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STUDIES IN STELIS. II.

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AMONG the genera of the Pleurothallidinae the genus *Stelis* has been considered a very natural one, characterized by unmistakable peculiarities in the structure of the gynostemium and by a clearly diagnostic perianth. But in the group discussed in the preceding paper of this series the stigmas, as already stated, exhibit a conspicuous departure from the typical condition and represent a transitional trend toward *Pleurothallis*. Indeed, the type species of *Pleurothallis*, namely *P. ruscifolia* (Jacq.) R.Br., has a gynostemium that bears some resemblance to the gynostemium of *Stelis rubens*, differing chiefly from it in being obliquely truncate and unlobed, but resembling it in having the stigmatic orifice extending along the summit on the anterior edge. This peculiarity is very strongly marked in a Costa Rican species of *Stelis* that has not yet been described and which may be characterized as follows:

***Stelis pendulispica* Ames, sp. nov.**

Herba verisimiliter caespitosa. Caules secundarii elongati, erecti, monophylli, vaginis amplis vestiti. Folium oblongo-ellipticum, valde coriaceum, usque ad basin attenuatum, in petiolum sulcatum elongatum contractum. Pedunculus plus minusve erectus, cum racemo folium excedens. Racemus elongatus, multiflorus, pendu-

lus. Flores valde congesti, purpurei. Sepala lateralia orbiculari-ovata, trinervia, intus valde glandulosa. Sepalum dorsale simile. Petala flabellata, apice valde incrassata, truncata, uninervia. Labellum carnosum, late unguiculatum, supra unguem late ovato-cordatum vel orbiculari-cordatum. Unguis labelli quadratus, callo elongato instructus. Columna abbreviata, apoda, apice trilobata.

Secondary stems probably densely caespitose, about 3 cm. long, erect, monophyllous, concealed by elongated tubular sheaths. Sheaths three to four, up to 2 cm. long, dilated upwards, the uppermost one much the longest, obliquely truncate. Leaf including the petiole 6.5–12 cm. long, 1.2–1.7 cm. wide, oblong-elliptic or oblanceolate, rounded at the tridenticulate tip, coriaceous; petiole about 1.5 cm. long, sulcate, rigid. Peduncle erect, 6–10 cm. long including the raceme, with five or six infundibuliform bracts, the lowermost one tubular and ample. Raceme 3–6 cm. long, pendulous or strongly arcuate, densely many-flowered. Flowers in several ranks, dark purple, subtended by broadly infundibuliform bracts which are almost contiguous along the rachis. Sepals equal, about 2 mm. long, 2 mm. wide, orbicular, densely glandular on the inner surface, 3-nerved, strongly convex, forming at base a shallow tube. Petals 1 mm. long, 1 mm. wide at the truncate thickened apex, cuneate or flabellate, 1-nerved. Labellum very fleshy-thickened, 1 mm. long, broadly unguiculate, broadly ovate-cordate or orbicular-cordate beyond the claw. Claw about 1 mm. wide, with a distinct broad callus in the middle. Column 3-lobed at the summit, with the stigmas confluent and extending to the lateral lobes forming a prominent pulvinate mass beneath the triangular rostellum.

Stelis pendulispica is readily distinguished from its allies by means of the pendulous racemes of crowded

flowers in several ranks. It is a very distinct species with no close affinities in Middle America, although the structure of the labellum suggests *S. ciliaris* Lindl. The flowers of Lankester no. 1175 are larger than the type, the sepals being about 1 mm. longer and smooth. Structurally the plant is inseparable from Alfaro's no. 141. I think it is probable that glandulousness in this case is of little consequence because the glandular emergences are readily rubbed off, and very often smooth and glandular sepals are characteristic of flowers which are beyond doubt referable to the same species.

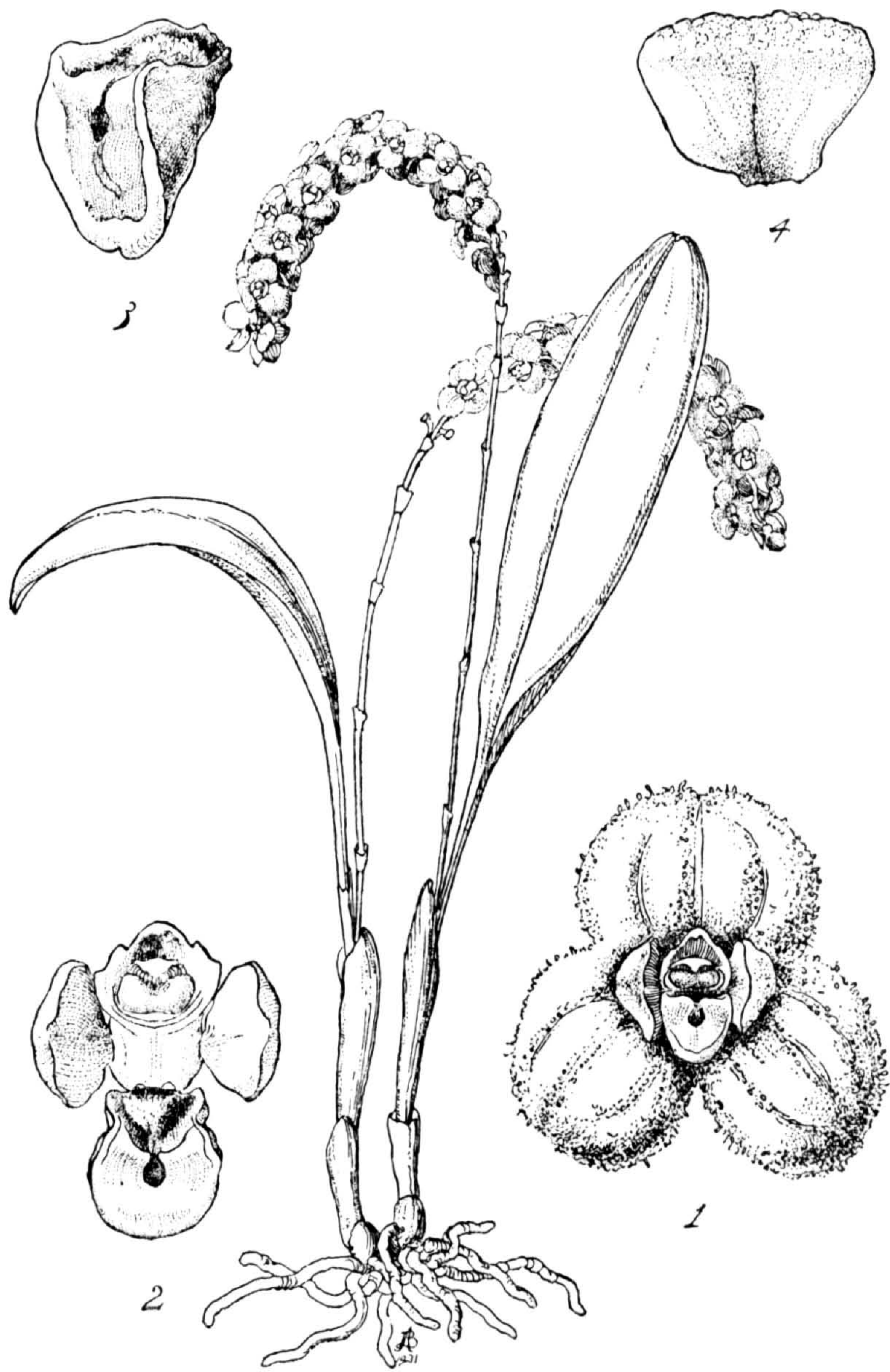
COSTA RICA, El Salvaje, Candelaria. Flowers chocolate, in four ranks. At 1,700 meters altitude. August 3, 1925. *Anastasio Alfaro 141*. (TYPE in Herb. Ames No. 30989.) (Under this same number, two other collections have been distributed. The plants are conspecific with those from El Salvaje. The data accompanying them are as follows: Estrella Valley. Flowers prune-purple. At 50 meters altitude. November 23, 1925. *Alfaro 141*; Estrella Valley, "Pandora." Flowers pansy-purple. At 50 meters altitude. September 12, 1925. *Alfaro 141*.); Satanillas de Acosta. Leaves up to $3\frac{3}{4}$ inches long, succulent. Sepals Corinthian purple (RIDGWAY xxxviii), petals and lip glistening as though wet with dew. Anthers nearly white, tinged with purple. At 5,000 feet altitude. August 1927 (flowered under cultivation at Cartago, October 27, 1927). *C.H. Lankester 1175*.

In 1925, I received from C. H. Lankester a Costa Rican species of *Stelis* which appears never to have been described. It is without close allies, although the structure of the labellum indicates relationship with *S. purpurascens* A. Rich. & Gal. The inflorescence is remarkable because the flowers do not conform to a fixed plan in their arrangement on the rachis. Some of the flowers are transversely attached. This peculiarity of the inflorescence is clearly shown in the accompanying illustration. For this species the name *Stelis transversalis* is proposed.

EXPLANATION OF ILLUSTRATION

STELIS PENDULISPICA Ames. Plant natural size. 1, flower much enlarged. 2, petals, labellum and column; labellum sharply deflexed; column (anther removed) showing the triangular rostellum overhanging the pulvinate stigmas. 3, labellum. 4, petal.

Drawn by Blanche Ames



STELIS *pendulispica* Ames