DISCUSSION. — *Topobea calycularis* is distinguished by its hair tuft foliar domatia, calyx lobes that consist of low apiculate undulations, essentially unappended anther connectives, and its 4-locular ovary. Only one collection examined, Tenorio et al. 14516, CAS, lacks good development of hair tuft domatia. *Topobea laevigata* is the only other species with which *T. calycularis* might be confused. In *T. laevigata*, the domatia, when produced, are slitlike pit domatia at the abaxial margin of the leaf blade near the petiole-laminar junction, and the ovary is consistently 6-locular.

For Costa Rican specimens erroneously identified as *T. calycularis*, see the discussion under *T. multiflora.*

7. *Topobea dimorphophylla* Almeda, sp. nov. (Fig. 2)

**TYPE.** — COSTA RICA. Heredia: along Río Peje about 0.5 km SW of back end of Vargas property; approximately in the area where an imaginary line drawn between Magsasay (colonia penal) and Puerto Viejo de Sarapiquí would cross the Río Peje, 20 Feb. 1982. Hammel 11217 (holotype: CAS!; isotypes: CR!, DUKE!, INB!, MO!, US!).

Frutex hemiepiphyticus. Ramuli sicut pedunculi folia inflorescentia hypanthiaque pilis 1.5–3(–9) mm longis induti. Folia in quoque pari dimorpha papyracea distanterque denticulata 3–5-plinervata. Folia majora: lamina (5.5–)9–15.5 × 2–7.5 cm elliptica vel elliptico-ovata apice caudato-acuminata basi rotundata. Folia minora: lamina 0.9–1.7 × 0.6–1 cm ovata vel subcordata apice caudato-acuminata basi cordata. Flores 6-meri in quoque nodo superiori singuli, pedunculis 0.8–0.9(–1.4) cm longis; bracteae exteriores omni liberae 0.5–0.7 × 0.3–0.5 cm elliptico-ovata apice acuto; bracteae interiores 0.5–0.6 × 0.4–0.5 cm ovatae apice acuta ca. 3.5–5 mm coalitae. Calycis tubus 0.5–0.75 mm longus, lobis 0.7–0.9 × 0.2–0.3 cm. Petala 5–6 × 5 mm obovata vel subrotundata. Antherarum thecae 1.5–3 × 0.5–0.75 mm inter se nunc cohaerentes, dorsaliter biporosae; connectivum dorsaliter supra thecarum basam tuberculatum. Ovarium 6-locculare et omnino inferum apice glabro (cono et collo non evoluto).

Secondary hemiepiphytic shrub with main stems growing v Nelsonike up trunks of host trees and secondary branches either drooping or horizontally spreading to 1–3 m long. Uppermost branchlets mostly terete, the older branches covered with numerous short root-like protuberances (adventitious roots?). Cauline internodes, leaf blades (both surfaces), peduncles, floral bracts, hypanthia, and calyx lobes copiously hirsute with rusty brown hairs mostly 1.5–3(–9) mm long. Mature leaves of a pair markedly unequal in size; blades coarsely papery when dry, the larger one at each node (5.5–)9–15.5 × 2–7.5 cm, elliptic to elliptic-ovate, the apex caudate-acuminate, the base broadly rounded, the margin denticulate (sometimes remotely so), 3-plinerved with an additional ill-defined intramarginal pair, the innermost pair of primary veins diverging from the median vein 2–3 mm above the blade base, the ± transverse secondary veins spaced 2–5 mm apart at the widest portion of the blade on the abaxial surface; petiole 5–17 mm long; the smaller blade 0.9–1.7 × 0.6–1 cm, ovate to subcordate, apex short caudate-acuminate, base cordate, margin entire, 3-nerved, the transverse secondary veins not evident on the abaxial surface; petiole barely prolonged or up to 2 mm long. Flowers erect, solitary in each axil of uppermost leaves; peduncles 0.8–0.9(–1.4) cm long. Floral bracts green and entire; outer bracts 0.5–0.7 × 0.3–0.5 cm, free, elliptic-ovate, the apex acute; inner bracts fused basally for 3.5–5 mm to form a bowl-like collar, the free lobes broadly ovate to deltoid, 0.5–0.6 × 0.4–0.5 cm. Hypanthium at anthesis 4–5 mm long to the torus and 4–5 mm in diameter. Calyx tube 0.5–0.75 mm long, ± erect at anthesis. Calyx lobes (on young fruit) deltoid at base but abruptly tapered to narrow linear upright segments 0.7–0.9 cm long and 0.2–0.3 cm wide at the base between sinuses. Petals 6, glabrous, 5–6 5 mm, translucent white, thin and translucent when dry, broadly obovate to subrotund, the apex ± rounded, the base shortly clawed, entire. Stamens 12, free and isomorphic; filaments 1.5–3 mm long,
Figure 2. *Topoea dimorphophylla* Almeda. A. habit, 2/5; B. foliar dimorphism at a node, 2/3; C. outer floral bract, 5; D. inner floral bracts, 4; E. hypanthium (floral bracts removed), 3; F. petal (adaxial surface), ca. 5; G. stamens, profile view (left) and dorsal view (right), 12; H. seeds, 15. (A from Gomez *et al.* 21127; B from Grayum *et al.* 7932; C–G from Hammel 11217; H from Hammel & Trainer 13241.)
glabrous; anthers 1.5–3 × 0.5–0.75 mm, yellow, oblong, each with 2 confluent, dorsally-inclined pores at the apex; connective thickened dorsally and barely elevated into a blunt callose knob dorso-basally. Ovary completely inferior, 6-locular, glabrous at the apex which is barely elevated at the stylar scar. Style glabrous, decline, 9–10 mm long; stigma punctiform. Berry red at maturity, 9–10 × 9–10 mm. Seeds 1 mm long, brown, cuneate to narrowly pyriform, testa smooth.

**Distribution and Phenology.** — Local and uncommon in the Caribbean slopes and lowlands of Costa Rica from the Puerto Viejo region south to the Cordillera de Talamanca (Limón) at 100–1000 m. Collected in flower and fruit from October through March and in June and July.


**Discussion.** — *Topobea dimorphophylla* has leaf blades that are markedly unequal in size at each node and copiously pubescent on both surfaces (Fig. 2A). It is most like *T. intricata* which has leaf blades that are only somewhat unequal in size at each node, longer floral peduncles (3.5–5.2 cm vs. 0.8–1.4 in *T. dimorphophylla*), and free (vs. basally fused for 3.5–5 mm) floral bracts. In habit, indument details, and the pronounced foliar dimorphism at each node, *T. dimorphophylla* is also similar to *T. tetramerina* which is readily separated by its 4-merous flowers, 4-locular ovary, completely free inner and outer floral bracts, and truncate anther pores.

One collection of *T. dimorphophylla*, Donnell-Smith 6554, was erroneously cited as a representative specimen of *Clidemia costaricensis* Cogn. & Gleason ex Gleason (Gleason 1939:126). This appears to have been an inadvertent error because this specimen, which is not mixed with *C. costaricensis*, has young fruiting hypanthia with attached floral bracts that Gleason surely would have recognized as something other than *Clidemia*.

**Etymology.** — The epithet dimorphophylla is derived from the Latin word *dimorphus*, having two forms, and the Greek word *phyllus*, relating to leaves, in reference to the pronounced difference in leaf size at each node.