

**ZYGOSTATES ADERALDOANA—A NEW SPECIES IN THE
ORNITHOCEPHALUS GROUP OF SUBTRIBE ONCIDIINAE
(ORCHIDACEAE) FROM PARAÍBA, NORTHEAST BRAZIL**

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ABSTRACT: A new species of *Zygostates* Lindl. from Paraíba, northeast Brazil, is described and illustrated.

Key words: Orchidaceae, Oncidiinae, *Zygostates*, Paraíba, Brazil

INTRODUCTION

The orchid genus *Zygostates* Lindl. is a member of the *Ornithocephalus* group of subtribe Oncidiinae. It comprises about 25 epiphytic species distributed in the South American tropics, mainly in southern Brazil. In the course of preparing a taxonomic revision of *Zygostates* (Toscano de Brito in prep.), a new species from Paraíba, northeast Brazil, has been discovered. It is described and illustrated here.

Zygostates aderaldoana Toscano, L.P. Felix & Dornelas sp.nov. Type: Brazil. Paraíba: Município de Areia, Fazenda Pirauá, 31/XII/2002, L.P. Felix 9790 (Holotype: EAN; Isotypes: IPA, RB, HUEFS). FIGURE 1.

Species haec *Z. obliquae* (Schnee) Toscano similis sed labello lateraliter compresso et distincte concavo differt.

Plant to 55 mm tall. **Roots** several, terete, whitish, glabrous. **Stem** inconspicuous, surrounded by the bases of the lateral leaves. **Pseudobulbs** 2.5–3.5 × 1–2 mm, unifoliate, narrowly ovoid to pyriform. **Lateral leaves** few, to 4 surrounding the pseudobulb, articulate, sheathing at base, the blade 25–45 × 2–4 mm, lanceolate to oblong-lanceolate, thick, narrowing at base, acute. **Apical leaf** similar to the lateral ones, lacking a leaf-sheath and shortly petiolate. **Inflorescence** to 50 mm long, 4- to 6-flowered, ra-

cemose, lateral, emerging from the base of the pseudobulb, erect, drooping or arching; peduncle to 25 mm long, terete; rachis to 25 mm long, slightly flexuous; floral bracts much shorter than pedicel, 1.5 × 1.5 mm, fleshy, sagittate, decreasing slightly in size towards the apex of inflorescence. **Flowers** ca. 6 mm in diameter, sepals and petals yellow, lip green. **Pedicel** to 4 mm long, twisted, slightly angular in cross-section. **Ovary** 1 mm long, slightly ridged in cross-section. **Dorsal sepal** 4 × 1.5–2 mm, slightly asymmetric, oblong-elliptic, reflexed or spreading, slightly incurved toward the acute apex, abaxially obscurely keeled, the margins obscurely crenate, denticulate or sinuate near apex. **Lateral sepals** free, similar to dorsal sepal. **Petals** 3–4 × 3–4 mm, unguiculate, broadly obovate, somewhat asymmetric and irregularly spreading, margins entire at base, erose-denticulate from near the middle to the obtuse, somewhat rounded apex. **Lip** 3–4 × 2.5–3 mm, deeply concave, strongly asymmetric, somewhat twisted, laterally compressed on one side, elliptic in outline from above, somewhat ovate and tri-lobed when spread, fleshy, green, the base glandular, hollowed, obliquely attached to the base of the column, the apex distinctly acuminate and incurved, the margins entire and incurved. **Column** 4.5 mm long (including rostellum), strongly sigmoid, asymmetric, somewhat twisted and flexuous, sideways-turned, lacking lateral appendages at base, the base slightly swollen, terete, bearing a sub-rounded stigmatic cavity

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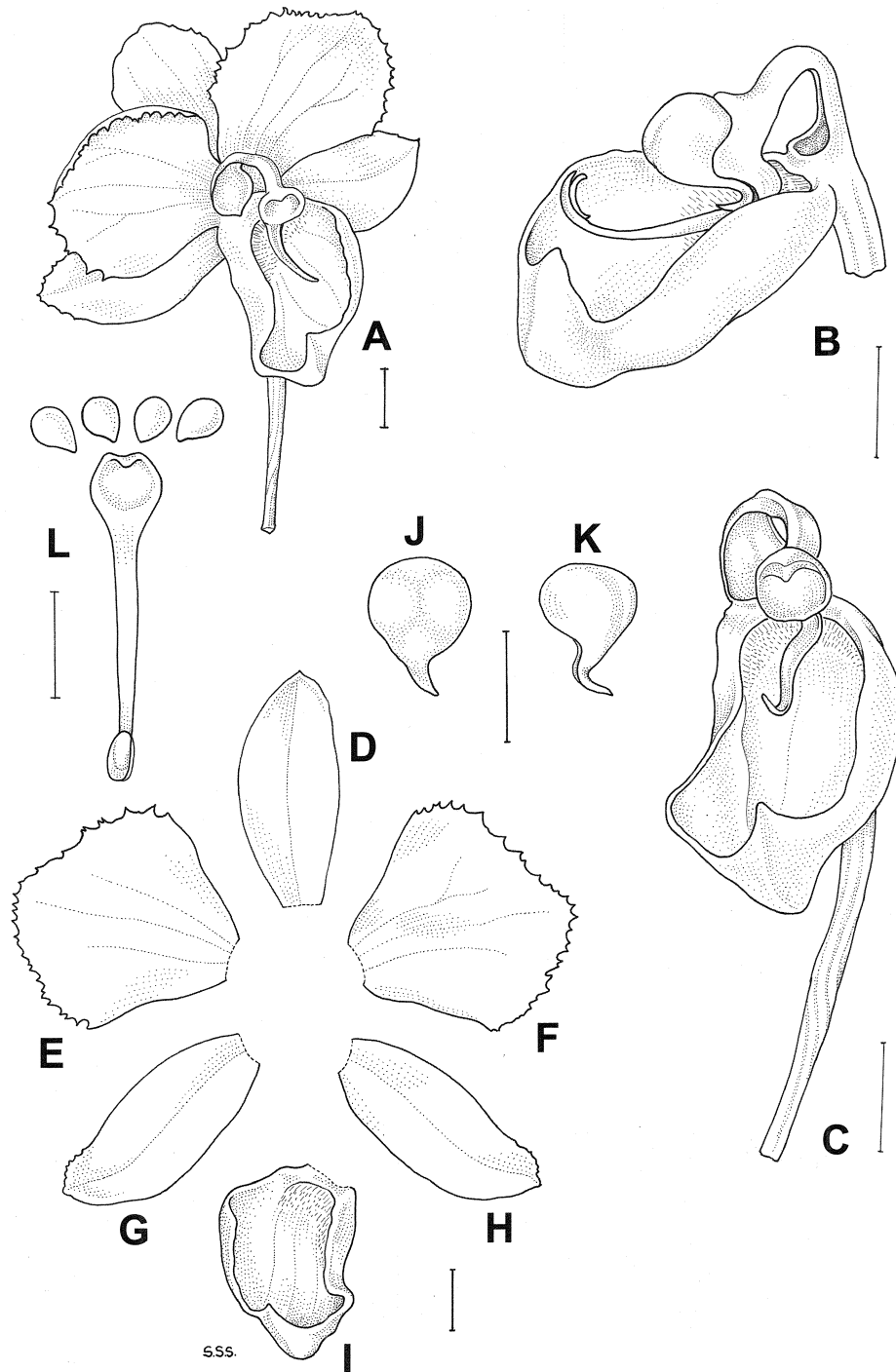


FIGURE 1. Floral detail of *Zygotates aderaldoana*. **A.** Flower in front view, column without anther; **B.** Lip and column in side view, anther and pollinarium in place; **C.** Lip, column, and pedicel in front view, column without anther and pollinarium; **D.** Dorsal sepal; **E–F.** Petals; **G–H.** Lateral sepals; **I.** Lip; **J.** Anther in front view; **K.** Anther in side view; **L.** Pollinarium in front view and spread. All drawn from *L.P. Felix & G.V. Dornelas 934* (EAN-spirit), by Susanna Stuart-Smith. Scale bar = 1 mm.

above, the mid-portion slender, nodding at middle, the apex dilated; rostellum conspicuous, 2.5 mm long, markedly curved forward and upward, asymmetric, somewhat twisted and flexuous, sideways-turned, subulate, adaxially flattened, acute; anther 1–1.5 mm long, operculate, much shorter than the rostellum when placed on the column, ovate in outline, shortly beaked, the beak recurved and parallel to the rostellum, acute; pollinia 0.5 mm long, obovoid, arranged in two superposed sub-equal pairs; stipe 3 mm long, narrow and elongate, obscurely flexuous and asymmetric, abruptly dilated and somewhat obovate near the apex; viscidium oblong-elliptic.

ETYMOLOGY: Named after Aderaldo Leocádio da Silva, botanical teacher and former curator of EAN.

HABITAT: Epiphytic in ecotonal forest (between brejo forest and caatinga forest), locally known as “Mata de Agreste.” Alt. 600–700m.

PARATYPES: **Brazil.** Paraíba: Areia: Fazenda Pirauá, 10/XII/ 2004, L.P. Felix & G.V. Dornelas Junior 10603 (EAN); same locality, 5/II/ 1988, L.P. Felix & G.V. Dornelas 934 (EAN—flowers in spirit).

Zygostates aderaldoana is related to the Venezuelan *Z. obliqua* (Schnee) Toscano with which it shares strongly asymmetric flowers. Nevertheless, this new species is readily distinguished from *Z. obliqua* by the shape of its deeply concave lip. The column and lip of *Z. aderaldoana* are somewhat twisted, flexuous and turned sideways either to the left or to the right. The lip is laterally compressed on either its left or right side. The other floral segments are also somewhat twisted and asymmetric in shape and attitude, which gives an odd aspect to the flowers. Recently *Z. aderaldoana* (cited as *Dipteranthus sp.*) has been reported $2n = 56$ (Felix & Guerra 2000).

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