

***Zygostates costaricensis* sp. nov. (PLATE 8)**

Plant grayish-green. Stem very short: leaves grayish-green; lower ones widely spreading, the upper ones ascending to erect; sheaths equitant, 1–2 cm. long, their margins hyaline; blades articulated to the sheath, inequilaterally lanceolate or oblong-lanceolate, sometimes slightly falcate, acute, laterally compressed, 1.5–4 cm. long, 4–10 mm. wide: inflorescence axillary, racemose, the rachis densely hispid with spreading hairs of variable length, the spreading bracts, both those at the base of the rachis and those subtending flowers, broadly ovate to orbicular, acute, about 2 mm. long, partly clasping the rachis, ciliate on the margin with glandular hairs: flowers not crowded, on hispid pedicels which are shorter than the bracts: sepals free, orbicular, wing-keeled on the back, about 2 mm. in diameter, obtuse, the keel ciliate with a few teeth, the body of the sepals on the back sparingly hispid: petals orbicular, about 2 mm. long including the short claw, keeled and sparingly hispid on the back: lip papillose, incurved and arching over the flower, concave, 4–5 mm. long when straightened out, green at the base, slightly dilated above where it is about 1 mm. wide when spread out, acute at the apex: the 2 appendages about 1 mm. long, spreading like a ram's horns, white, papillose, flattened, somewhat dilated toward the obtuse apex: column very slender and weak, bent back, geniculate, the rostellum with a long crooked beak which is recurved into a semicircle about the middle: anther of the general shape of the rostellum and somewhat exceeding it in length, and with a recurved tip: pollinia 4, on a long slender stipe which is bent back upon itself toward the apex.

On tree-trunk in forest, Finca Navarro, *no.* 680. The most interesting plant revealed thus far in Mr. Maxon's collections. The herbarium material of this plant brought back still had the old racemes attached, but all the flowers were missing, so it was impossible to place it satisfactorily. Fortunately Mr. Maxon succeeded in securing some good living plants. These thrived and came into flower in October of last year. This supplied the needed material for a definite determination of the plant. It was interesting to find that it belonged to the genus *Zygostates*, known hitherto only from Brazil and Paraguay, and that it was also an undescribed species. Another genus is thus added to the orchid flora of North America.

*Zygostates* is closely related to *Ornithocephalus*, which ranges from northern South America and Trinidad through Panama and Central America, with one or two outlying species in Asia and Australia. It is distinguished from *Ornithocephalus* by the two appendages near the base of the column. The structure of the column and the unusual lip of this Costa Rican member of the genus differ considerably from the same organs in other species of the genus, but it seems best, at least for the present, to refer it here.