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DODSONIA, A NEW ECUADORIAN GENUS OF THE ZYGOPETALINAE (ORCHIDACEAE)

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The circumscription of the genera of the Zygopetalinae is a difficult problem which has received the attention of several authors (e.g., Dressler, 1972; Garay, 1969b, 1973; Fowlie, 1966, 1969). The subtribe is unusual in that the species are often more easily identified than the genera. The difficulties of generic recognition are exemplified in *Chaubardiella* Garay, *Chondrorhyncha* Lindl., and *Stenia* Lindl. One problematic facet pertaining to this group is treated herein.

In 1969, Garay (1969a) described *Stenia saccata*, based on its peculiar lip-shape. He stated that the structure of its pollinia and the lateral view of its lip did not differ appreciably from *S. pallida* Lindl. Subsequently, Garay (1969b) changed his view in his generic treatment of the *Condrorhyncha* complex. He transferred *S. saccata* to a new genus, *Chaubardiella*, to which he also assigned *Chaubardia tigrina* Garay & Dunsterv., *Chaubardiella calceolaris* Garay, *Kefersteinia subquadrata* Schltr., and *Stenia chasmatochila* Fowlie. He pointed out differences in the structure of the pollinarium and articulation of the lip as justification for the exclusion of *C. saccata* from *Stenia*. The similarity in the lateral view of the lip became useless as a taxonomic distinction since all species of *Chaubardiella* and *Stenia*, and some species of *Chondrorhyncha* (Garay, 1978) are reminiscent in this respect. According to Garay, *Chaubardiella* is characterized by its long filiform rostellum, articulation of the lip, and column-shape. Additional criteria may include pollinarium placement on the legs of bees, and a viscidium which curls after removal (Dressler, personal communication, 1979). Still, *C. saccata* is an anomalous species in the genus. Its lip-shape and callosities are unique compared to all other species of the subtribe. The labellum is basally saccate as in *Chaubardiella*, *Stenia* and in some species of *Chondrorhyncha*. The lip is provided with two conspicuous sickle-shaped lobes that extend well beyond the short triangular mid-lobe. Within the saccate base of the lip is a large, transverse, shelf-like partition broadly attached to the base of the lip below its articulation with the column-foot. In addition, the front margin of the saccate portion has two converging transverse callosities. These features make it one of the most readily recognizable species of the Zygopetalinae.

The stimulus for creating a new genus to accommodate *Chaubardiella saccata* came from a study of Ecuadorian Zygopetalinae. A specimen collected by Dr. C. H. Dodson was brought to my attention for examination. It is clearly allied to *C. saccata*, having all the basic features outlined above, yet differing in the shape of the basal partition of the saccate lip, and the form and ornamentation of the callus. The rostellum of this proposed new species has two minute, inconspicuous lateral teeth, one on each side of the prominent filiform mid-tooth. *Chondrorhyncha* supposedly differs from *Chaubardiella* by its three-dentate rostellum. If the anomalous *C. saccata* and this proposed new species are included in *Chaubardiella*, one of the major distinctions between *Chaubardiella* and *Chondrorhyncha* is invalidated. However, because of the distinctiveness of these two species, and also because of the ambiguity of their inclusion in *Chaubardiella*, I believe that a new genus is warranted. Figures 1 - 6 illustrate the differences and similarities of the two species.

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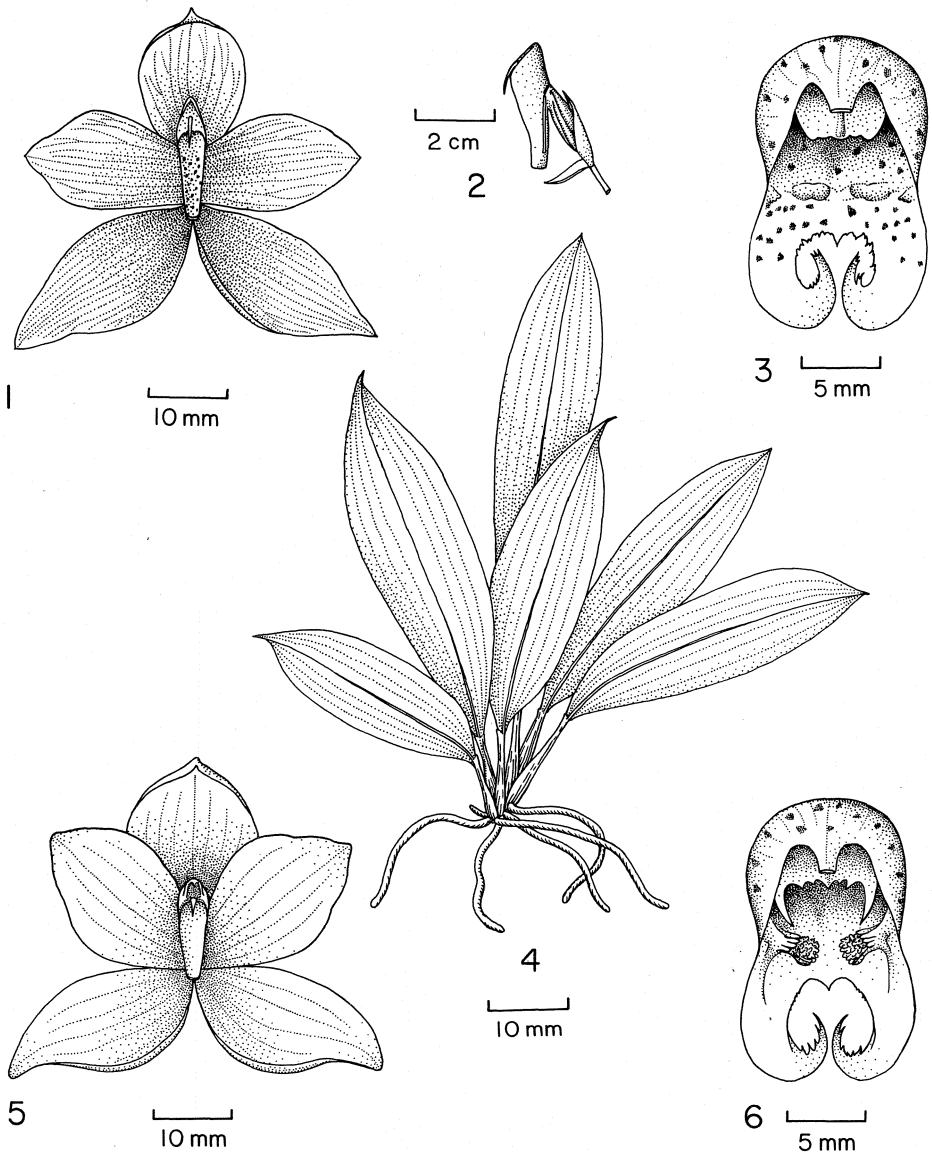

Figures 1-6: Species of *Dodsonia*. 1. Front view of flower of *D. falcata*, lip removed, sepals and petals spread. 2. Side view of column of *D. falcata* with perianth removed. 3. Labellum of *D. falcata*. 4. Habit of *Dodsonia* species. 5. Front view of flower of *D. saccata*, lip removed, sepals and petals spread. 6. Labellum of *D. saccata*. Figures 1-3 are drawn from the pressed type-specimen. Figure 4 is a composite drawing based on the type-specimen of *D. falcata* and a photograph of the type-plant of *D. saccata*. Figures 5-6 are redrawn from Garay (1969a).

Dodsonia Ackerman, *gen. nov.*

Chaubardiellae Garay similis, sed labello trilobato, lobis lateralibus falcatis, porrectis, labelli parte saccata cum septo transverso basali, parte anteriore cum callis duobus transversis convergentibus differt.

Plants caespitose, epiphytic herbs without pseudobulbs, each growth with several subpetiolate leaves arranged fan-like. Inflorescences lateral from leaf-axils, single-flowered. Flowers conspicuous, fleshy, resupinate; sepals and petals spreading, subplanar, subsimilar, broad; lip articulate to the column-foot, saccate at the base, with two falcate lobes extending forward beyond the mid-lobe, the saccate portion with a transverse, shelf-like partition at the base, and converging, transverse callosities at the front margin; column semiterete, stout, the column-foot well-developed; stigma transverse; rostellum simple or obscurely tridentate, the mid-tooth elongate, filiform-acicular, conspicuous; pollinia four, in two unequal pairs, clavate-cylindric.

TYPE: *Dodsonia saccata* (Garay) Ackerman (*Stenia saccata* Garay).

ETYMOLOGY. Named in honor of Dr. Calaway H. Dodson, director of the Marie Selby Botanical Gardens, Sarasota, Florida. Dr. Dodson is well-known for his significant contributions in taxonomy and pollination biology of the Orchidaceae as well as for his studies in neotropical floristics.

The species of *Dodsonia* are easily identified by the following features of the lip: the prominent falcate lobes, the basal partition, and the transverse frontal callosities.

Dodsonia falcata Ackerman, *sp. nov.* Figures 1-4.

Dodsoniae saccatae (Garay) Ackerman similis, sed labelli parte saccata cum margo antico septi crenato, parte anteriore cum callis minutis papillosis differt.

Plants caespitose, without pseudobulbs. Leaves several, erect-spreading, the uppermost 2-3 leaves subequal, the lowermost leaves short to bract-like, the sheaths 1-2.5 cm long, narrow, linear, conduplicate, articulated and confluent with the lamina; lamina 1.5-11.0 cm long, 0.7-2.2 cm wide, slightly conduplicate only at the base, oblanceolate-elliptic, acute to accuminate. Roots thick, ca. 2 mm in diameter, with several velamen layers present, without root hairs. Inflorescence lateral from axils of lower leaf-sheaths, simple, the peduncle 1.5-2.5 cm long. Flowers conspicuous, resupinate, light yellow with reddish spots, ca. 4 cm across; dorsal sepal 1.8 cm long, 1.3 cm wide, broadly oval-elliptic, acute, entire; lateral sepals 2.6 cm long, 1.2 cm wide, ovate-elliptic, acute, entire, attached to the base of the column-foot, spreading; petals 1.8-2.2 cm long, 1.2 cm wide, obovate-elliptic, acute, entire, subobliquely attached to nearly the full length of the column-foot; lip three-lobed, globose-saccate at the base; mid-lobe short, broadly triangular, deflexed, denticulate; lateral lobes longer than the mid-lobe, falcate, incurved, serrate-lacerate along inside margin, the free portion 0.8-1.0 cm long, the tips of each lobe overlapping, the globose-saccate portion 1.0-1.2 cm long and approximately as broad when pressed, articulate with the column-foot, the basal partition broad, subquadrate, plate-like, transverse, broadly attached at the base, free beneath, 4-5 mm long, 6-7 mm wide, the front margin of the saccate portion of the lip bordered by two low, transverse, converging,

minutely papillose callosities. Column short, stout, semiterete, 6 mm long, 4-5 mm deep; column-foot 6-7 mm long; rostellum tridentate, the mid-tooth much exceeding the inconspicuous lateral teeth, about 3 mm long; ovary 4-5 mm long; pedicel 4-5 mm long, subtended by two small bracts.

TYPE: *ECUADOR*: ZAMORA-CHINCHIPE: Río Zamora, epiphytic in dense jungles, uncommon, alt. 1100 m, 26 July 1960, *C. H. Dodson 141* (HOLOTYPE: SEL).

ETYMOLOGY: Named for the falcate lobes of the lip.

The crenate front margin of the lip-partition and the minutely papillose callosities distinguish this species from *D. saccata*. There may be differences in the pollinarium but unfortunately the type specimen is missing this structure.

Dodsonia saccata (Garay) Ackerman, *comb. nov.* Figures 4-6.

Stenia saccata Garay, Orch. Rev. 77: 152, 1969.
Chaubardiella saccata (Garay) Garay, Orquideologia 4: 148, 1969.

TYPE: *ECUADOR*: ZAMORA-CHINCHIPE: along Río Zamora, epiphytic on trees, *J. Stroebel s.n.* (HOLOTYPE: AMES). Type-plant cultivated and flowered 12 November 1968.

DISTRIBUTION: Ecuador.

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