

2. *Sigmatostalix cardioglossa* Pupulin, *sp. nov.*  
TYPE: COSTA RICA. San José: Pérez Zeledón, San Ramón Norte, trail to Cerro Pelón, 9°25'N 83°44'W, 1050 m, lower montane moist forest, secondary mature and primary vegetation, collected by J. Cambroner and F. Pupulin, flowered in cultivation, 3 December 2001, *F. Pupulin 3499* (holotype, USJ; clonotype in cultivation at Jardín Botánico Lankester, Universidad de Costa Rica). Fig. 2.

*Species Sigmatostalici pictae* Rehb.f. *similis*, *planta parvior e ungue labelli cylindrica non canaliculata lamina inter a cordata apiculata callo non cyathiformi antice tri-mammillato differt.*

**Plant** epiphytic, caespitose, erect, small, to 8 cm tall. **Roots** filiform, flexuous, glabrous, about 1 mm in diameter. **Pseudobulbs** elliptic-ovate, compressed, unifoliate at apex, surrounded at the base by 3–5 distichous, foliaceous and non-foliaceous sheaths, 1.5–2.3 cm long, 0.7–1.2 cm wide, green flushed with purple-brown. **Leaves** subcoriaceous, linear-ligulate, obliquely bilobulate at apex, to 7.5 cm long, 1 cm wide, the base narrowing into a conduplicate petiole to 1 cm long.

**Inflorescence** lateral, erect-spreading, slender, apparently secund, much longer than leaves, up to 22 cm long, the successive flowers subtended by clusters of papery bracts.

**Floral bracts** lanceolate, acute, scarious, subequal to pedicel, about 6 mm long. **Pedicellate ovary** slender, to 7 mm long including the pedicel. **Flowers** yellow blotched with reddish brown. **Sepals** free, narrowly lanceolate-elliptic, acuminate, strongly reflexed, 8 mm long, 2.0–2.3 mm wide. **Petals** lanceolate-ligulate, acuminate, reflexed, 7.5 mm long, about 1.7 mm wide. **Lip** long-unguiculate, the fleshy claw linear, cylindrical, dilated toward the apex into two lateral, triangular, obtuse, flattened

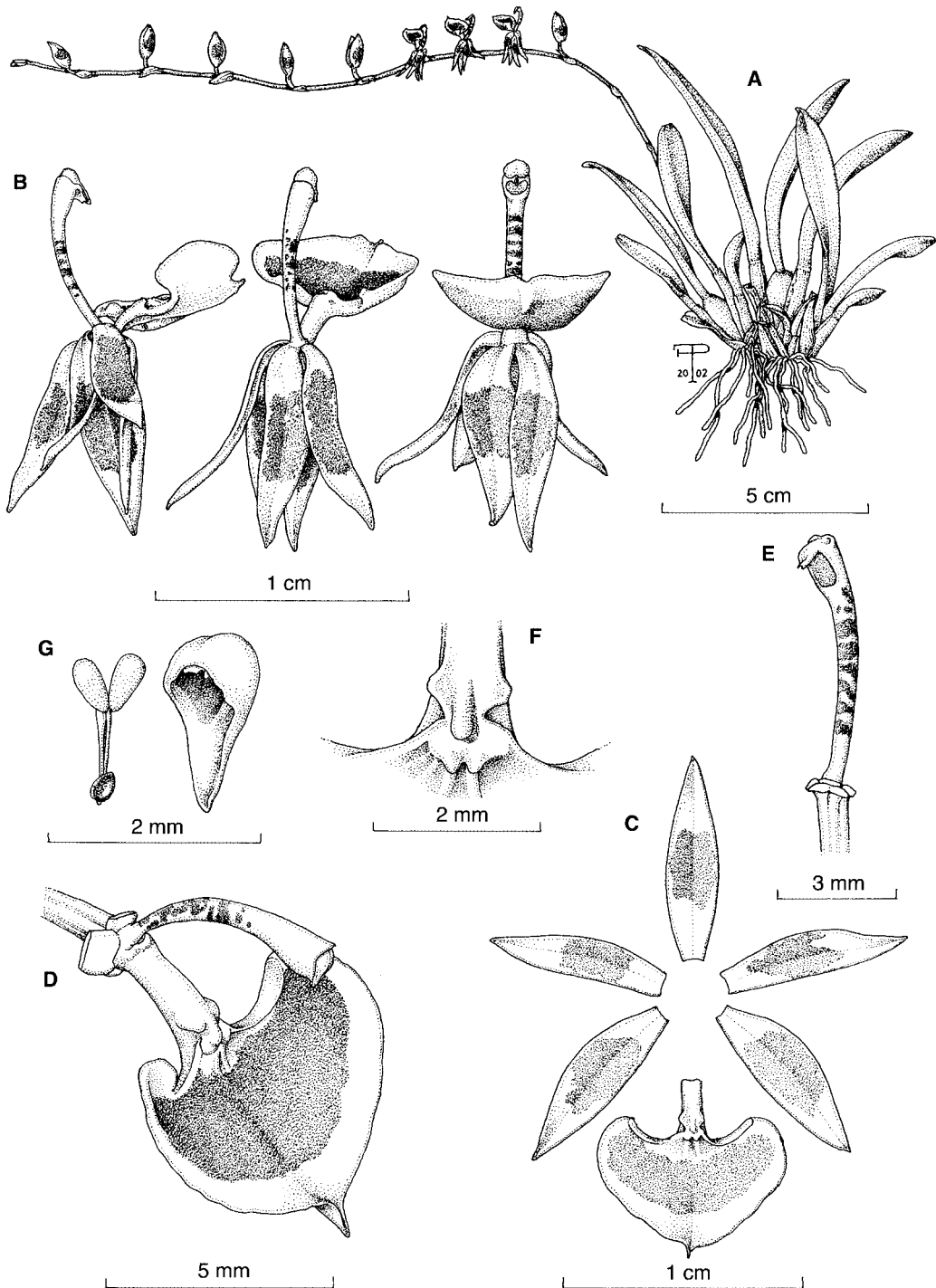


FIGURE 2. *Sigmatostalix cardioglossa* Pupulin. A. Habit. B. Flower, three views. C. Dissected perianth. D. Column and lip, lateral view. E. Column, abaxial view. F. Callus. G. Pollinarium and anther cap. Based on: *Pupulin* 3499 (USJ). Drawn from the holotype.

teeth, 2 mm long, 1 mm wide, the lamina entire, cordate, apiculate, 5 mm long, 8 mm wide; disc with a very short, widely elliptic, 3-mamillate, rounded callus. **Column** slender, terete, arcuate, dilated at apex into a porrect, triangular, shortly bifid rostellum, 6 mm long. **Anther cap** ovate, narrowly acute, 2-celled. **Pollinia** 2, elliptic-obovate, on an elliptic, infolded stipe; viscidium obpeltate.

**Habitat and Ecology:** Epiphytic in premontane moist forest at about 1000 m elevation. *Sigmatostalix cardiglossa* is uncommon on shaded branches and twigs in primary and secondary mature vegetation. Flowering occurs at least in November and December.

**Distribution:** Only known from the type collection in Costa Rica.

**Etymology:** From the Greek *cardio-*, heart, and *glossa*, tongue, lip, in reference to the heart-shaped lip.

*Sigmatostalix cardiglossa* has the smaller habit among Mesoamerican species of the *S. picta* group. The cylindric claw of the lip lacking a central channel, the tri-mammillate callus at the base of the lip, and especially the cordate lamina without any lateral lobe, easily distinguish this species from its Costa Rican relatives.