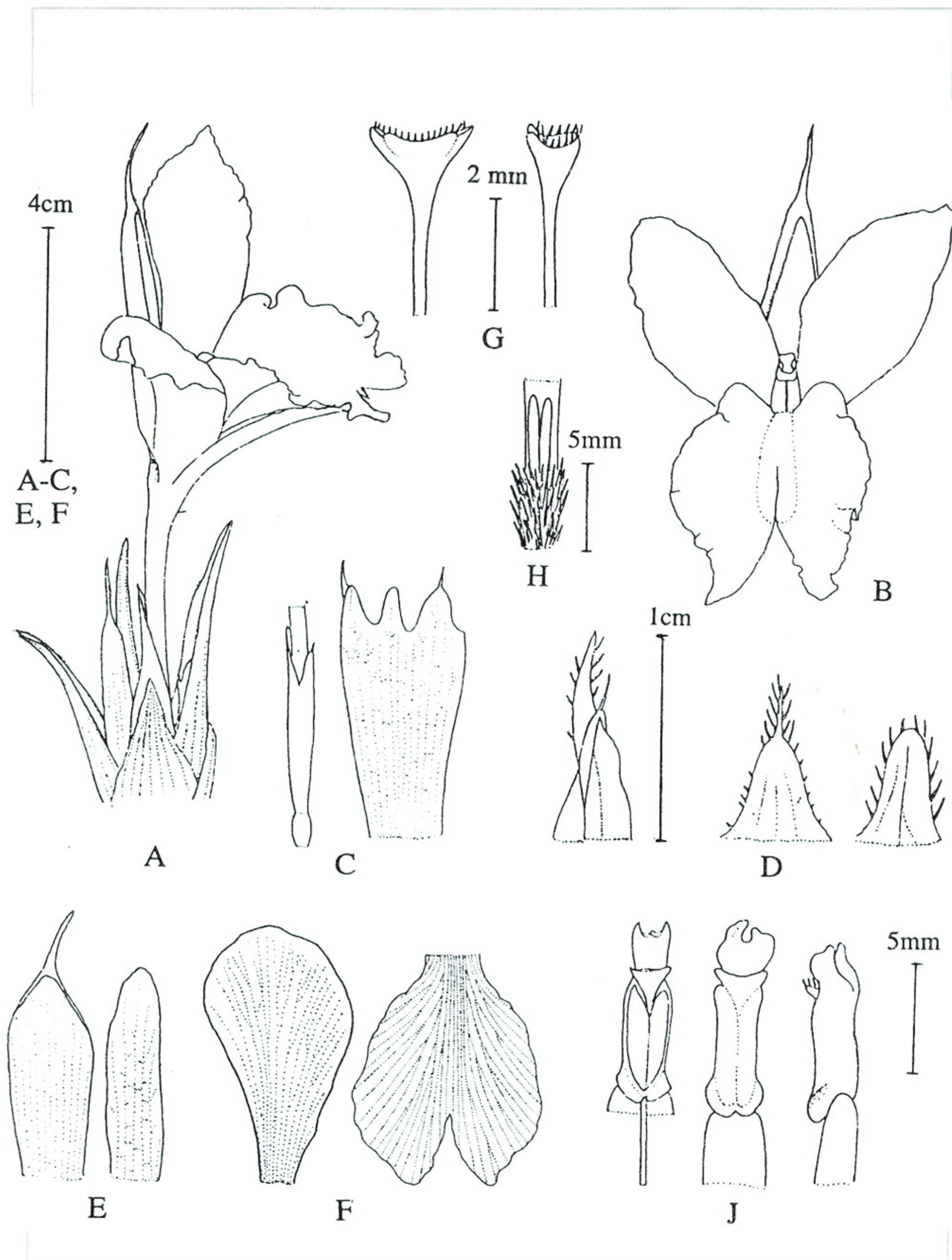


Fig. 1. *Kaempferia candida* Wall. A. Flower and upper part of inflorescence; B. Flower; C. Calyx and expanded calyx; D. Apex of dorsal and lateral calyx lobes; E. Dorsal and lateral corolla lobes; F. Staminate and labellum; G. Anther and stigma, front, back, and side view; H. Nectary glands; I. Stigma, front and side view. All from *Tiptabiankarn* 3230 (AAU, BKF, BK, herb. Suan Luang Rama IX). Drawn by T. Jenjittikul.

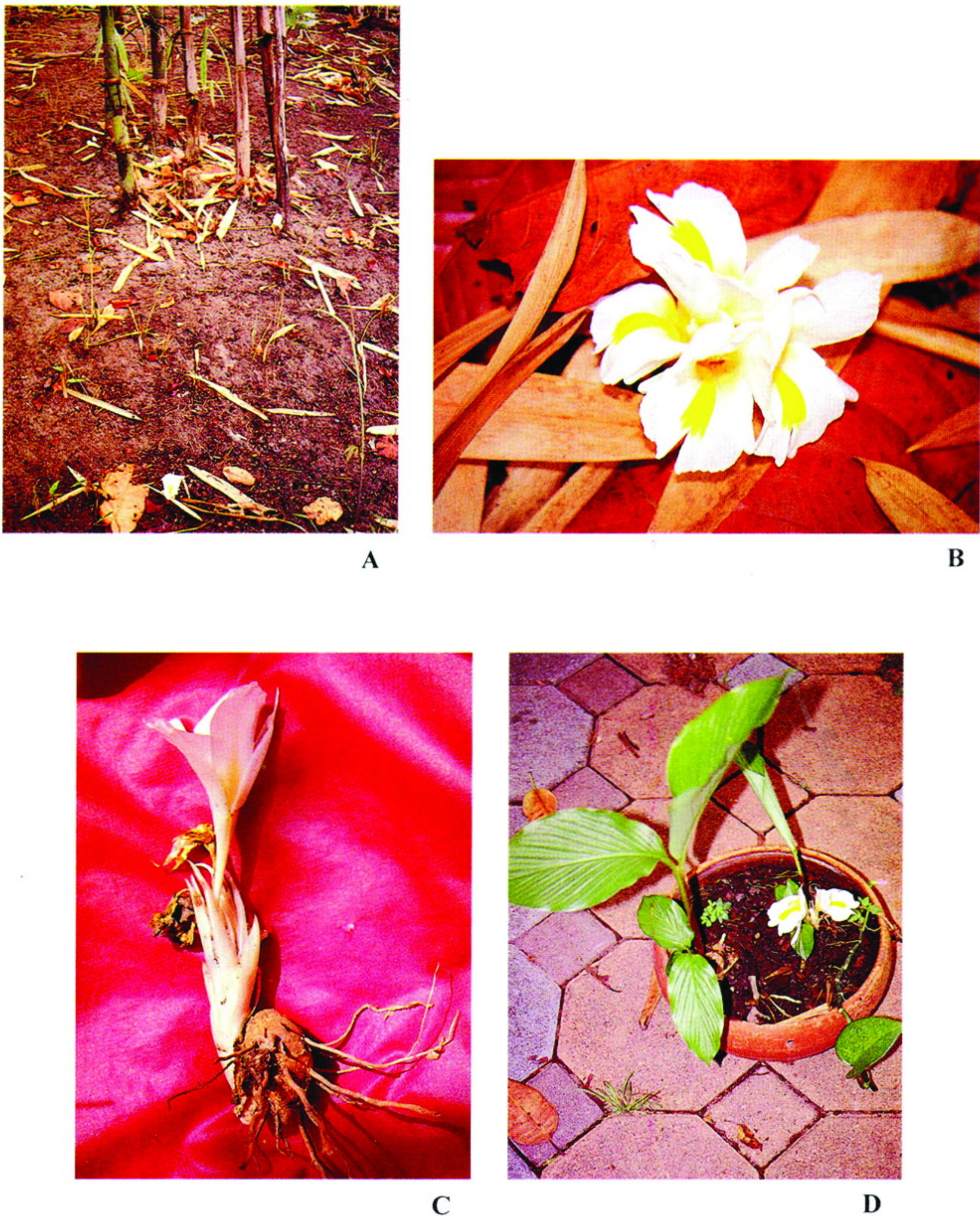


Fig. 2. *Kaempferia candida* Wall.: A. Habitat; B. Inflorescence; C. Rhizome and inflorescence; D. Young inflorescences were sold in the local market as vegetables.