

Acianthera fecunda Pupulin, G. Rojas & J. D. Zuñiga, *sp. nov.* TYPE: COSTA RICA. Cartago: Turrialba, La Suiza, road between Pacayitas and La Suiza, 2 km South of Pacayitas, 9°52'29.9" N 83°35'03.6" W, 1150 m, premontane rain forest, epiphytic in secondary vegetation along pastures, 8 March 2006, D. Bogarín 2650, R. L. Dressler, A. Karremans & F. Pupulin (Holotype: CR; Isotype: JBL-Spirit). Fig. 2.

Herba epiphytica perpusilla ramicaulibus quam foliis brevioribus, folia anguste ovata, inflorescentia biflora, flores semper cleistogami, sepalum posticum oblongum, synsepalum late ovatum, petalis lanceolatis, labellum 3-lobatum, hastatum, lobulis lateralibus rotundatis, lobo intermedio obtuso, dauabus carinis subquadratis ornato.

Plant epiphytic, caespitose, small, up to 2.5 cm tall. *Roots* slender, flexuous, 0.5 mm in diam. *Stem* short, subtriangular in section, grooved, dilated toward the apex, 6–10 mm long, enclosed at the base by 2–3 infundibuliform, tubular, membranaceous bracts to 5 mm long. *Leaf* narrowly ovate, acute, minutely emarginate, provided with a small abaxial apicule, 16–17 mm long, 5–6 mm wide. *Inflorescence* a 2-flowered, suberect raceme borne at the base of the leaf from a membranaceous spathe 2 mm long. *Floral bract* membranaceous, globose-infundibuliform, acuminate, to 0.5 mm long. *Pedicel* clavate, to 1 mm long. *Ovary* elliptic, longer than the pedicel, to 5 mm long, 2 mm wide. *Flowers* always cleistogamous, yellowish green, sparsely spotted purple on the petals and the keels of the lip. *Dorsal sepal* oblong, acute, 2.7 mm long, 1.2 mm wide, abaxially carinate. *Lateral sepals* connate in the basal two-thirds into a broadly ovate synsepal, obtuse to subacute, 2.8 mm long, 2 mm wide. *Petals* lanceolate, acute, the distal margins irregularly erose-denticulate, 1.5 mm long, 0.6 mm wide. *Lip* articulate with the column foot, clawed, obscurely 3-lobed, hastate, 1.6 mm long, 1 mm wide, the lateral lobes rounded, the midlobe obtuse, subcrenulate,

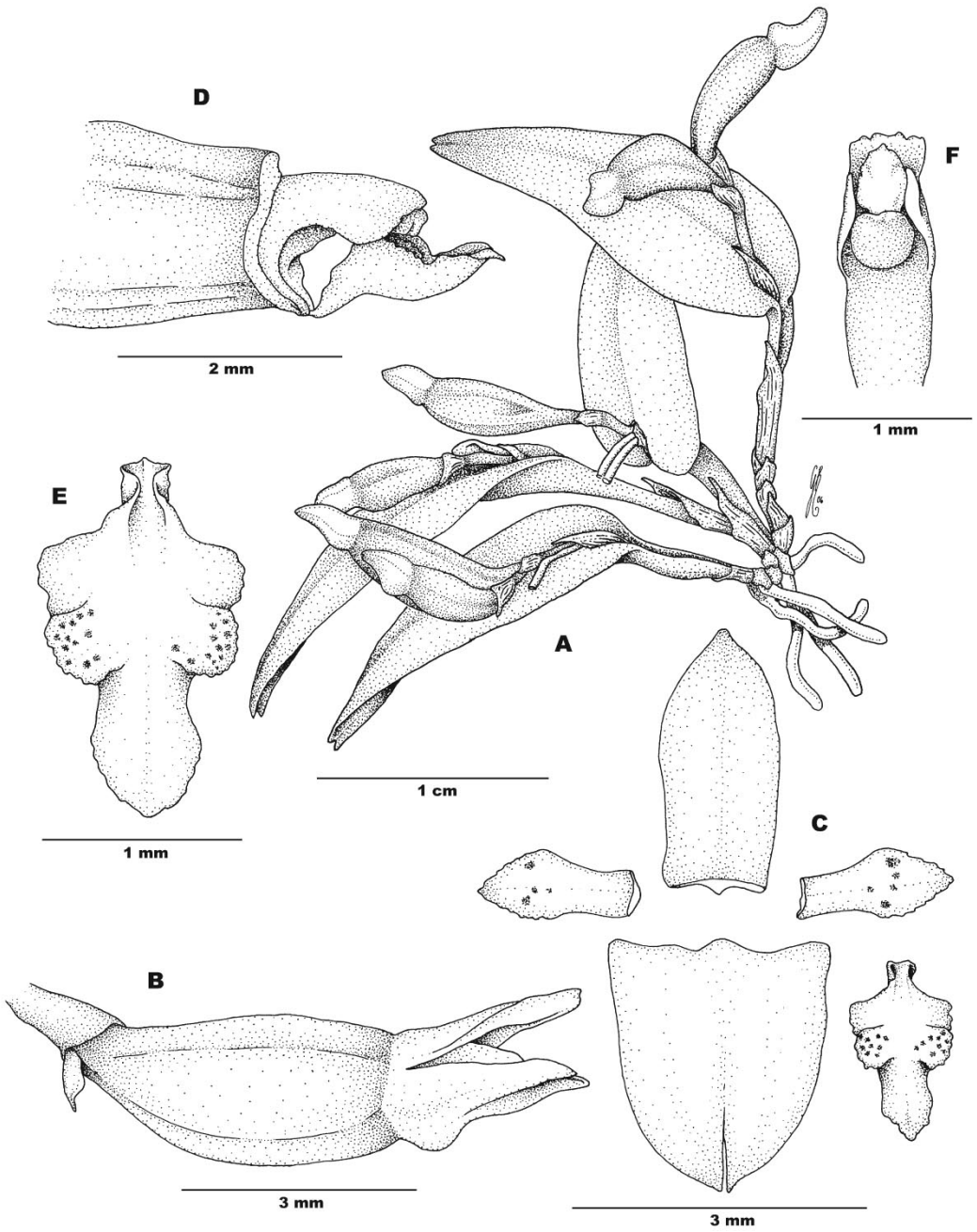


FIGURE 2. *Acianthera fecunda* Pupulin, G. Rojas & J. D. Zúñiga. A, habit; B, ovary and flower; C, dissected perianth; D, column and lip, lateral view; E, lip, adaxial view; F, column, ventral view. Drawn by G. Rojas from the holotype.

provided with 2 subquadrate, crenulate, diverging, laminar keels. *Column* slender, terete, 1.2 mm long, with a short foot, provided with 2 elliptic wings, the apex with a truncate, erose, petaloid clinandrium. *Anther cap* cucullate, obovate.

Etymology: from the Latin *fecundus*, fruitful, in reference to the autogamous nature of the species.

Distribution: known only from Costa Rica.

Ecology: epiphytic on remnant patches of very wet premontane secondary forest at 1150 m elevation. The cleistogamous flowers have been observed during October and November, corresponding to the rainy season.

Acianthera fecunda has apparently no close relatives within the genus, with the exception of the species described hereafter as *A. cabiriae*. It can be recognized by the very reduced habit size (less than 3 cm tall), the 2-flowered, short inflorescence, and the cleistogamous nature of the flowers. The broadly ovate synsepal, the lanceolate petals with irregularly erose-denticulate margins, and the hastate, obscurely 3-lobed lip provided with subquadrate, laminar keels easily distinguish the flower among *Acianthera* species.