

# Sociedad Colombiana de ORQUIDEOLOGIA

Apartado Aéreo 4725  
Medellín - Colombia

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Asociada a la American Orchid Society Inc.

6000 South Olive Ave West Palm Beach, FL. 33405

La Sociedad Colombiana de Orquideología es una entidad privada, sin ánimo de lucro, dedicada a fomentar el estudio, cultivo y conservación de las Orquídeas

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# THE TELIPOGONS OF COSTA RICA (II)

Calaway H. Dodson \*  
Rodrigo Escobar R. \*\*

TELIPOGON GLICENSTEINII Dodson & Escobar, sp. nov.

TYPE: COSTA RICA: SAN JOSE: Km 94 on the Panamerican highway on the western side of Cerro de la Muerte, epiphytic at the top of a huge tree 30 m tall, alt. 3050 m, Jun 1985, cultivated by A. Campos near La Georgina, flowered 3 Aug 1985, R. Escobar, D. Portillo, D. E. de Retana 3610 (JAUM holotype, RPSC, MO, USJ, ANT isotypes).

Species haec *T. christobalensis* Krzl. similis, sed floribus multiminoribus, calli forma dissimili et labello 19- ad 21-nervato differt.

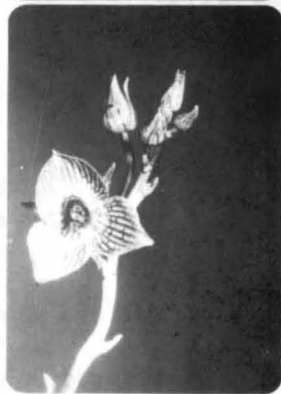
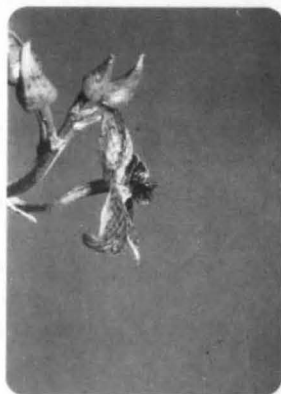
ETYMOLOGY: Named in honor of Leon Glicenstein who discovered the species, and was unwilling to divulge the locality.

DISTRIBUTION: Costa Rica.

Plant of medium size, caulescent; total stem to 14 cm long, branched from apical nodes, the branches to 4 cm long; roots coarse, produced along the stem. Leaves alternate, distichous, obovate, to 4 x 1.4 cm, obtuse

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\* Curator, Missouri Botanical Garden, Casilla 449, Sucursal 12 de Oct., Quito, Ecuador.

\*\* Curator of Orchids, Herbarium of Jardín Botánico Joaquín Uribe, Apartado Aéreo 4725, Medellín, Colombia.



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FLORA DE Costa Rica  
*Telepogon glaberrimus* DeCandolle & Fernald  
 No. 146. Pochi, Pochi, Cerro de la Muerte, No. 14  
 of the San Juan National Highway, alt. ca. 2000 m,  
 a population at the top of a mango tree, 30 meters  
 tall, June 1985, cultivated by H. Campos.  
 Provenance small for the genus, flowers pinkish,  
 light purple to blue with dark purple-bean  
 white ring and calicines; petals white to 13, but  
 most of the tube is white; sepals white to 13, but  
 the outer margin is a few dark brown, dark  
 purple calicines, the internal lobes suberect, the  
 pedicels dark, the pedicels purple beak with  
 3 brown bristles of slender hairs, the one on top  
 with slender bristles.

Collector: H. Campos, H. Pochi & D. E. de Retana  
 No. 146. Pochi, Pochi in cult. 3 August 1985

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE

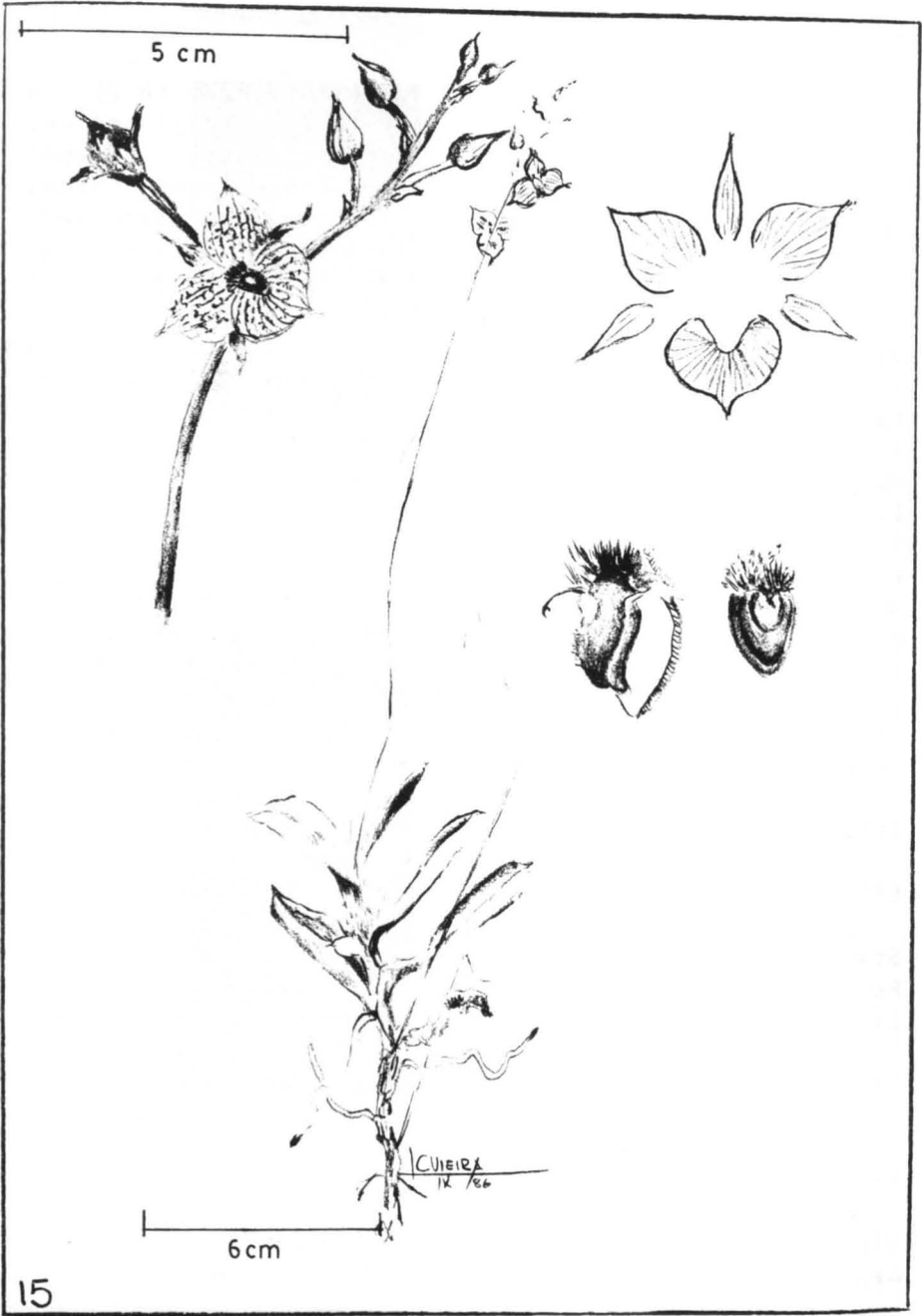


Illustration: L.C. Vieira

*Telipogon glicensteinii*

at the apex, narrowing toward the base, with net-like venation; sheaths surrounding the stem. Inflorescence terminal, terete, to 45 cm long, to 15 flowered, sometimes branched, the flowers produced in succession; peduncle of 1 elongate internode to 22 cm long; floral bracts triangular, to 3 mm long; pedicel terete, 1.2 cm long; flowers nonresupinate. Flowers creamish yellow, with purple brown vein lines reticulately interconnected, the callus dark red-purple, the column blackish red-purple, spines red. Sepals equal, narrowly ovate, concave, carinate on the backside, 0.9 x 0.4 cm; petals ovate, acuminate, not overlapping at the base, 1.1 x 0.6 cm, 11-to 13-veined; lip broadly ovate, obtuse, apiculate, retuse at the base, 19-to 21-veined, the veins sometimes branched, to 1 x 1 cm, the callus at the base of the lip solid, cordiform from a frontal view, slightly free from the lip at the apex and around the thickened margins, forming a platform into which the column is immersed, papillate-hirsute; column swollen on the ventral side surrounding the stigma, cordiform from a frontal view, papillate-hirsute, with bristles at the apex of the stigma, the apex receding, with 3 dense bundles of short spines on the upper portion, the middle bundle with shorter spines; pollinia 4 in 2 equal pairs, yellow.

ILLUSTRATIONS: L. C. Vieira No. 15 (JAUM, RPSC).

**DISTINGUISHING FEATURES:**

Scape terete.

Petals 9-to 13-veined; lip 19-to 21-veined.

Callus cordiform, the thickened margins raised from the surface of the lip.

Column swollen on the ventral side, cordiform, with 3 dense bundles of short spines, the dorsal bundle with shorter spines.

Plant caulescent.

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: probably near La Auxiliadora on the road to Piedra Alta, ca.



*T. glicensteinii*  
(R. Escobar 3610a)

alt. 2850 m, collected by L. Glicenstein, 10 Jun 1978, photo by L. Glicenstein labeled "Telipogon D" (JAUM, RPSC); same locality as the holotype, March 1985, D. E. de Retana 39 (JAUM, USJ, RPSC).

NOTES: This species is the least significant of the genus in Costa Rica. It was discovered in 1978, but no herbarium specimen was prepared at that time. In 1985, Aldemar Campos, logging huge trees to make pasture land, rediscovered it near La Georgina at the top of the trees growing sympatrically with *T. guila* and *T. leila-alexandrae*. The species is uncommon in the area.

NOTAS: Esta es la especie menos significativa del género en Costa Rica. Fue descubierto en 1978, pero no se preparó entonces un ejemplar de herbario. En 1985 Aldemar Campos, quien cortaba árboles enormes para hacer potreros, lo redescubrió cerca a la Georgina, en la cima de los árboles creciendo simpátricamente con *T. guila* y *T. leila-alexandrae*. Esta especie no es común en el área.



*T. glicensteinii*  
(R. Escobar 3610)

**TELIPOGON GRACILIPES** Schltr., Rep. Spec. Nov. Beih. 19: 263. 1923.

TYPE: COSTA RICA: ALAJUELA: Palmira, alt 1825 m, Apr. 1921, A. M. Brenes 8 (presumably destroyed at Berlin?).

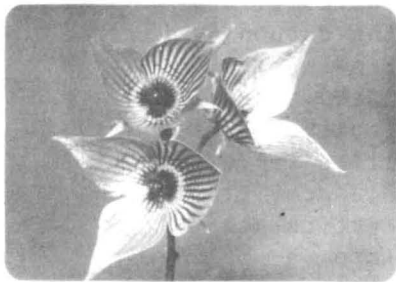
SYNONYMS: *Telipogon horichianus* Braas, Die Orchidee 32: 244, 1981.

DISTRIBUTION: Costa Rica

Plant caulescent, total stem to 12 cm long, branched from apical nodes, each branch to 3 cm long; roots coarse, produced along the stem. Leaves obovate, obtuse at the apex, apiculate, narrowing toward the base at the junction with the sheath, to 4 x 1.4 cm, but often much smaller. Inflorescence terminal or uncommonly lateral, terete, unbranched, to 21 cm long, 1-to 9-flowered, the flowers produced 1-3, in succession, rarely simultaneously, resupinate. Flowers yellow, the petals with green or yellow vein lines and reticulations which are red-brown for the lower 1/4-1/2, the lip with red-brown vein lines and reticulations and a dark wine-red blotch at the base, the column wine-red, the spines (if present) wine-red. Sepals equal, narrowly ovate, concave, carinate on the back side, to 1.2 x 0.4 cm; petals ovate, long acuminate, to 4.0 x 2.2 cm, 7-to 9-veined (rarely 10 or 11); lip ovate, acute at the apex, apiculate, to 3.5 x 3.3 cm, 13-to 21-veined (usually 17) and heavily reticulated, the base slightly to somewhat swollen to form a collar around the base of the column, finely hirsute; column short, terete, the portion below the stigma projecting and provided with sericeous hairs, ranging from bald to the presence of sparse clusters of spines (*T. horichianus*); pollinia 4 in 2 equal pairs, yellow suffused with red.

ILLUSTRATIONS: Schltr., illustration of type (AMES!).  
L. C. Vieira No. 19 (JAUM, RPSC).  
L. A. Brass, Die Orchidee 32: 244. 1981  
(as *T. horichianus*).





FLORA DE Costa Rica  
*Telipogon gracilipes* Schltr  
 Province of Heredia, above El Collito, on a  
 pasture field, fully exposed to the sun,  
 alt 2052 m, siliques germinated on a netton,  
 tree stump, 1 m from the ground, plants flo-  
 wering for the second time.  
 Petals yellow with green veins, post-purple  
 and with reticulations at the base; lip  
 without callus, suffused with red, with 16 to 18  
 red-brown veins with reticulations either  
 at the base or covering the whole lip;  
 column naked without hairs.

Herb. R. Escobar, D. Robillo and A. Jimenez  
 No. 31 s. a. 14 August 1985

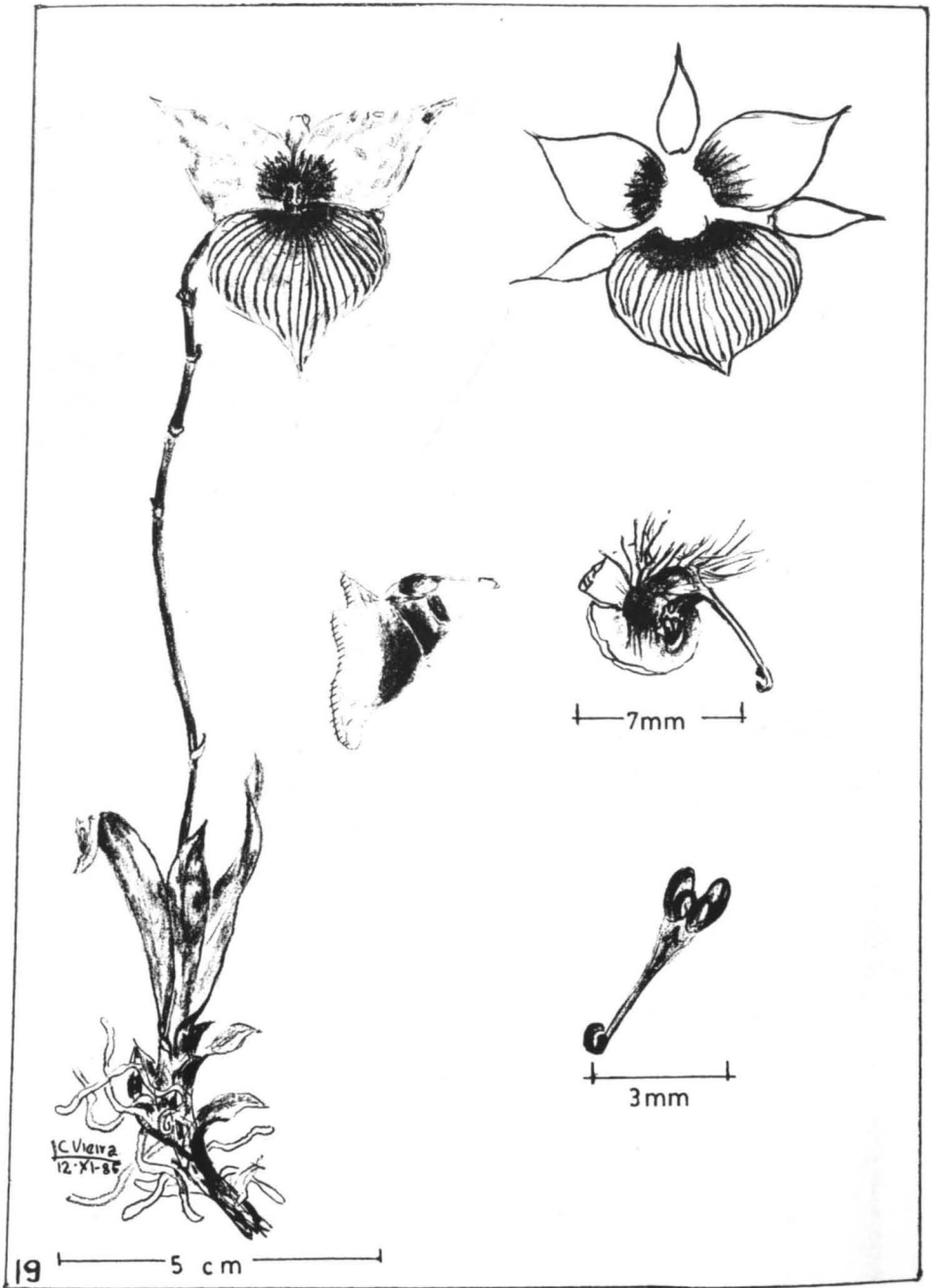
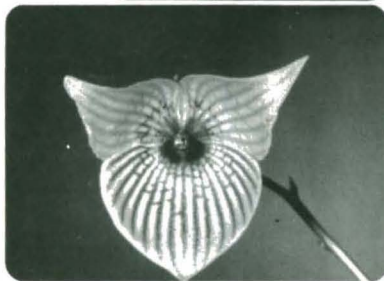


Illustration: L.C. Vieira

*Telipogon gracilipes*



FLORA DE Costa Rica  
*Teleipogon gracilipes* Schltr.  
 Finca de Hacienda, between Barba and  
 Guimbarrá, km 2.7 above Los Castigos, alt.  
 3000 m, epiphytic on *Illex* sp., 4 meters  
 above the ground.  
 Petals yellow, suffused with red at the base,  
 with 9 darker yellow veins with few radi-  
 culations at the base; lip without callus,  
 dark brownish at the base, surface ye-  
 llow with 17 broader veins with few radi-  
 culations; column brownish, notched above  
 and with some hairs below on the chin.  
 R. Escobar, M. García & C. Pérez  
 3541 h. 12 October 1984

HERBARIUM JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*T. gracilipes*,  
bald column  
(R. Escobar 3541)



*T. gracilipes*,  
column with spines  
(R. Escobar 3622)

R. L. Rodriguez, 14 Jul 1964 (USJ).  
R. L. Rodriguez, 229B (with spines)  
(USJ).  
R. L. Rodriguez, Aug 1978, *C. Todzia sn*  
(bald column) (USJ).

DISTINGUISHING FEATURES:

Scape terete  
Petals 7-to 9-veined (rarely 10-11); lip 13-to 21-  
veined (usually 17).  
Callus lacking but base of lip swollen to form a collar  
around the base of the column.  
Column terete, bald or with sparse tufts of spines,  
the portion below the stigma projecting and with  
a tuft of soft hairs.  
Plant caulescent.

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: near  
Cascajal, alt. 1850 m, collector not recorded, bought  
by C. Horich, Jul 1980, *L. A. Braas* 34 (illustration of  
holotype of *T. horichianus* - private herbarium of *L. A.*  
*Braas*); Las Nubes, above Coronado, alt. 1900 m, Aug.  
1938, *Valerio* 2661 (AMES); HEREDIA: near Vara Blanca,  
alt 1800 m, 15 Sep. 1979, *Luer et al.* 4178 (SEL);  
between Barba and Varablanca, km 27 above Los Cartagos,  
alt 2000 m, 12 Oct 1984, epiphytic on *Ilex* sp., 4  
meters from the ground, *R. Escobar, M. Garces and D.*  
*Perez* 3541 (JAUM, RPSC); same tree, 14 Jul 1983, *R.*  
*Escobar & K Anderson* 3005 (SEL); above Porrosati, alt.  
2300 m, 25 Oct 1984, *R. Escobar & R. Vega* 3591 (JAUM,  
RPSC, USJ, CR); same locality (with spines) *R. Escobar*  
3591A (JAUM); Varablanca, alt 1400-1700 m, 12 Aug 1978,  
*C. Todzia* 389 (CR); Finca of Mike Canon, near junction  
of highways 9 & 120, alt. 1900 m, 20 Jul 1975, *J. & K.*  
*Utley* 2669 (CR); El Gallito, alt. 1900 m, 30 Oct 1938,  
*M. Valerio* 2664 (AMES); same locality, alt. 2080 m, 7  
Aug 1985, *R. Escobar & D. Portillo* 3621 A, C & D  
(JAUM); *R. Escobar & D. Portillo* 3621 B & E (JAUM,  
RPSC); between El Gallito and road to Rio Patria  
(column with spines), alt 2020 m, 7 Aug 1985, *R.*  
*Escobar & D. Portillo* 3622 (JAUM, RPSC); same locality

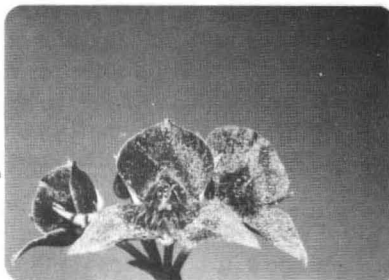
and date (column with spines), alt. 2100 m, R. Escobar & D. Portillo 3623 (JAUM, RPSC); road to Río Patria, in a pasture on a rotten tree stump fully exposed to the sun one meter above the ground, alt. 2050 m, 14 Aug 1985, R. Escobar, D. Portillo & A. Jiménez 3631 (JAUM, RPSC, MO);

NOTES: *Telipogon gracilipes* has not been found again at the type locality in the province of Alajuela, but is very common in the Provinces of Heredia and San José. It is very variable in color and number of veins of the petals and the lip and also in the transverse reticulations, but can always be recognized by the ovate, very long acuminate petals and by a dark wine-red blotch at the base of the lip and commonly, at the base of the petals. The column is usually naked on top and with a bundle of a few short hairs on the chin below the stigma but in about 20% of the plants examined, 3 sparse bundles of long spines were present on the top of the column.

NOTAS: *Telipogon gracilipes* no ha sido encontrado de nuevo en la localidad tipo en la provincia de Alajuela, pero es muy común en las provincias de Heredia y San José. Es muy variable en el color y en el número de venas de los pétalos y del labelo y también en las reticulaciones transversales, pero siempre puede reconocerse por los ovados pétalos largamente acuminados y por la oscura mancha rojo-vino en la base del labelo y comunmente en la base de los pétalos. La columna es usualmente desnuda arriba y con un manojito de pocos pelos cortos en el mentón debajo del estigma, pero en un 20% más o menos de las plantas examinadas, estaban presentes en la parte de arriba de la columna 3 manojos poco densos de espigas largas.

**TELIPOGON GUILA** Dodson & Escobar, sp. nov.

TYPE: COSTA RICA: SAN JOSE: km 94 on the Panamerican Highway on the eastern side of Cerro de la Muerte, epiphytic at the top of a huge tree 30 m tall, alt. 3050 m, Jun 1985, cultivated by A. Campos near La Georgina, flowered in cultivation 3 Aug 1985, R. Escobar, D. Portillo & D. E. de Retana 3611 (JAUM holotype, RPSC, MO, USJ isotypes).



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FLORA DE Costa Rica

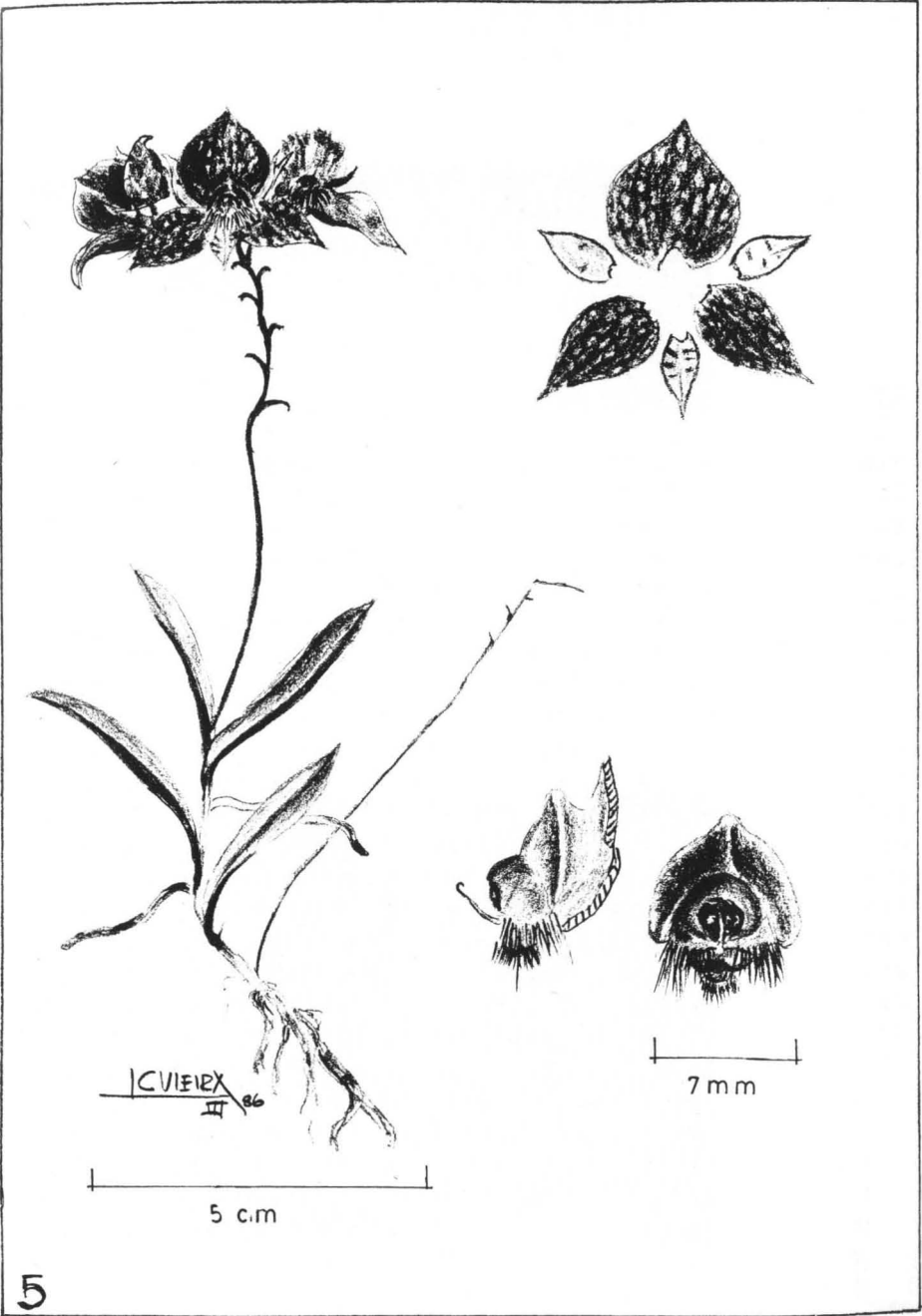
*Talipogon sp.* Denton & Escobar  
 No. 11 of San José, No. 14 of the Pan American  
 Highway, 2100-2200 m. 2 specimens at the top of a  
 large tree, in insular forest. 1985, collected  
 by H. Escobar near to Obispo.

Flowers very disorganized, very pale yellow, totally  
 covered with mites, very irregular, especially the  
 petals, which are very small with the veins almost  
 absent, petals white, bracts branched and with oblique  
 white markings, sepals with 2-3 mm veins, veins  
 branching, a total of 13 or 15 in the outer  
 margin, the middle one is the most narrow, and forms  
 along the column. Lateral, the central lobes  
 branching with 3 equal branches of them,  
 soft, long hairs.

Collector: H. Escobar, D. Bello & D. E. de la Hoz  
 No. 11 of San José, No. 14 of the Pan American  
 Highway, 2100-2200 m. 2 August 1985

Holotype

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URBIE



*Telipogon guila*

Illustration: L.C. Vieira



Species haec *T. biolleyi* Schltr. similis, sed floribus atropurpureo maculatis et callo cordato liberi praeter basim columnae differt.

ETYMOLOGY: Named to honor young boys with sharp eyes and the instincts of monkeys when climbing trees. In Costa Rica such boys are called "guilas". They are usually small and since this species is one of the smallest-flowered members of the genus *Telipogon* in Costa Rica the name seems appropriate.

DISTRIBUTION: Costa Rica.

Plant small, shortly caulescent; total stem to 3 cm long, branched from the apical nodes, the branches 1 cm long; roots very coarse, produced along the stem. Leaves alternate, distichous, elliptic to obovate, to 2.5 x 1 cm, obtuse to acute at the apex, narrowing toward the base, with net-like venation; sheaths surrounding the stem and overlapping. Inflorescence terminal, terete, to 10 cm long, to 5-flowered, produced in succession with up to 4 open simultaneously, unbranched; peduncle of 1 internode, to 6 cm long; floral bracts triangular, apiculate, 4 mm long; pedicel terete, to 1.2 cm long. Flowers non resupinate, basally yellow totally covered with coalescent red-chocolate brown blotches with red vein lines and reticulations; sepals white with transverse red-chocolate markings. Sepals narrowly ovate, long acuminate, concave, carinate on the backside, 0.6 x 0.3 cm; petals narrowly ovate, long acuminate, 1.2 x 8 cm, 5-veined, the veins reticulately branched; lip broadly elliptic, obtuse at the apex, bluntly apiculate, obtuse at the base, 1.2 x 1.2 cm, 13-to 15-veined, the callus at the base of the lip cordiform from a frontal view, finely papillose, with a raised keel down the middle and raised margins that are free from the lip; column emersed in the callus, swollen around the ovoid stigma, with 3 equal bundles of thin, soft, long spines; pollinia 4 in 2 equal pairs, yellow.



*T. guila*  
(R. Escobar 3570)



*T. guila*  
(R. Escobar 3611)

ILLUSTRATIONS: L. C. Vieira No. 5 (JAUM, RPSC).

DISTINGUISHING FEATURES:

Scape terete.

Petals 5-veined; lip 13-to 15 veined.

Callus cordiform.

Column emersed in the callus, with 3 tufts of equal, thin, soft spines.

Plant short caulescent.

OTHER SPECIMENS SEEN: Cerro de la Muerte, Km 94 Panamerican Highway, not far from La Georgina, alt. 3100 m, discovered by Ricardo Campos, 22 Oct 1984, R. Escobar & R. Vega 3570 (JAUM).

NOTES: This species was discovered by 10 year old Ricardo Campos in October 1984, but only one plant with the last flower open was found at that time. It was rediscovered by his father in June 1985, when logging trees, growing sympatrically with *T. gleichensteinii* and *T. leila-alexandrae*. Four plants were examined each with 3 or 4 flowers open simultaneously. The pollinia had not been removed by a pollinating agent.

NOTAS: Esta especie fue descubierta por Ricardo Campos de 10 años en Octubre de 1984, pero solamente una planta con la última flor abierta fue encontrada en ese entonces. Fue redescubierta por su padre en 1985, cuando cortaba árboles, creciendo simpátricamente con *T. glicensteinii* y *T. leila-alexandrae*. Cuatro plantas fueron examinadas, cada una con 3 ó 4 flores abiertas simultáneamente. Los polinios no habían sido removidos por el agente polinizador.

TELIPOGON LEILA-ALEXANDRAE Brass, Die Orchidee 36: 78. 1985.

TYPE: COSTA RICA: SAN JOSE: Cerro de la Muerte, alt. 2450 m, Mar 1984, L. & A. Heinrich & H. Ardelt sn. (private herbarium of L. A. Braas, holotype).

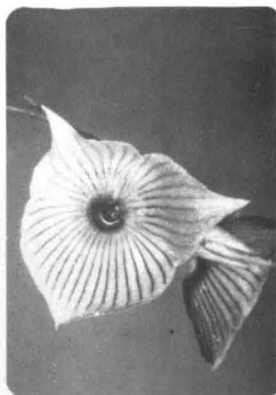
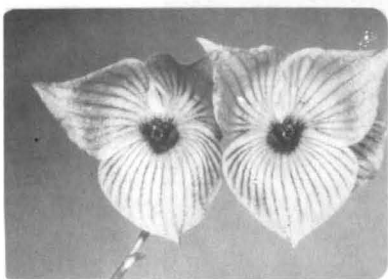
DISTRIBUTION: Costa Rica.



*T. leila-alexandrae*  
(R. Escobar 3641)



*T. leila-alexandrae*  
(R. Escobar 3633)



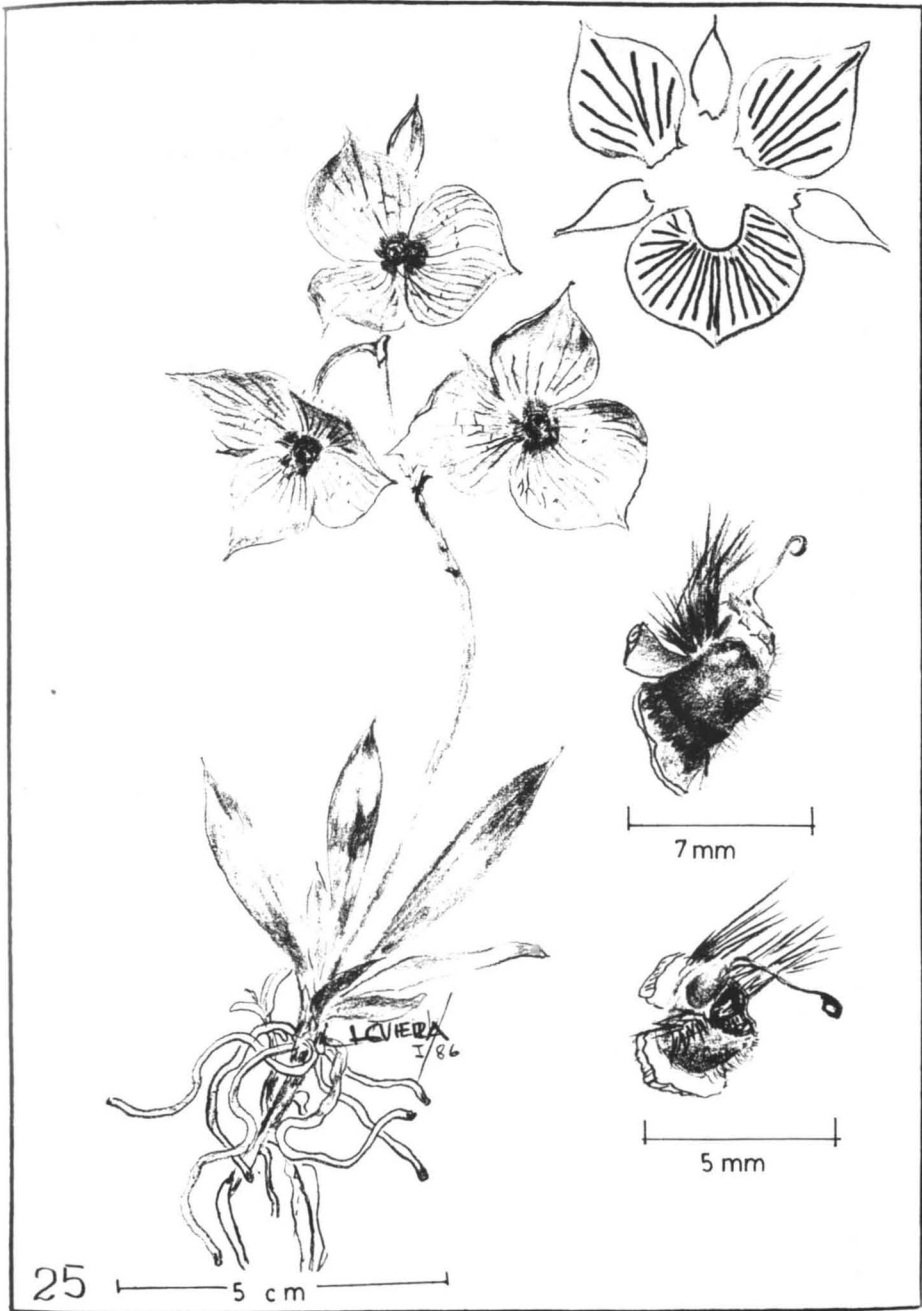
FLORA DE Costa Rica

*Tropaeum lewis-alexandriae* Brass.  
 Province of Cartago, between Imbaburgus and  
 La Amaloteca, Km 97 of the Interamerican  
 highway, alt. 2550 m.  
 Flowers bright yellow suffused with pink  
 at the base of petals and lip, with three light  
 red-brown vein lines; the petals with 11 and  
 the lip with 17 to 19, the lip without callus  
 but with a semicircular nectary at the  
 base. Column with 3 equal lobes of sparse  
 soft, spongy spines.

Collector R. Eschsché & D. Roldán

No. 241 Fecha, 20 Aug 1965

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*Illustration: L. C. Vieira*

*Telipogon leila-alexandrae*

Plant caulescent; stem to 2.5 cm long; roots fine, produced from the base of the stem. Leaves narrowly obovate, acute at the apex, apiculate, narrowing to the base to join the sheath, to 4 x 0.7 cm. Inflorescence terminal, terete, unbranched, to 13 cm tall, 3-to 4-flowered, the flowers produced usually 1-2 in succession. Flowers yellow with a rose suffusion at the base of the segments and red-brown or green vein lines in the petals and lip with few to many reticulations, the column and spines red to red-brown. Sepals narrowly ovate, concave, carinate on the backside, to 1.2 x 0.4 cm; petals ovate-elliptic, long acuminate, to 2.1 x 1.6 cm, 7-to 13-veined (usually 9-to 11-veined); lip ovate to elliptic-ovate, acute at the apex, apiculate, to 2.5 x 2.0 cm, 15-to 23-veined (usually 17-to 19-veined), swollen at the base to form a collar surrounding the column, with a faint keel down the front, subglabrous to finely hirsute; column terete, the underside of the stigma not projecting, the upperside with 3 bundles of sparse, long, soft spines; pollinia 4 in 2 pairs.

ILLUSTRATIONS: Braas, *Die Orchidee* 36: 79. 1985.  
L. C. Vieira No. 25 (JAUM, RPSC).

#### DISTINGUISHING FEATURES:

Scape terete.

Petals 7-to 13-veined (usually 9-11): lip 15-to 23-veined (usually 17-19).

Callus lacking but base of lip forming a swollen collar around the base of the column.

Column terete, underside of stigma not projecting, with 3 bundles of equal, sparse, long, soft spines.

Plant caespitose

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: Between La Trinidad de Dota and Madre Selva, km 64 Panamerican Highway, alt. ca. 2450 m, 17 Aug 1985, R. Escobar, D. Portillo & D. E. de Retana 3633 (JAUM); CARTAGO: eastern side of Cerro de la Muerte, near Villa Mills,

Km 98 Panamerican Highway, behind restaurante La Auxiliadora, alt. 2850 m, epiphytic on *Randia karstenii* "Peispute", 23 Oct 1984, R. Escobar & R. Vega 3571 (JAUM, RPSC, MO, CR); between La Georgina and La Auxiliadora, km 97, Panamerican Highway, alt 2880 m, 20 Aug 1985, R. Escobar & D. Portillo 3641 (JAUM, RPSC, USJ); same locality and date, R. Escobar & D. Portillo 3642 A & B (JAUM, RPSC); same locality and date, R. Escobar & D. Portillo 3642 C & D (RPSC); km 94 Panamerican Highway, alt. ca. 3000 m, collected by E. Abarca near La Georgina, 25 Aug 1985, R. Escobar, D. Portillo & D. E. de Retana 3649 (JAUM, RPSC, MO, USJ).

NOTES: *T. leila-alexandrae* is extremely common around La Georgina and it is curious that it was discovered independently by H. Ardelit and R. Escobar only as late as March and October 1984. It is a very variable species in vein number as well as in the color of the vein lines and the reticulations which are present or absent. In October 1984 more than 50 flowers were examined.

NOTAS: *T. leila-alexandrae* es extremadamente común alrededor de La Georgina y es curioso que fue descubierto solamente hace poco en forma independiente por H. Ardelit y R. Escobar en Marzo y Octubre de 1984. Es una especie muy variable en número de venas como también en el color de las líneas de éstas y en las reticulaciones que puede estar presentes o ausentes. En Octubre de 1984 fueron examinadas más de 50 flores.

TELIPOGON MONTICOLA L. O. Wms., Fieldiana Bot. 32: 202. 1970.

TYPE: COSTA RICA: CARTAGO: near Villa Mills, km 97, 5 km SE of summit along Interamerican Highway, Cordillera de Talamanca, alt. 3100 m, 19 Jun 1968, Burger & Stolze 5993 (F! holotype, US! isotype).

DISTRIBUTION: Costa Rica



Plant long caulescent, total stem to 70 cm tall, branching at the apical nodes, the branches to 15 cm long; roots coarse, produced along the stems. Leaves oblong-elliptic, obtuse at the apex, narrowing abruptly at the base to join the sheath, to 4.5 x 1.4 cm. Inflorescence terminal or lateral, terete, seldom branched, to 40 cm tall, 3-to 9-flowered, the flowers produced 1-4 in succession, resupinate. Flowers yellow, the petals with or without dull red-brown vein lines and reticulations, the petals and lip with a red-brown suffusion that covers more than half the surface, the callus, column and spines purple-black. Sepals narrowly ovate, equal, concave, to 11 x 0.5 cm; petals rhombic-elliptic, acute at the apex, obtuse at the base, to 2.1 x 1.6 cm, 7-veined; lip broadly ovate, obtuse at the apex, apiculate, to 1.8 x 1.8 cm, 14-to 15-nerved, the base with a prominent callus, which is cordiform from a frontal view, subpeltate from a lateral view, the subsagittate lateral lobes surrounding the basal half of the column, mostly free from the surface of the lip, sparsely villose; column projecting below the stigma, papillose-villose, with 3 equal bundles of dense, long spines on the dorsal surface; pollinia 4 in 2 equal pairs, light yellow.

ILLUSTRATIONS: L. D. Williams, *Fieldiana Bot.* 32: 203. 1970.

L. C. Vieira No. 22 (JAUM, RPSC).

R. L. Rodriguez, 534, *A. Weston & H. Mathias sn*, 27 Jun 1967, (USJ).

R. L. Rodriguez, No. 969, *G. Carmiol sn*, 18 Jun 1978, (USJ).

#### DISTINGUISHING FEATURES:

Scape terete.

Petals 7-nerved; lip 14-to 15-nerved.

Callus prominent, cordiform from a frontal view.

Column projecting and swollen below the stigma, spines in 3 equal bundles.

Plant long caulescent.



*T. monticola*  
(R. Escobar 3638)



*T. monticola*  
(R. Escobar 3630)



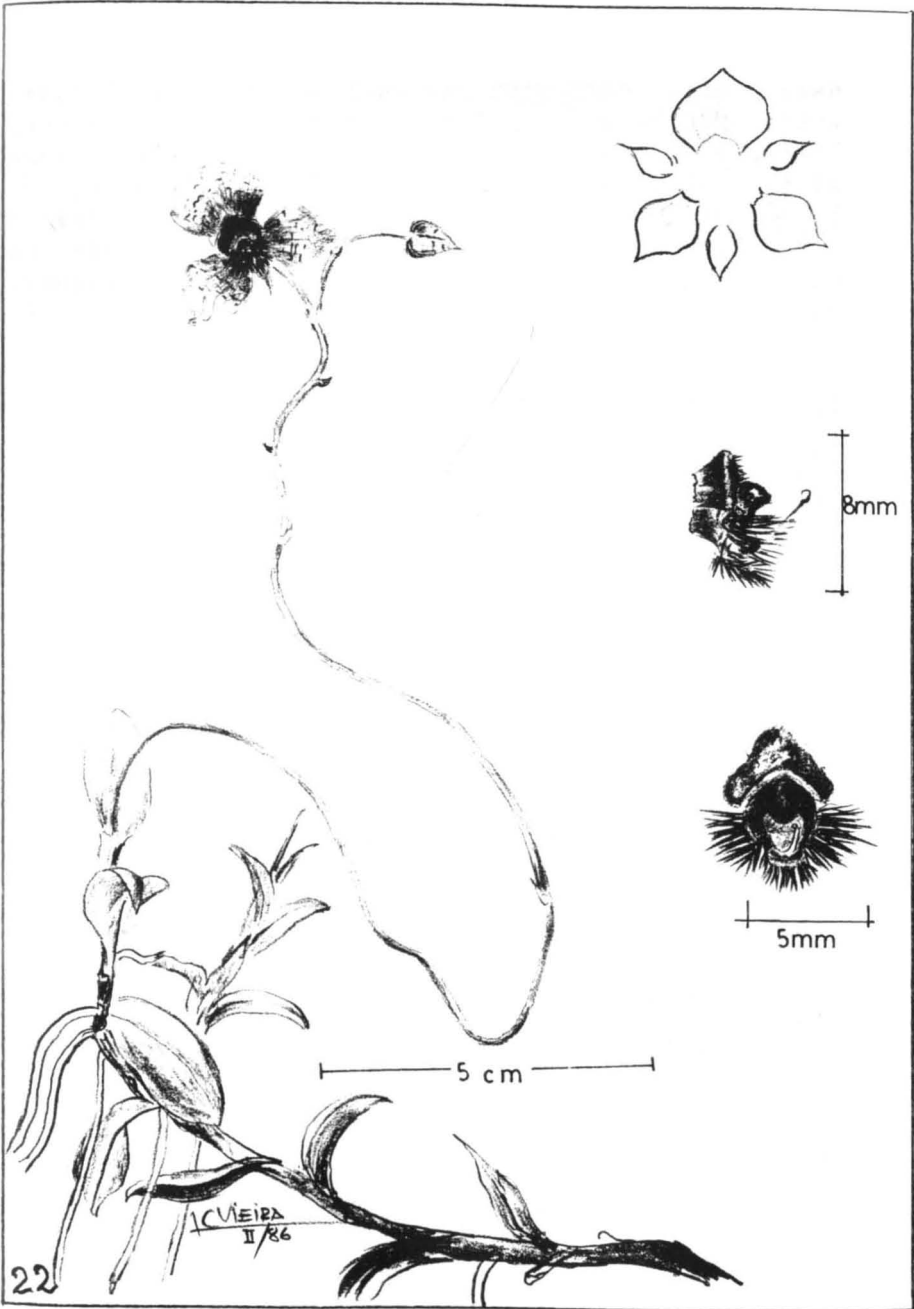
FLORA DE Costa Rica

*Tolipogon monticola* L. C. Wms.  
 Province of Cartago, between La Guaciza and  
 La Auxiliadora, Km 97 of the Panamericano High-  
 way, alt 3850 m  
 Flowers yellow with dark red-brown suffe-  
 renes and dark centers, petals with 4 veins  
 each up with 15, the top with one slanted,  
 Petalobesent, corolla lobes, narrow, bilobed,  
 Siliques setose purple-black with 3 apical  
 bundles of dense, long, purple-black  
 hairs, pellicles bright yellow.

Guillermo Sanchez & D. Poehlein

No 3043 June 22 August 1985

HERBARIUM JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*Telipogon monticola*

Illustration: L.C. Vieira

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: western side of Cerro de la Muerte, km 73 Panamerican Highway, alt. 2275 m (?), 22 Jul 1966, R. Anderson & S. Mori 232 (F, paratype); near La Georgina, km 94 Panamerican Highway, alt. ca. 3100 m, collected by A. Campos, (sterile specimens), 8 Oct 1984, R. Escobar, H. Garces, O. Perez & D. E. de Retana 3527 (JAUM, RPSC); same locality, alt. ca. 3000 m, collected by A. Campos, Jun 1985, flowered in cultivation, 3 Aug 1985, R. Escobar & D. Portillo 3612 (JAUM, RPSC); CARTAGO: between La Georgina and La Auxiliadora, km 97 Panamerican Highway, (flowers without reticulations), alt. 2880 m, R. Escobar & D. Portillo 3630 (JAUM, RPSC); same locality, (unusually dark form), 20 Aug 1985, R. Escobar & D. Portillo 3638 (JAUM), same locality and date, R. Escobar & D. Portillo 3638 A & B (RPSC); same locality and date, flowers from several different plants, R. Escobar & D. Portillo 3639 (JAUM, RPSC, MO, USJ); same locality and date, R. Escobar & D. Portillo 3643 (JAUM, RPSC).

NOTES: *Telipogon monticola* is an extremely long caulescent, recumbent plant but the flowers are small compared to the size of the plant. A very large number of plants was studied and it is a very variable species in flower color, some plants presenting no reticulations. It grows associated with *T. costaricensis*, low on tree trunks or scattered at the base of the trunk in dense oak forests.

NOTAS: *Telipogon monticola* es una planta caulescente extremadamente larga, que se recuesta, pero las flores son pequeñas comparadas con el tamaño de la planta. Fue estudiado un número muy grande de plantas y es una especie muy variable en el color de la flor, con algunas plantas presentando ninguna reticulación. Crece asociada con *T. costaricensis*, en la parte baja de los troncos de los árboles o esparcida en la base del tronco en bosques densos de robles.

**TELIPOGON PARVULUS** C. Schw., Bot. Mus. Leafl. 4: 123. 1937.

TYPE: COSTA RICA: SAN JOSE: near La Holanda, 29 Sep. 1934, Valerio 971 (F! holotype, CR! isotype).



*T. parvulus*  
(R. Escobar 3500)



FLORA DE Costa Rica  
*Tillipzigeria parviflora* C. Schweinfurth  
 Reserve of Cesteros, Piedraíta, km 57 of the Pan  
 American Highway, Alt. 1450 m, 4 pm, the tree  
 is densely covered by mossy ferns of a Heliconia  
 forest of the same locality as "Cesteros",  
 between 3 and before the ground.  
 Petals lemon yellow with 7 to 9 yellow veins;  
 sepals more yellow with 9 main light brown  
 veins, 2nd veins branched making a total  
 of 13 to 17 on the outer margin, with a cork-  
 like, elevated, purple-streak center. The  
 margins of the calyx only in the front; co-  
 mmon language, 4-lobed, the central one  
 is 10 to 12 mm, the rest to the sides with  
 long fringe of white, long, spinose hairs;  
 pedicel white.  
 Collector: R. Escobar, M. García et. MORA 3500

No. 3500 Fecha 2 October 1984

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE

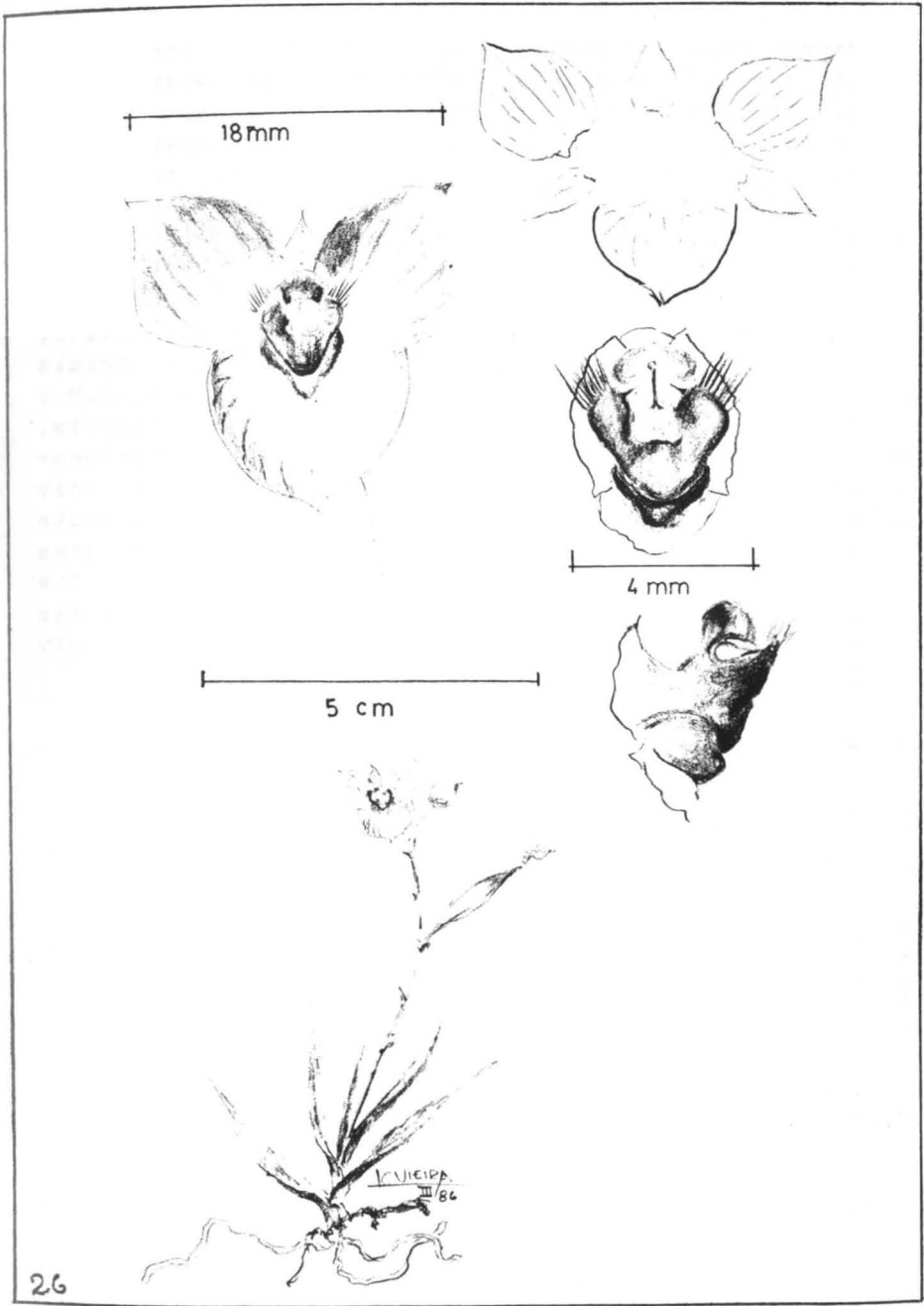


Illustration: L.C. Vieira

*Telipogon parvulus*



DISTRIBUTION: Central Costa Rica to Western Panama.

Plant small, caespitose; stem to 0.5 cm long; roots fine, produced from the base of the stem. Leaves narrowly elliptic, acute at the apex, distichous, conduplicate at the base. Inflorescence terminal, terete, unbranched, to 6 cm tall, 4-to 8-flowered, the flowers produced 1 or 2 in succession. Flowers lemon-yellow, the petals with green vein lines, the lip with light brown vein lines, some lines branched, the callus, column and spines wine-red. Sepals ovate, concave, mucronate at the apex, 0.7 x 0.4 cm; petals elliptic, acute at the apex, acute at the base, 0.9 x 0.9 cm, 7-to 9-veined; lip ovate, concave, apiculate, 0.7 x 1.2 cm, 13-to 17-veined, with a cordiform-sagittate callus at the base, embracing the column only underneath; column enlarged with a pair of quadrate lateral lobes on each side of the stigma and the area beneath the stigma swollen and projecting over the callus, each lateral lobe with a bundle of long, sparse spines on the dorsal margin, the anther minutely papillose; pollinia 4 in 2 pairs, white.

ILLUSTRATIONS: Sketch of type specimen (AMES!).  
L. C. Vieira No. 22 (JAUM, RPSC).  
R. L. Rodriguez, 19 May 1967 (USJ).

DISTINGUISHING FEATURES:

Scape terete.

Petals 7-to 9-veined; lip 13-to 17-veined.

Callus cordiform-sagittate.

Column with quadrate wings on each side of the stigma, with spines on the dorsal margin, the anther minutely papillose.

Plant caespitose.

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: San Cristobal Norte, alt. 1900 m, 8 Oct 1978, C. Todzia 458 (CR); San Miguel, alt. ca. 1800 m, Sept 1984, J. Hall sn (CR); HEREDIA: above Porrosatí, Vereda Los Angeles,

alt. 2300 m, 25 Oct 1984, R. Escobar & R. Vega 3592 (JAUM); CARTAGO: Palmital, km 37 Panamerican Highway, alt. 1980 m, epiphytic exclusively on thin, non-mossy twigs of a member of the Melastomaceae known locally as "Cantarillo", between 3 & 8 m from the ground, 2 Oct 1984, R. Escobar, M. Garces & L. Mora 3500 (JAUM, RPSC, MO, USJ).

PANAMA: CHIRIQUI: Llanos west of Volcan, alt 1500 m, 11 Sep. 1976, Luer & Butcher 1185 (SEL).

NOTES: The column of *T. parvulus* is unlike any other species of *Telipogon* in that well-developed quadrate lateral lobes occur on each side of the stigma much as in many members of the genus *Stellilabium*. This species is rather frequent in the Provinces of San José, Heredia and Cartago and usually it grows associated with *T. biolleyi*, *T. ardetianus* and *T. gracilipes*.

NOTAS: La columna de *T. parvulus* no se parece a la de ninguna otra especie de *Telipogon* por los bien desarrollados lóbulos laterales cuadrados que se presentan a cada lado del estigma como en muchos miembros del género *Stellilabium*. Esta especie es relativamente frecuente en las provincias de San José, Heredia y Cartago y usualmente crece asociada con *T. biolleyi*, *T. ardetianus* y *T. gracilipes*.

TELIPOGON PFAVII Schltr., Rep. Spec. Nov. Veg. 17: 143. 1921.

TYPE: COSTA RICA: without locality, Pfau 930 (presumably destroyed at Berlin, copy of drawing prepared from the type at AMES 24894!).

DISTRIBUTION: Costa Rica.

Plant medium in size, caulescent, total stem to 9 cm long, branched at an apical node, branches to 6 cm long; roots coarse, produced along the stem. Leaves narrowly oblong, obtuse at the apex, narrowing to join the sheath at the base. Inflorescence terminal, terete, unbranched to 21 cm long, 6-to 8-flowered, the

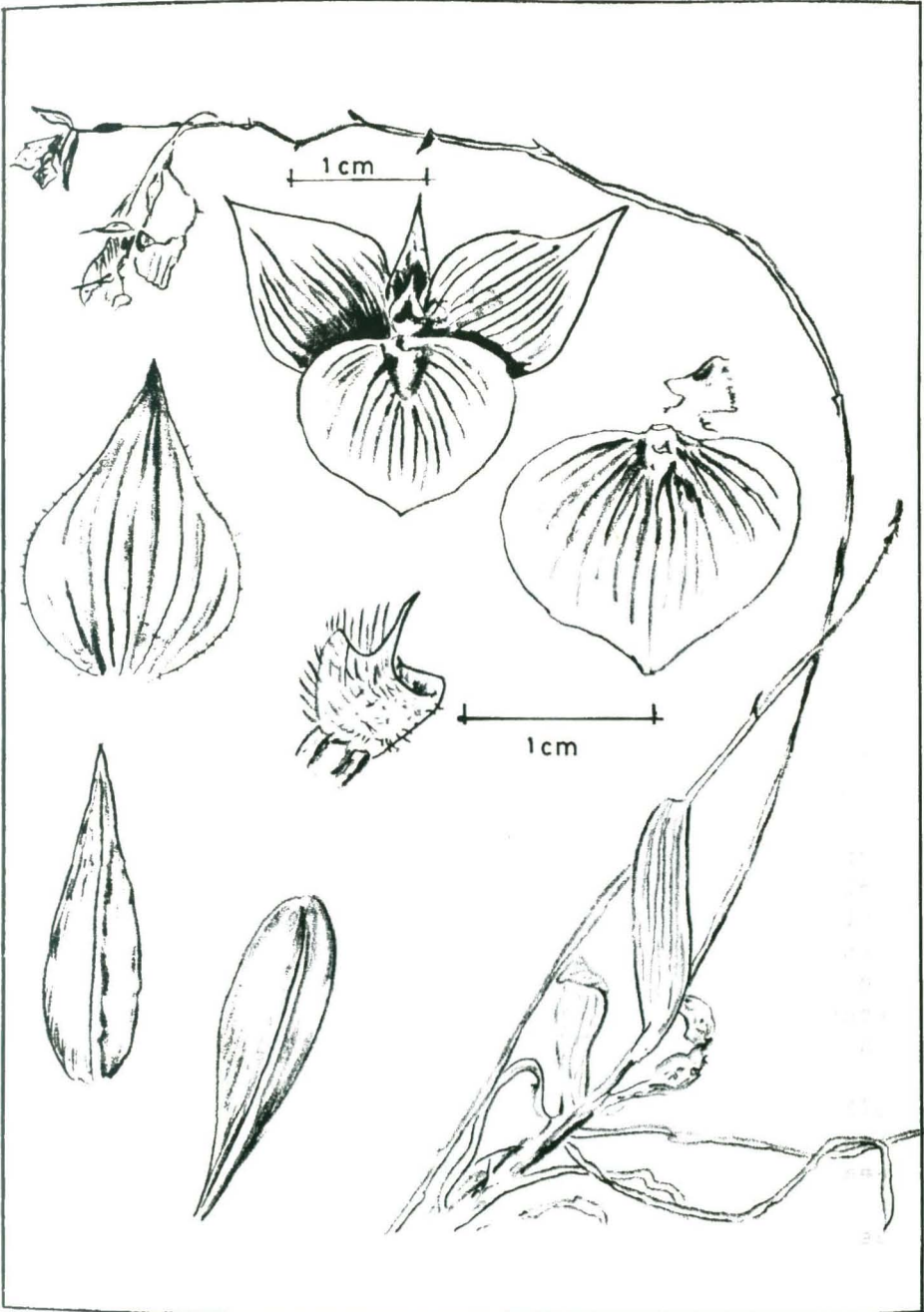


*T. pfavii*  
(L. Glicenstein,  
"Telipogon 9")



*T. pfavii*  
(L. Glicenstein,  
"Telipogon 6")

*Tracing from the original drawing prepared under the supervision of R. Schlechter and sent to O. Ames.*



*Telipogon pfavii*

flowers produced 1-2 in succession. Flowers yellow, the petals with green vein lines changing to red-brown toward the base, the lip with red-brown vein lines and totally covered by reticulations, the callus and column wine-red, the spines light red. Sepals equal, ovate, concave, carinate down the back, to 1 x 0.4 cm; petals broadly elliptic-ovate, acuminate, 1.5 x 1.2 cm, 9-to 13-veined; lip broadly ovate, subapiculate, 1.6 x 1.2 cm, 16-to 18-veined, with an obvious callus at the base, cordiform from a frontal view, villose, surrounding the lower side of the column; column projecting under the stigma, with a bundle of short, sparse spines on each side of the anther, the anther with very short-villose hairs; pollinia 4 in 2 equal pairs.

ILLUSTRATIONS: Drawing supervised by Schltr. (AMES!).

DISTINGUISHING FEATURES:

Scape terete.

Petals 9-to 13-veined; lip 16-to 18-veined.

Callus cordiform from a frontal view, surrounding the lower side of the column.

Column projecting under the stigma with a bundle of short, sparse spines on each side of the anther, the anther with very short villose hairs.

Plant caulescent.

OTHER SPECIMENS SEEN: COSTA RICA: El Cedral, Jul-Aug 1962, C. Dodson & C. Horich sn (JAUM, RPSC, color photo); without record of locality, photographed by Leon Glicenstein 7 & 9 May 1977, labeled "Telipogon 6" and "Telipogon 9" (JAUM, RPSC, color photo); without record of locality, photographed by L. Glicenstein, 14 Jun 1977 (JAUM, RPSC, color photo).

NOTES: *Telipogon pfavii* was described in 1921 from a Pfau collection without date and locality. The species seems to be rare and was rediscovered by C. Dodson and C. Horich in 1962, but no specimen was prepared. It was photographed again by L. Glicenstein in May and

June of 1977 but no specimens were prepared and the locality of the population was not made available when inquiry was made.

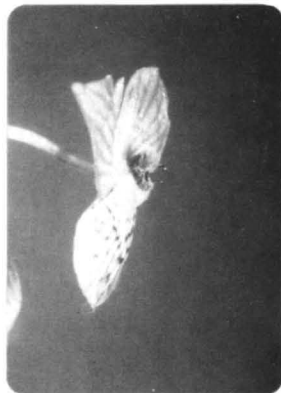
NOTAS: *Telipogon pfavii* fue descrito en 1921 de una colecta de Pfay sin fecha ni localidad. Esta especie parece ser escasa y fue redescubierta por C. Dodson y C. Horich en 1962, pero no se preparó ningún ejemplar de herbario. Fue fotografiada de nuevo por L. Glicenstein en Mayo y Junio de 1977 pero tampoco se prepararon ejemplares y la localidad de lapoblación no fue revelada cuando se preguntó por ella.

**TELIPOGON PORTILLOI** Dodson & Escobar sp. nov.

TYPE: COSTA RICA: CARTAGO: Cerro de la Muerte, km 90 of the Panamerican Highway, alt. 3300 m, 25 Aug 1985, R. Escobar, D. Portillo & D. E. de Retana 3648 (JAUM holotype, RPSC isotype).



*T. portilloi*  
(L. Glicenstein, "Telipogon DE")



## FLORA DE Costa Rica

*Telipogon portilloi* Dodson & Escobar  
 Province of Cartago, Carro de la Muerte, km. 40 of  
 the San Amarcado Highway, alt. 3300 m.  
 Petals yellow with 5 green veins, red-brown only  
 at the base, the veins branched to 8 or 9 in the  
 outer margin; lip lighter yellow with 14 or  
 15 very light brown veins, with transverse red-  
 brown reticulations; lip without elevated callos,  
 but with a semicircular pink swelling at  
 the base that surrounds the column; column  
 burgundy, with 3 equal bundles of sparse,  
 soft, short, burgundy hairs.

Collector R. Escobar, D. Portillo & E. de Retana

No. 3648 Fecha 25 August 1985

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE

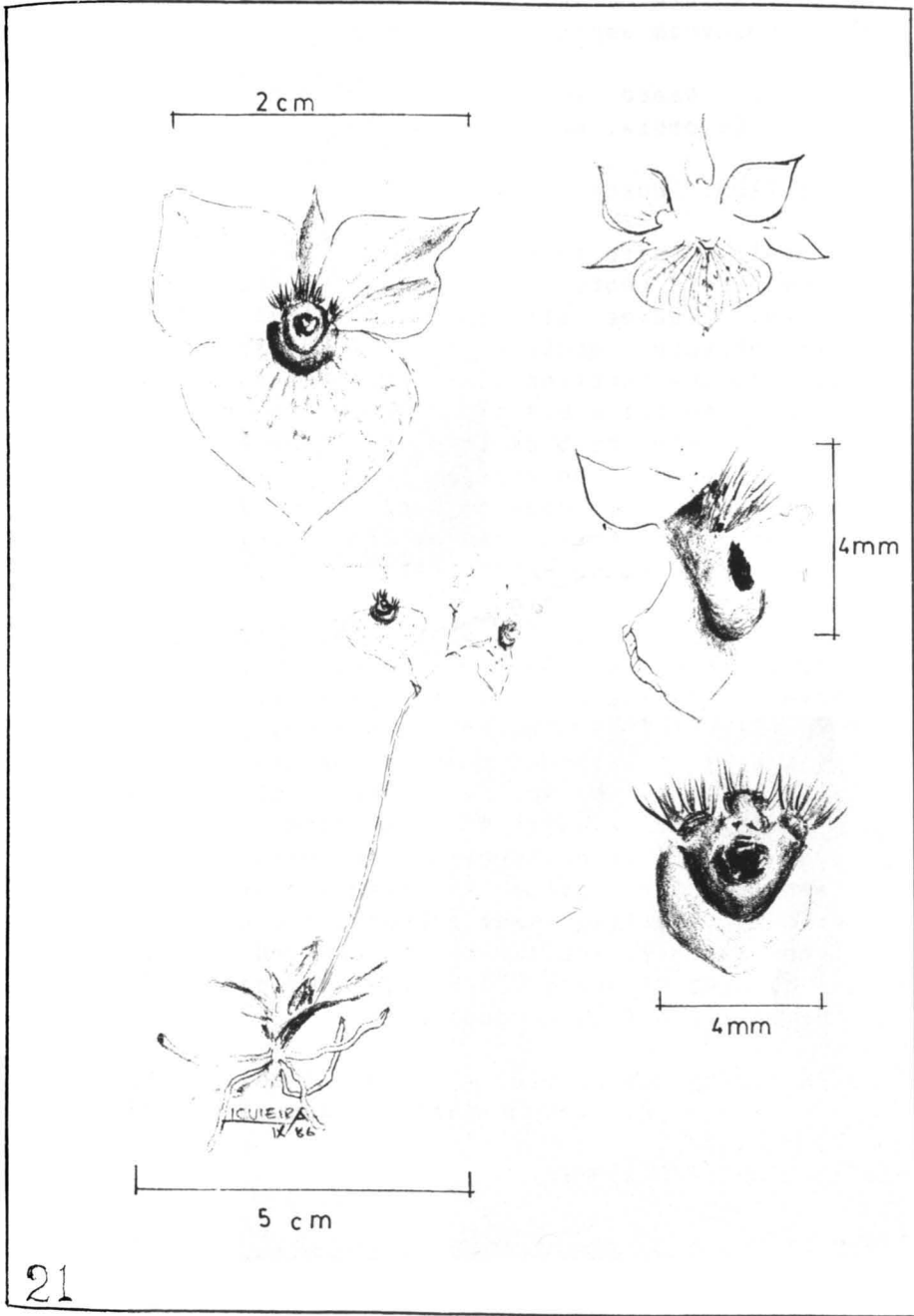


Illustration: L.C. Vieira

*Telipogon portilloi*



Species haec *T. leila-alexandrae* Brass similis, sed floribus multiminoribus et labelli callo triangulari roseolo columnam amplectenti differt.

ETYMOLOGY: Named in honor of David Portillo, of Medellin, Colombia, who rediscovered the species.

DISTRIBUTION: Costa Rica.

Plant small, caespitose; stem to 3 mm long, branched from the base; roots coarse, produced from the base of the stem. Leaves alternate, distichous, 3 to 5, narrowly obovate, acute at the apex, narrowing toward the base to the junction with the sheath; with net-like venation, to 2.1 x 0.4 cm. Inflorescence terminal or lateral, terete, to 5 cm long, branched or unbranched, 3-to 5-flowered, the flowers produced in succession; peduncle of 1 internode to 3 cm long; floral bracts triangular, apiculate, to 4 mm long; pedicel terete to 1 cm long; flowers non-resupinate. Flowers yellow with green or red-brown vein lines which have transverse reticulations, the callus pink, the column and spines wine-red. Sepals equal, narrowly ovate, concave, carinate on the back side, to 0.6 x 0.2 cm; petals rhombic-elliptic, acute, to 1 x 0.6 cm, 5-to 7-veined, the veins often branched near the margin; lip broadly ovate, obtuse at the apex and base, apiculate at the apex, 1.1 x 0.8 cm, with 13 main veins, often branched to form up to 17 veins, some of the veins branched near the margin, the callus at the base of the lip a semicircular swelling which embraces the column, finely papillose-villose; column short, emersed in the callus with 3 bundles of sparse, short, soft spines of equal length; pollinia 4 in 2 equal pairs.

ILLUSTRATIONS: L. C. Vieira No. 21 (JAUM, RPSC).  
R. L. Rodriguez, 21 June 1978 (USJ).

DISTINGUISHING FEATURES:

Scape terete.

Petals 5-to 7-veined; lip 13-to 17-veined.



*Telipogon portilloi*  
(R. Escobar 3648)



Callus a semicircular swelling embracing the column.

Column short with 3 bundles of sparse, short, soft spines of equal length.

Plant caespitose.

OTHER SPECIMENS SEEN: COSTA RICA: CARTAGO: km 97 of the Panamerican Highway, between La Georgina and La Auxiliadora, alt. 2880 m, 25 Aug 1985, R. Escobar, D. Portillo & D. E. de Retana 3646 (JAUM).

NOTES: This species was photographed by Leon Glicenstein on 28 May 1978 and labeled "Telipogon DE". No herbarium material was prepared at that time and the locality was not provided when inquiry was made. Three plants were rediscovered by David Portillo in August 1985, in two different localities and based on these specimens the species has been described. The type material is of smaller plants than the one photographed in 1978.

NOTAS: Esta especie fue fotografiada por León Glicenstein el 28 de Mayo de 1978 y marcada como "Telipogon DE". No se preparó material de herbario en ese entonces y la localidad no fue dada cuando se preguntó por ella. Tres plantas fueron redescubiertas por David Portillo en Agosto de 1985, en dos localidades diferentes y con base en estos ejemplares se ha descrito la especie. El material tipo es de plantas más pequeñas que la fotografiada en 1978.

**TELIPOGON RETANARUM** Dodson & Escobar, sp. nov.

TYPE: COSTA RICA: CARTAGO: National Reserve of Tapanti, alt. 1660 m, ca. 6 km from the entrance, 200 m after a large waterfall on an open side of the road to the right in a very windy and exposed area, 4-5 meters above the ground, epiphytic on two different shrubs of *Piper lanceafolium*, 14 Oct 1984, R. Escobar, R. L. Dressler, M & D. E. & E. Retana 3555 (JAUM holotype, RPSC isotype).

Species haec *T. guilae* Dodson & Escobar similis, sed floribus atropurpureis non-maculatis, petalis obtusis 11-nervatis basi incrassatis pubescentibusque differt.



*T. retanarum*  
(R. Escobar 3555)

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FLORA DE Costa Rica  
*Telipogon retanarum* Dodson & Escobar  
Province of Cartago, National Reserve of Tapanti, alt 1660 m, about 6 kilometers from the entrance, 200 m after a big waterfall, on an open side of the road, in a very windy and exposed area, 4 to 5 meters above the ground, epiphytic on *Piper tabacae* solum H.B.K.  
Flowers very dark maroon-red with a curved ovary, petal with 11 darker veins, lip with 13; the lip with a cordiform bright burgundy-red callus, elevated from the stamens; a long maroon block with 3 bundles of hairs on top, the laterals with just a few hairs, the one on top with many hairs.  
Holotype  
Collector: R. Escobar, R. L. Dressler, E. Retana, M. Retana & D. E. de Retana  
No. 3555 PNRH 14 October 1984  
HERBARIUM JARDIN BOTANICO JOAQUIN ANTONIO URIBE

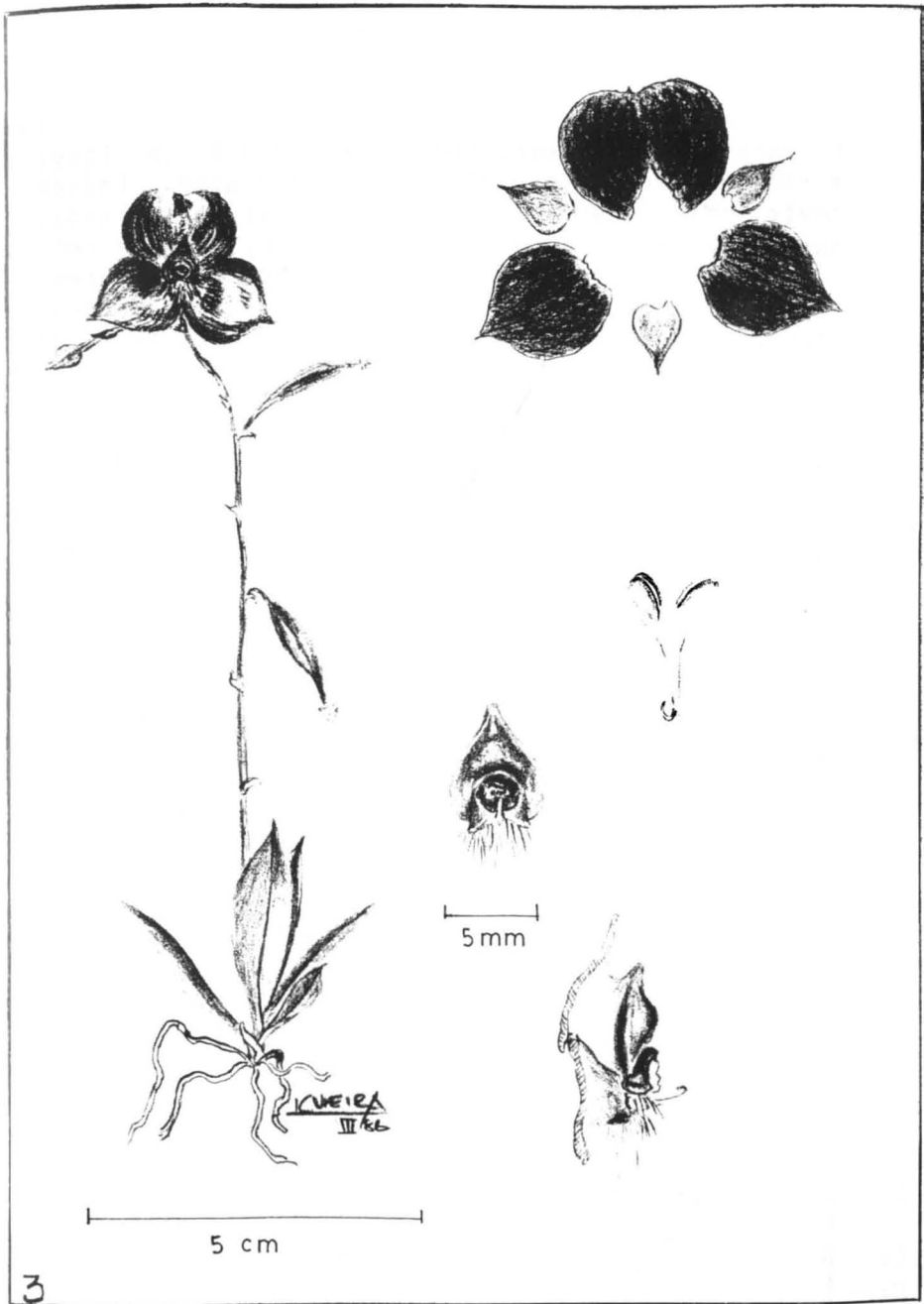


Illustration: L.C. Vieira

*Telipogon retanarum*

ETYMOLOGY: Named in honor of Marcos, Dora Emilia and Emilia Retana, co-discoverers of this species.

DISTRIBUTION: Costa Rica.

Plant very small, caespitose; stem to 0.5 cm long; roots fine, produced from the base of the stem. Leaves alternate, distichous, elliptical, acute at the apex, narrowing toward the base to join the sheath; with net-like venation; sheaths surrounding the stem. Inflorescence terminal, terete, to 15 cm long, unbranched, to 7-flowered, flowers produced singly in succession; peduncle of 1 internode to 6 cm long; floral bracts triangular, to 3 mm long; pedicel terete, curved, to 1 cm long; flowers nonresupinate. Flowers very dark maroon-red, the callus wine red, the column maroon-black. Sepals equal, ovate, concave, carinate on the backside, to 0.7 x 0.4 cm; petals broadly ovate, acuminate at the apex, to 1.2 x 1 cm, 11-to 13-veined, veins few-branched; lip ovoid, retuse at the apex, apiculate, to 1.4 x 1.2 cm, 13-to 15-veined, veins unbranched, the callus at the base of the lip cordiform-sub-sagittate from a frontal view, to 6 mm long, 4 mm wide, acuminate at the apex with a broad longitudinal keel, with a raised margin somewhat free from the lip, finely papillose-villose, the lateral lobes surrounding most of the column; column emersed in the callus, very short, with the stigma in a deeply sunken pit, with 3 bundles of spines, the lateral bundles sparse, the dorsal dense; pollinia 4 in 2 equal pairs, white.

ILLUSTRATIONS: L. C. Vieira No. 3 (JAUM, RPSC).

DISTINGUISHING FEATURES:

Scape terete.

Petals 11-to 13-veined; lip 13-to 15-veined.

Callus cordiform-hastate with a raised margin free from the lip.

Column sunken in the callus with the stigma in a pit.

Plant caespitose.

OTHER SPECIMENS SEEN: COSTA RICA: CARTAGO: same locality as the type collection, alt 1630 m, 8 Aug 1985, R. Escobar, D. Portillo and H. Retana 3628 (RPSC, USJ).

NOTES: Two flowering plants were discovered in 1984 with a total of 3 flowers (2 were pollinated) and 5 dark maroon seed pods. In addition to the two flowering plants one seedling was found growing on the petiole of the leaf of a small tree one meter from the ground. No additional plants were encountered. One year later two more plants, flowering for the first time, were found in the same trees and are assumed to have matured within one year.

NOTAS: Dos plantas florecidas fueron descubiertas en 1984 con un total de 3 flores (2 estaban polinizadas) y 5 cápsulas de semilla de color marrón oscuro. Además de las dos plantas florecidas se encontró un "seedling" "creciendo a un metro del suelo en el peciolo de la hoja de un pequeño árbol. No se encontraron plantas adicionales. Un año más tarde, dos plantas más, floreciendo por primera vez, fueron encontradas en los mismos árboles y se presume que maduraron en el término de un año.

TELIPOGON SETOSUS Ames, Bot. Mus. Leaflet 6: 28. 1938.

TYPE: COSTA RICA: Vara Blanca de Sarapiquí, north slope of central Cordillera, alt. 1500-1700 m, Jul. to Sept. 1937, Skutch 3246 (AMES!)

DISTRIBUTION: Costa Rica.

Plant caespitose; stem to 0.5 cm tall; roots fine, produced from the base of the stem. Leaves narrowly elliptic, acute at the apex, narrowing toward the base to join the sheath, to 3 x 0.6 cm. Inflorescence terminal, terete, unbranched, to 13.5 cm long, 5- to 7-flowered, the flowers produced 1 to 2 in succession. Flowers yellow with maroon vein lines, the vein lines narrow in the petals, broad in the lip, the column and



the spines wine-red. Sepals equal, concave, to 0.7 x 0.2 cm; 7-veined; lip broadly elliptic, obtuse at the apex, to 1 x 1.3 cm, 9-to 11-veined, swollen at the base to form a collar around the base of the column, the collar with a short horn on each side at the base; column subterete, swollen under the apex of the stigma and projecting slightly, with a bundle of setose spines on each side of the anther and a bundle of shorter spines on the anther; pollinia 4 in equal pairs.

ILLUSTRATIONS: Ames, Bot. Mus. Leaflet. 6: 29. 1938.

DISTINGUISHING FEATURES:

Scape terete.

Petals 7-nerved; lip 9-to 11-nerved.

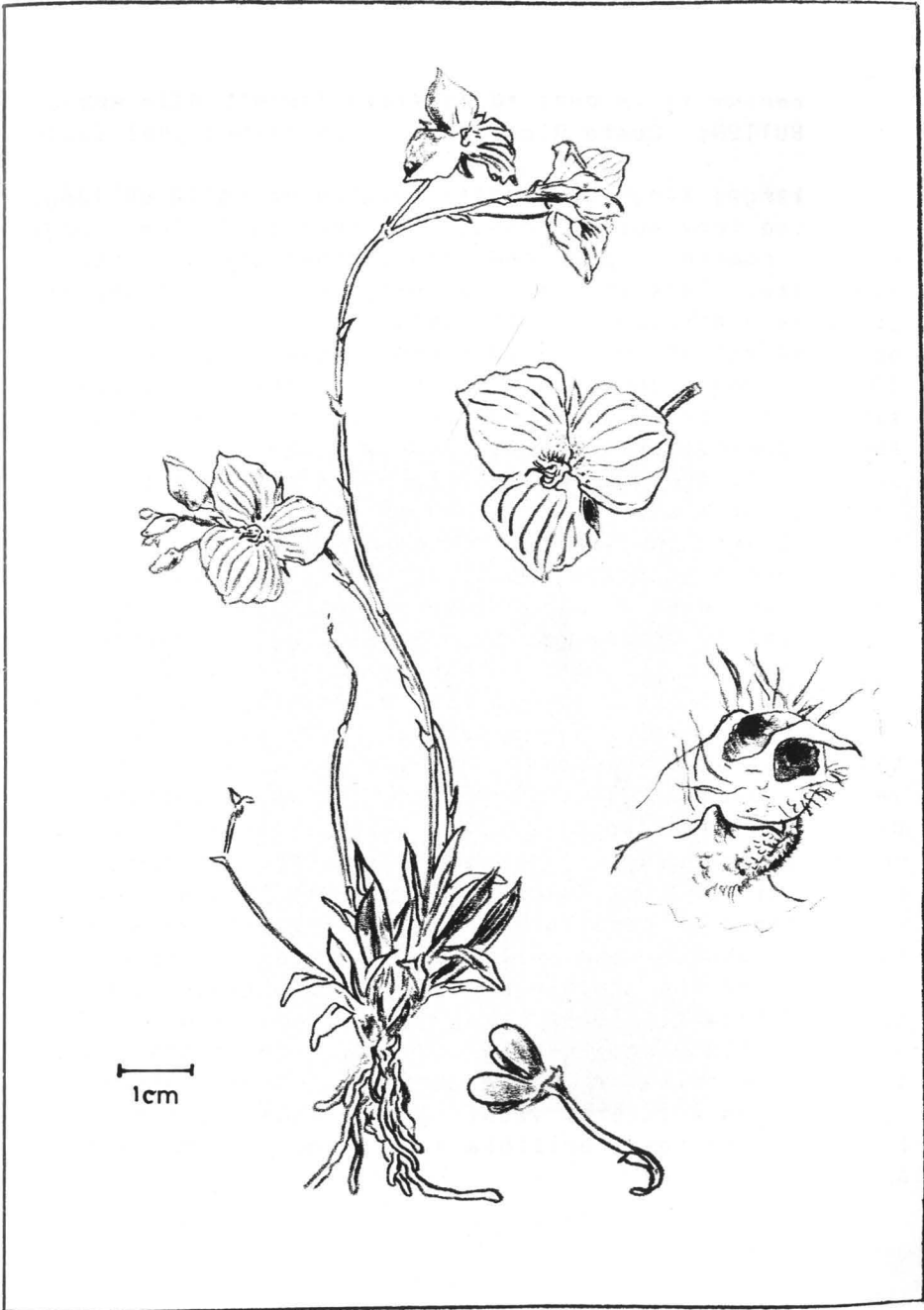
Callus indistinct, swollen around the base of the column with a tooth on each side at the base.

Column setose.

Stem caespitose.

NOTES: The description was prepared from the type specimen since neither living material or photographs were available. There exists some doubt about the validity of the pair of horns at the base of the collar surrounding the column. They may be merely artifacts of boiling the flowers for preparation of the sketch. In any case, the features of the plant and flowers do not match any other known species but come closest to *T. caroliniae*, which comes from a very distant region in Costa Rica. Search of the type locality, by R. Escobar, has failed to turn up specimens of this species.

NOTAS: La descripción fue preparada del ejemplar tipo, ya que ni material vivo ni fotografías estuvieron disponibles. Existe alguna duda acerca de la validez del par de cuernos en la base del collar que rodea la columna. Pueden ser solamente producto del hervir las flores para preparar el dibujo. En todo caso, los rasgos de la planta y las flores no concuerdan con otra especie conocida, pero están cercanos a *T. caroliniae*, el cual proviene de una región muy distante en Costa Rica. La búsqueda de la localidad tipo, por R. Escobar, ha fallado en encontrar nuevos ejemplares de esta especie.



*Telipogon setosus*

**TELIPOGON STORKII** Ames & C. Schw., Sched. Orch. 10: 101. 1930.

TYPE: *COSTA RICA*: La Chonta, 15 May 1928, Stork 2101 (AMES!).

DISTRIBUTION: Costa Rica.

Plant large, long caulescent; total stem to 18 cm long, branching from apical nodes, branches to 3.5 cm long; roots coarse, produced along the stem. Leaves alternate, distichous, narrowly oblong-elliptical, obtuse and apiculate at the apex, to 2.5 x 1 cm, with net-like venation. Inflorescence terminal, terete, to 30 cm long, unbranched, 6-to 9-flowered, produced singly in succession; peduncle of 1 internode, to 19 cm long; pedicel terete, to 2.5 cm long, twisted and arched at the midpoint. Flowers from light to dark yellow, with broad tan, brown or red-brown vein lines, the callus, column and column spines dark brown. Sepals narrowly ovate, to 1.2 x 0.5 cm, carinate on the back side with a pair of approximate veins on each side; petals broadly ovate, acuminate, overlapping at the midpoint, concave for the basal half, to 2.4 x 2.3 cm, 16-to 19-veined, usually 17-veined; lip broadly transversely ovate, acuminate at the apex, retuse at the base, deeply concave, to 2.2 x 3.1 cm, 21-to 27-veined, usually 23-to 25-veined, the veins unbranched, callus at the base of the lip solid, forming a collar under the column, to 4 x 6 mm, mostly free from the surface of the lip, subpeltate-obovate from a lateral view, broadly cordiform from a frontal view, the lateral lobes of the callus only partially surrounding the base of the column, minutely papillose; column obovate from a lateral view, 3 mm long, 4 mm thick, densely villose-papillose throughout, the stigma ovoid, dark green with a white marginal collar which is concave from a lateral view, with 3 equal clusters of long stiff spines; pollinia 4 in 2 equal pairs, yellow suffused with red.

DISTINGUISHING FEATURES:

Scape terete.

Petals 16-to 19-veined; lip 21-to 27-veined.

Callus solid, cordiform from a frontal view.

Column with 3 equal clusters of long stiff spines.

Plant long caulescent.

ILLUSTRATIONS: Analytical sketch on type specimen  
(AMES!).

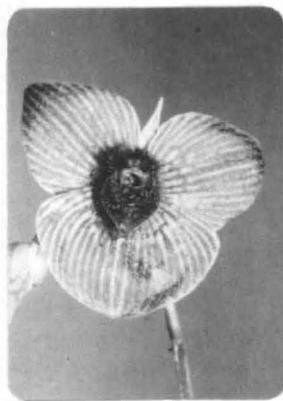
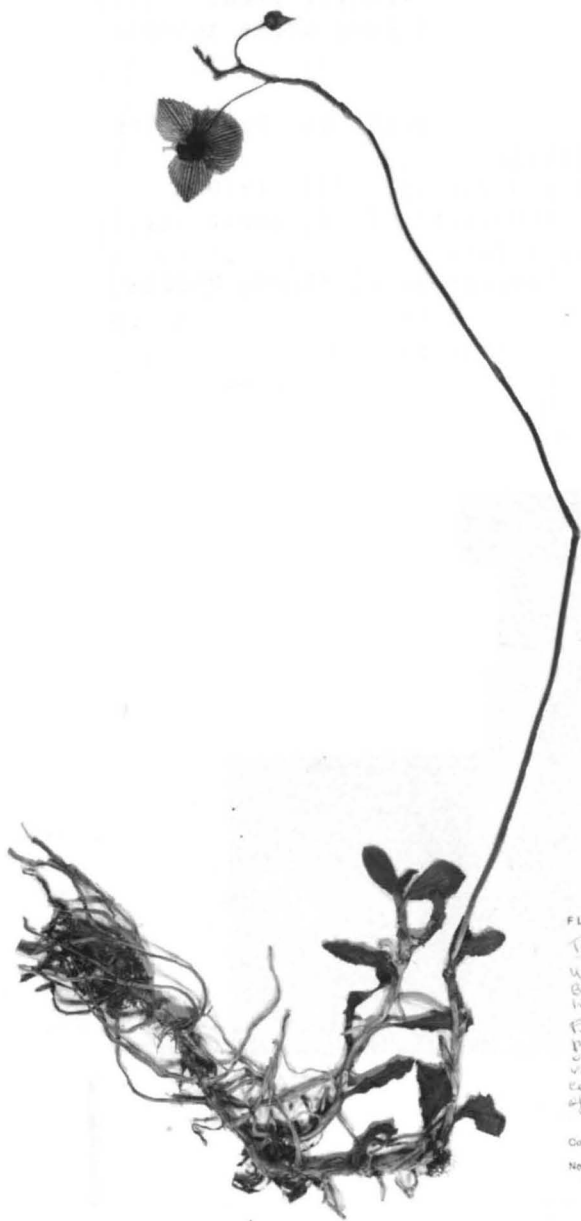
Fieldiana Bot. 32: 203. 1970.

R. L. Rodriguez, J. A. Saenz sn, 12 Nov  
1965 (USJ).

L. C. Vieira No. 28 (JAUM, RPSC).



*T. storkii*  
(R. Escobar 3650)



FLORA DE Costa Rica

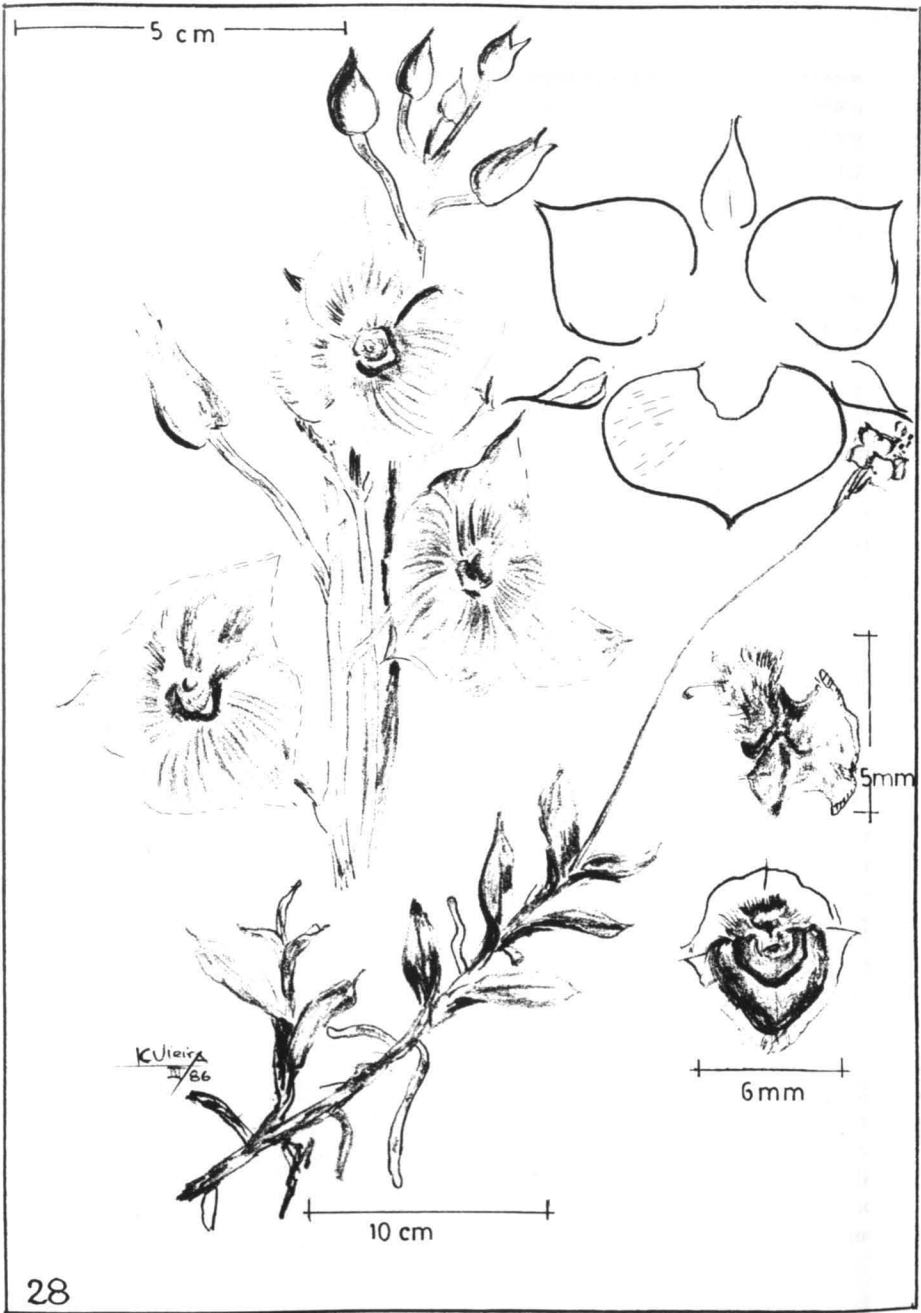
*Telopogon storkii* Ames & Schweinfurth  
 Without exact locality, collected by W.  
 Ballester in early 1985, cultivated at San-  
 José, Costa Rica, from larvae.

Flowers yellow with double maroon veins,  
 petals with 19 and sep with 25 in the  
 outer margin, sep with a prominent, ele-  
 vated, pulsed maroon callus at the base;  
 column maroon with 3 equal bundles  
 of dense, long, maroon hairs.

Collector R. S. Scahill

No. 3636 Ferns, flew in cult. 17 August 1985

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*Telipogon storkii* ssp. *storkii*

Illustration: L.C. Vieira

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: Panamerican highway between Macho Sapote and Empalme, alt 2600 m, 16 Sep. 1943, Lankester 1511 (AMES); Between Macho Gaf and La Trinidad de Dota, km 62 Panamerican Highway, alt 2450 m, on oaks in dense oak forest, collected by W. Ballestero, Sept 1984, cultivated in San Jose by C. Pacheco, flowered in cultivation 11 Oct 1984, R. Escobar 3538 (JAUM, RPSC); El Empalme, km 51 Panamerican Highway, alt. ca. 2000 m, Aug 1984, cultivated at El Empalme by A. Solano, flowered in cultivation 23 Oct 1984, R. Escobar & R. Vega 3573 (JAUM); near Macho Gaf, entrance to the farm of N. Camacho, alt. 2400 m, 25 Aug 1985, R. Escobar, D. Portillo, M. Retana, D. E. de Retana and N. Camacho 3650 (JAUM, RPSC, MO); Madre Selva, km 65 Panamerican Highway, alt. ca. 2600 m, 28 May 1985, D. E. Retana & P. Morúa sn (RPSC); same locality, 17 Aug 1985, R. Escobar, D. Portillo, M. Retana & D. E. de Retana 3637 (JAUM); without record of locality, cultivated at Lankester Gardens near Paraíso, flowered in cultivation 17 Aug 1985, R. Escobar 3636 (JAUM); Cordillera de Talamanca, before El Empalme, alt. 2500 m, 12 Nov 1965, Jose A. Saenz sn (USJ).

NOTES: *Telipogon storkii* has been found in several localities along the Panamerican Highway between km 50 & 70, but never in large colonies, although it was stated in the original description that it had been "seen in Santa Clara in great numbers". It is a very variable species and almost every plant has flowers of a different color with light or dark, broad vein lines. The paler forms present a brown or reddish suffusion at the base of the lip.

NOTAS: *T. storkii* se ha encontrado en varias localidades a lo largo de la Carretera Panamericana entre los kms. 50 y 70, pero nunca en colonias grandes aunque en la descripción original se afirma había sido "visto en Santa Clara en grandes cantidades". Es una especie muy variable y casi cada planta tiene flores de diferente color con anchas líneas de las venas, claras u oscuras. Las formas más pálidas presentan una difusión de color café o rojizo en la base del labelo.



*T. storkii*  
(R. Escobar 3636)



*T. storkii*  
(R. Escobar 3538)



**TELIPOGON STORKII** Ames & C. Schw. ssp. **MAGNIFICUS**  
Dodson & Escobar ssp. nov.

TYPE: COSTA RICA: HEREDIA: Above San José de la Montaña, passing Porrosatí, "Paso Llano", alt. 2300 m, discovered by F. Brenes, 25 Oct 1984, R. Escobar & R. Vega 3590 (JAUM holotype, RPSC, MO, CR, USJ, COL, ANT, isotypes).

Subspecies haec *T. storkii* Ames & C. Schw. similis, sed foliis rigidis late ellipticis, petalis enervosis et labello transverse reticulato.

ETYMOLOGY: Named for the spectacular flowers of this subspecies.

DISTRIBUTION: Costa Rica.

Plant similar to the type form but the leaves larger, to 3.5 X 1.4 cm, the inflorescence usually branched with several flowers open simultaneously, and the flowers smaller with narrowly ovate petals. The flowers pale yellow with green or yellow veins, without broad vein lines and the segments totally covered with brown transverse reticulation marks. The petals with 11-to 13-veins; the lip with 19-to 22-veins. The callus and column indistinguishable from the type form.

ILLUSTRATIONS: L. C. Vieira No. 9 (JAUM, RPSC).

DISTINGUISHING FEATURES:

Scape terete.

Petals 11-to 13-veined; lip 19-to 22-veined.

Callus and column as in the typical form.

Plant long caulescent.

OTHER SPECIMENS SEEN: COSTA RICA: HEREDIA: Above San José de la Montaña, passing Porrosatí, Vereda Los Angeles, alt. 2320 m, 22 Aug 1985, R. Escobar & D. Portillo 3644A (RPSC); same locality and date, R. Escobar & D. Portillo 3644B (JAUM).



*T. storkii* ssp. *magnificus*  
(R. Escobar 3644B)



*T. storkii* ssp. *magnificus*  
(R. Escobar 3590)



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FLORA DE COSTA RICA

*Telipouhon alatum*

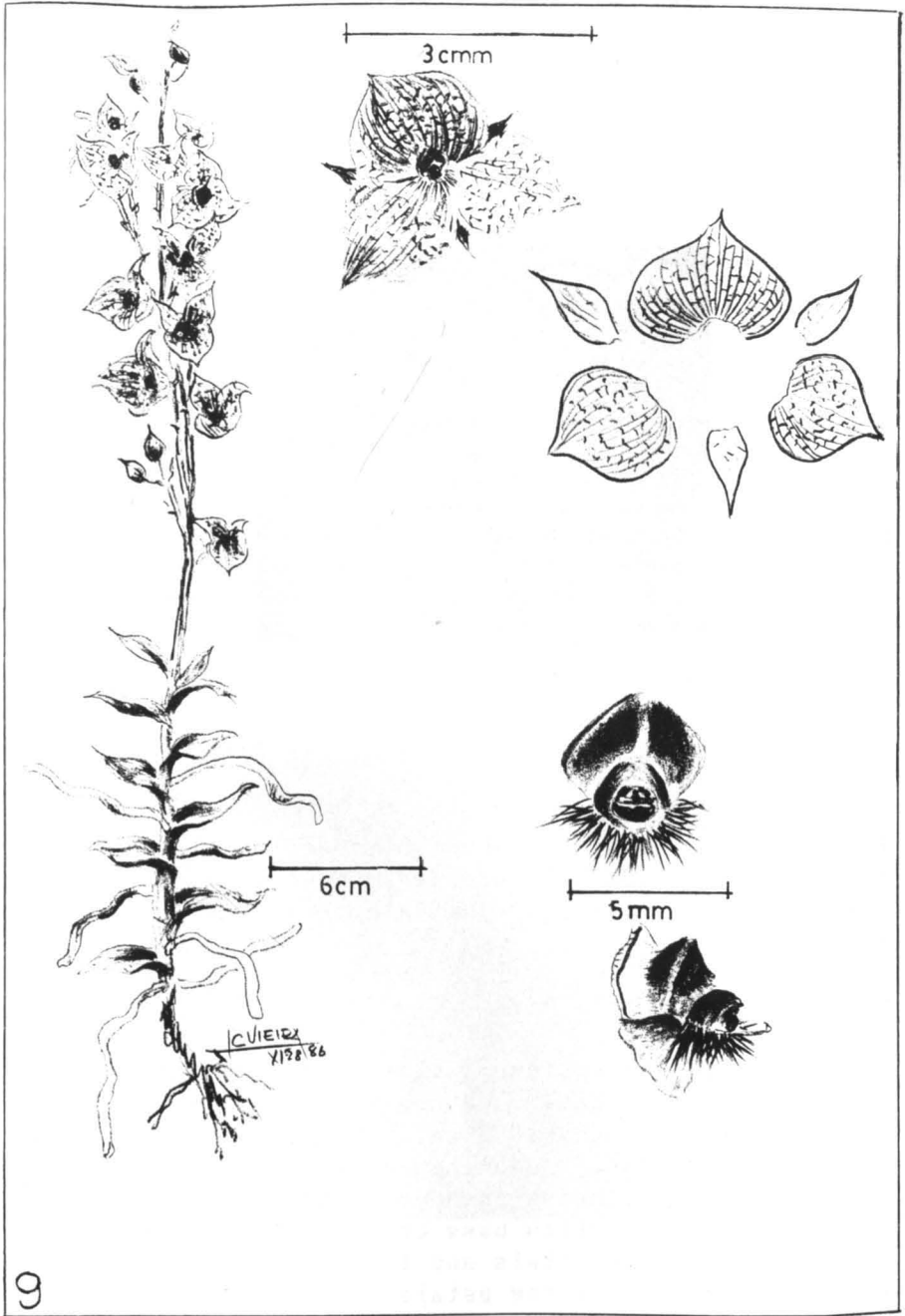
*T. magnificum* Robinson & E. S. Cornejo

Plains of Heredia, above San José & San  
Monte, passing "Cancosoti, vereda" Los  
Turques, alt. 2,200 m, collected by E. B. Sauer.  
Flowers pale yellow, totally covered with red  
bees, stamens, filaments, etc. etc. etc. etc.  
veins green or dark yellow, the petals with  
11 to 13 broad the base with 10 to 20 deep with  
an auricle, cordate, shallowly lobed, with  
moss-brain callos at the base, 10 to 15  
with 3 equal bundles of dense, very, broad,  
brown, spinous, polline yellow suffused  
with red.

Collector: R. E. Sauer & H. V. Sauer

No. 15-10, Heredia 25 October 1934

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*Telipogon storkii* ssp. *magnificus*

Illustration: L. C. Vieira

NOTES: About 15 plants with more than 50 flowers were examined of this subspecies. The locality is on a different mountain range, far from the places where the typical form of *T. storkii* occurs. The population was consistently similar and there was little significant variation from plant to plant. All mature plants had branched inflorescences with several flowers open simultaneously. The plants were growing in a heavy mat of humus and moss 1 to 2 meters from the ground at the base of huge trees (2-3 meters in diameter) that were left scattered in a pasture.

NOTAS: De esta subespecie se examinaron unas 15 plantas con más de 50 flores. La localidad es en una cadena de montañas diferentes y lejos de los sitios donde ocurre la forma típica de *T. storkii*. La población era consistentemente similar y había muy poca variación significativa de planta a planta. Todas las plantas adultas tenían inflorescencias ramificadas con varias flores abiertas simultáneamente. Las plantas se encontraron creciendo en un grueso colchón de humus y musgo a 1 ó 2 metros del suelo, en la base de árboles enormes (2 ó 3 metros en diámetro) que habían sido dejados regados en los potreros.

**TELIPOGON VAMPIRUS** Braas & Horich, Die Orchidee 33: 98. 1982.

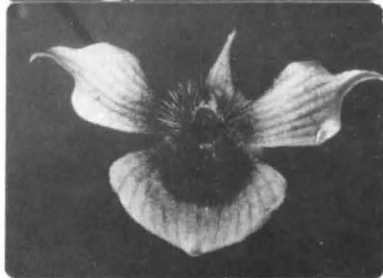
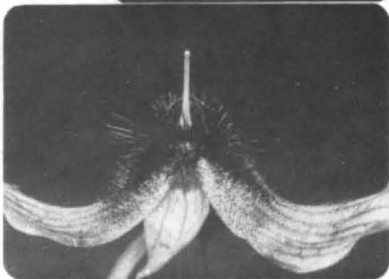
TYPE: COSTA RICA: SAN JOSE: Alto de la Palma, alt ca. 1500 m, collector not recorded, bought by C. Horich, 1981, L. A. Braas 40 (private herbarium of L. A. Braas, holotype).

DISTRIBUTION: Costa Rica.

Plant small, caespitose; stem to 0.5 cm long; roots produced from the base. Leaves elliptic-obovate, acute at the apex, to 3.5 x 0.8 cm. Inflorescence terminal or lateral, terete, unbranched, to 6 cm long, 1-to 3-flowered, the flowers produced singly in succession. Flowers with a yellow base color suffused with pale red-purple on the petals and lip with red-purple vein lines, the base of the petals red-purple, the basal half of the lip, the column and the spines dark red-

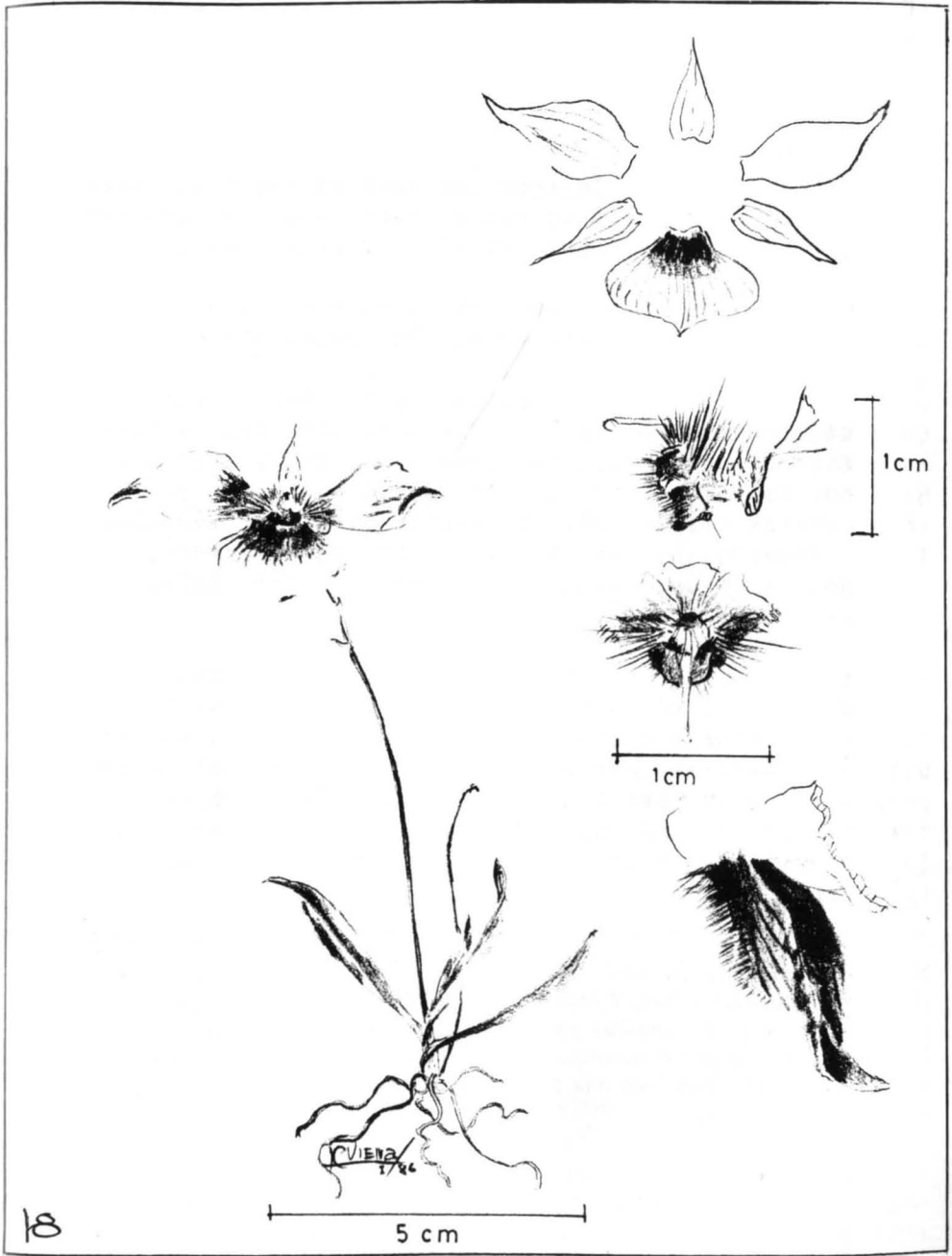


*T. vampirus*  
(R. Escobar 3535)



FLORA DE Costa Rica  
*Telipogon vampirus* Braas & Horich  
 Province of San José, Cascajal, alt. 1700 m, col-  
 lected by H. Astaya, Sept 1984, cultivated at  
 Jardín Botánico Universidad de Panamá, Panamá.  
 Petals yellow suffused with light red-brown below  
 the middle, with 7 branching light brown veins,  
 with dense and long purple-black pubescence  
 at the basal half; lip without an elevated callus,  
 purple-black below the middle, with long and  
 dense purple-black pubescence, the apical half  
 basally yellow, with 17 dark veins; column  
 purple-black densely pubescent and with  
 rather indistinct bundles of long purple-  
 black spines, pollinia purple-black.  
 Cultivar: R. Escobar 3535  
 No. 3535 Panama, flowered in cultivation  
 11 OCT 1984

HERBARIO JARDIN BOTANICO JOAQUIN ANTONIO URIBE



*Telipogon vampirus*

Illustration: L.C. Vieira



purple. Sepals equal, concave, 3-veined, 1.6 x 0.6 cm; petals obliquely obovate, with a long acuminate apex, densely hirsute for the basal 1/3, to 2.5 x 1.1 cm, 7- to 9-veined; lip obovate, obtuse at the apex, acuminate, 2.1 x 1.9 cm, 15- to 17-veined, the basal 1/2 slightly thickened, densely long-hirsute and the base forming a collar around the base of the column; column barely distinguishable from the base of the lip, with long dense clusters of spines on each side and shorter spines on the anther; pollinia 4 in 2 equal pairs.

ILLUSTRATIONS: L. A. Braas, Die Orchidee 33: 99. 1982.  
L. C. Vieira No. 22 (JAUM, RPSC).

OTHER SPECIMENS SEEN: COSTA RICA: SAN JOSE: La Hondura, alt 1000-1200 m, bought in the street, collector unknown, L. D. Gomez 3432 (CR); Cascajal, Hacienda de Mario Chandi, alt. 1700 m, on "Plomillo" trees (Melastomataceae), collected by M. Artava, Sept 1984, donated by J. Garcia to Lankester Gardens in Cartago, flowered in cultivation 11 Oct 1984, R. Escobar 3535 (JAUM).

NOTES: *T. vampirus* has been occasionally collected around San José growing in association with *T. biolleyi*. From a distance the species are very similar but *T. vampirus* may be recognized by the blackish-purple flowers, petals long pubescent on the base and the absence of a callus on the lip, rather presenting a large swelling that occupies half of the lip and is long-hirsute.

NOTAS: *T. vampirus* ha sido colectado ocasionalmente alrededor de San José creciendo en asociación con *T. biolleyi*. Desde alguna distancia las especies son muy similares pero *T. vampirus* puede reconocerse por las flores negro-púrpura, los pétalos largamente pubescentes en la base y la ausencia de un callo en el labio, el cual presenta más bien una hinchazón grande que ocupa la mitad de éste y es largamente hirsuta.

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Queremos agradecer al Dr. Carlyle Luer por hacer las descripciones en latín y al Dr. Luis Carlos Vieira por las ilustraciones botánicas. También damos las gracias a todas aquellas personas en Costa Rica que contribuyeron a la información básica que hizo posible este estudio.