

NEW SPECIES OF RUBIACEAE FROM VENEZUELA

JULIAN A. STEYERMARK

Instituto Botánico, MARNR

Since the publication of my Rubiaceae for the FLORA DE VENEZUELA, exploration en various sectors of Venezuela have brought to light a number of new taxa, of which the following are described below.

FARAMEA BERRYI Steyermark, sp. nov.

Arbor 10-metralis, ramis glabris; stipulis cupuliformibus 5 x 2 mm una aristam erectam subulatam 1.5 mm longam desinentibus; foliis elliptico-obovatis apice abrupte obtuseque caudatis, acuminis 5-9 mm longo, basi cuneatim acutis decurrentibus 5.5-7 x 2-3.8 cm glabris brevipetiolatis, petiolis 3-5 mm longis canaliculatis; nervis lateralibus utroque latere 5-7 fere horizontaliter patentibus supra impressis subtus subelevatis; inflorescentia umbellatim ramosa, ramis primariis tribus vel quinque apicem versus paullo dilatatis 5-9 mm longis glabris apice plerumque 1 vel 2 bracteas foliosas oblanceolatas obtusas gerentibus, bracteis 3-5 x 1-2 mm, quoque ramo 3-9 floro; floribus brevipedicellatis, pedicellis 1-1.5 mm longis glabris; calyce hypanthioque 1.5 mm longo glabro, calyce cupuliformi apice subtruncato vel margine subundulato 0.3 - 0.5 mm longo; disco conspicuo cupuliformi 1.5 x 1.5 mm calycem exceeding; corolla profunde campanulato-cylindrica 5 mm longa, tubo 3-3.5 mm longo basi 2 mm lato fauce 3 mm lato omnino glabro, lobis quattuor ovato-lanceolatis subobtusis 1.8-2 x 1.3-1.5 mm; staminibus inclusis, antheris quattuor oblongis apiculatis 1.8 mm longis, filamentis 0.5 mm longis prope medium tubi affixis; stylo 1.5 mm longo, stigmatibus late ovatis apice rotundatis; fructu non visi.

VENEZUELA: Terr. Fed. Amazonas: Estación Experimental de Sta. Barbara del Orinoco, 1-2 Km. al sur de Trapichote, alt. 130 m., 26 Feb- 2 Marzo 1976, Paul Berry & Luis Chesney 2096, "árbol de 10 metros de alto con flores blancas" (Holotipo, VEN; isotipo, MO).

Nombre vernacular: cafecillo.

This taxon is related to F. parvibractea Steyermark of Amazonian Venezuela, from which it differs in the smaller flowers and bracts, subtruncate to subundulate calyx margins, more numerously flowered axes of the inflorescence, and smaller leaves with shorter petioles.

HILLIA MARCANO-BERTII Steyermark, sp. nov. (Fig. 1)

Suffrutex; caulis junioribus areis incrassatis pustulatis instructis; stipulis prominentibus oblanceolato-ligulatis apice rotundatis 6.8 cm longis supra medium 2.3-2.5 cm latis glabris pinnatim multinervatis; foliis petiolatis, petiolis 1.7-2 cm longis, laminis submembranaceis late ellipticis vel ovato-ellipticis apice acuminate basi acutis 14-16 x 5.6-7 cm ubique glabris, subtus aliquantum subverruculosus, nervis lateralibus utroque latere 6-8 ascendenteribus in statu sicco brunneis subtus praecipue areis incrassatis pustulatis instructis; floribus solitariis terminalibus, bracteis sub ovario oblongo-ligulatis apice rotundatis 11 x 5 mm glabris munitis; calyce nullo; corolla alba plerumque hypocrateriformi vel paullo subinfundibuliformi, tubo 9.5 cm longo basi 4 mm lato fauce 15 mm lato, lobis quinque ovatis apice acutis 3.5 x 1.5 cm; staminibus sex vel septem sessilibus inclusis infra basin loborum corollae 7 mm insertis, antheris linearibus 8 mm longis; stylo 8.8 cm longo glabro, stigmate bilobato; ovario cylindrico 8 x 3.5 mm manifeste 10-costato.

VENEZUELA: Edo. Táchira: Municipio Lobatera: Parque "Cazadero"

carretera Palo Grande-Minas de Carbón de Lobatera, bosque húmedo montaño bajo, 6 Diciembre 1979, Luis Marcano-Berti & Ismael Peña 519-979 (Holotipo, VEN; isotipo, MER).

It affords me great pleasure to dedicate this taxon to Ing. For. Luis Marcano-Berti, astute student of the Venezuelan flora and editor of the revista PITTIERIA. The combination of elongated stipules, absence of calyx lobes, and prominently nerved, somewhat verruculose lower surface of the leaves is suggestive of a relationship with H. wurdackii Steyermark of Peru and H. killipii Standley of Colombia. From these and other species of the genus, H. marcano-bertii differs in the much more elongated stipules, larger, ovate, acute corolla lobes, larger leaves, and longer corolla tube than found in H. wurdackii.

PALICOUREA HUBERI Steyermark, sp. nov. (Fig. 2).

Frutex 1-2-metralis, ramulis subquadrangularibus moderatim pilosis pilis patentibus 1-1.5 mm longis munitis; stipulis in vaginam brevem 1-2 mm altam 4 mm latam hirsutulam connatis, in aristas duas hirsutulas utrinque 8-12 x 0.5 mm pilis 0.3-1 mm longis desinentibus; foliis oppositis brevipetiolatis, petiolis 3-5 mm longis dense ferrugineo-villosis; petioli cicatrice rotundata manifesta 4 x 3.8 mm; laminis subcoriaceis oblongis vel ovatis apice caudatis, acumine usque 5 mm longo, basi amplexicaulibus vel cordatis 8.5-21 x 4.5-9.5 cm, supra valde bullatis subtus valde rugosis, supra costa media sulcisque dense ferrugineo-hirsutulis pilis 1-1.5 mm longis munitis, subtus costa media nervisque dense hirsutis pilis patentibus 1-2 mm longis vestitis sed inter venulas tertiaris glabratris vel parce pilosis; nervis lateralibus utroque latere 9-13 divaricatae arcuato-adscendentibus ante marginem 2-3 mm conjunctis supra valde sulcatis subtus manifeste elevatis; venulis tertia-

riis supra valde sulcatis subtus elevatis inter nervos laterales transversalibus; inflorescentia terminali multiflora dense cymosocorymbosa pedunculata, pedunculo rubro vel coccineo 3-6 cm longo 2 mm lato pilis patentibus fulvis 0.5-1 mm longis dense hirsutis; in florescentiae axibus principalibus tribus 1-1.5 cm longis praecipue furcatis, axibus secundariis 0.5 cm longis dense fulvo-pubescentibus; floribus sessilibus in cymulis congestis dispositis, bracteatis; bracteis alternatim distichis congestis ovatis acutis 4-5 x 2-2.5 mm extus pilis 0.1-0.5 mm longis hirsutulis intus sparsim puberulis vel glabratibus; calyce hypanthioque coccineo 2.5-3 mm longo, hypanthio breviter campanulato 2 mm longo 3mm lato pilis patentibus 0.2-0.3 mm longis hirsutulis; calyce 5-lobato, lobis subaequalibus vel inaequalibus late deltoideis subacutis 1 x 1 mm extus hirsutulis ciliolatisque intus glabris; calycis tubo intus sub sinu loborum 1-3-atroglandulifero; disco tubo calycis breviore; corolla ~~carmesino~~-rubra subcylindrico basi paullo dilatata sub anthesi 9 mm longa, tubo extus pilis 0.5-0.8 mm longis patentibus dense hirsutulo intus modo infra medium tubi supra basin 3.5 mm annulo pilorum ornato, lobis sub anthesi ovato-lanceolatis apice obtusis appendice inflexa, instructis 1.5 x 1 mm extus dense hirsutulis; staminibus ad medium tubi, antheris linearis-oblongis 1.8-2 mm longis, filamentis 2 mm longis in tertia parte inferiore tubi corollae insertis; stylo 4-7 mm longo glabro; fructu non visi.

VENEZUELA: Terr. Fed. Amazonas: Depto. Atabapo: white sand savanna, southeastern bank of the middle part of Caño Yagua at Cucurital de Yagua, lat. 3° 36' N., long. 66° 34' W., alt. 120 m., 8 May 1979, "shrub 1 m. tall; inflorescence branches red; corolla dark carmine red", Gerrit Davidse, Otto Huber, & Stephen Tillett 17359 (Holotipo, VEN; isotipo, MO).

PARATYPE: BRAZIL: Edo. Amazonas: Rio Urubu, Manaus-Itacoatirra road, km. 202, east of east bank of Rio Urubu, forest on terra

firma, 29 May 1968, "shrub about 2 m. tall; inflorescence axis and calyx crimson; corolla lilac pink at base of tube, crimson purple lobes", G. T. Prance, D. Philcox, W. A. Rodriguez, J. F. Ramos & L. G. Farias 4864 (VEN, NY).

In addition to the subsessile, strongly amplexicaul, prominently bullate, densely pubescent leaves, conspicuously pubescent stems and peduncles, this species has all parts of the calyx and corolla densely pubescent, the flowers finally unilaterally arranged with alternately distichous bracts. It may be related to P. foldatsii Steyermark of Amazonian Venezuela.

PSYCHOTRIA ALTIOLA Steyermark, sp. nov.

Planta subherbacea 0.35-0.4-metralis, caulis tenuibus 2 mm diam. glabris vel pilis adpressis in lineis duobus verticalibus dispositis; stipulis in vaginam 3-4 x 2-3 mm glabram connatis, in dentes duos linear-lanceolatos vel lanceolatos acutos 0.5-2 mm glabros; foliis petiolatis, petiolis 3-12 mm longis glabris, laminis linear-lanceolatis vel anguste lanceolatis apice sensim acuminatis basi longiattenuatis acuminatis 4-7 x 1-1.5 cm supra praeter secus costam medium breviter puberulam glabris subtus glabris; nervis-lateralibus in quoque latere 5-6 adscendentibus; inflorescencia monocephala axillari sessili subhemisphaerica, capitulis 1 cm altis 1.5 cm latis multifloris; floribus sessilibus ternis aggregatis a bracteis cinctis; bracteis exterioribus in quoque fasciculo duabus majoribus cucullatis amplexicaulibus suborbiculari-obovatis apice rotundatis 2-lobatisque 8 x 8 mm dorso marginibusque puberulis ceterum glabris; bracteis majoribus bracteas duas minores magis tenues scariosas valde cucullatas late obovatas apice rotundatas 6.5 x 4.5 mm dorso praeter carinam puberulam glabras cingentibus; bracteolis duabus sub quoque flore ligulato-obovatis apice ro-

tundatis cucullatis suberosisque 6 x 3.5 mm glabris; hypanthio turbinato 1 x 0.7-1 mm glabro; calycis lobis inaequalibus plerumque tribus ovatis vel triangulari-lanceolatis acutis acuminatis vel interdum abrupte aristatis 1-3 x 0.8-1.2 mm praeter margines basin versus ciliis paucis glabris, inter lobos calycis glandulis squamiformibus numerosis 0.5 mm longis munitis; corollis roseis in alabastro extus puberulis intus supra medium pilosis; fructibus rubescenti-vinaceis.

VENEZUELA: Edo. Merida: Sierra del Norte, selva nublada, alt. 2600-2800 m., 6-8 Octubre 1952, H. Humbert 26739 (Holotipo, P).

With its nearly eciliate calyx lobes, P. alticola is most closely related to P. eciliata Steyermark, from which it differs in the narrower leaf blades, narrow, lance-linear stipular teeth, lance-triangular calyx-lobes with more pointed apex on some lobes while abruptly aristate on others, and roseate instead of white flowers. The other species to which it is related, such as P. dunstervilleorum, P. norae, P. rosacea, and P. ruiz-teranii, all have the upper surface of the leaf blade densely short-pubescent.

PSYCHOTRIA YAPACANENSIS Steyermark, sp. nov.

Frutex 1-2-metralis, ramulis pilis patent-i-adscendentibus brevissimis 0.1 mm longis dense puberulis vestitis; stipulis sparsim puberulis in vaginam connatis, vaginis in dentes duos aciculares 4.5-5 mm longos desinentibus; foliis brevipetiolatis vel subsessilibus, petiolis usque 3 mm longis dense puberulis; laminis subcoriaceis elliptico-lanceolatis apice acutis rigide apiculatis, apiculo 0.5-0.7 mm longo, basi obtusis 5.5-9 x 2.3 cm supra glabris subtus costa media nervisque minute puberulis; nervis lateralibus in quoque latere 12-17 supra impressis subtus elevatis subhorizontaliter patentibus secus marginem curvatis conjunctisque; venuis

tertiariis subtus subelevatis reticulatisque; inflorescentia terminali pedunculata relative pauciflora 1 x 1 cm dense puberula, pedunculo tenui 15 x 0.7 mm dense puberulo, axibus primariis tribus vel quattuor; bracteis sub axibus inflorescentiae triangulari-lanceolatis acuminatis 2-3 mm longis dense puberulis; floribus sessilibus; bracteis sub floribus ovatis acutis 0.7 mm longis extus puberulis ciliolatis; calyce hypanthioque viridescenti-luteo 1.3 mm longo puberulo, hypanthio breviter cupulato 0.7 mm longo 0.9 mm lato; calycis lobis quinque suborbiculari-ovatis acutis 0.6-0.7 mm longis 0.7-0.8 mm latis ciliolatis extus puberulis; disco lobis calycis paullo breviore; corolla viridescenti-lutea infundibuliformi 5 mm longa, tubo 4 mm longo-basi 1 mm lato supra basin superneque 2 mm lato, extus minute moderatimque puberulo intus parte basilari 2.5 mm glabro ceterum dense pilosulo, lobis quinque ligulato-oblongis obtusis valde corniculatis 1.5 x 0.7 mm extus puberulis; staminibus supra medium tubi inclusis, antheris linearri-oblongis 1.3 mm longis, filamentis 0.4-0.5 mm; supra basin tubi 2.5 mm affixis; style 5.5 mm longo superne 2.5 mm dense puberulo; fructibus subglobosis lutescentibus 0.5-0.7 cm diam., pyrensis duobus suborbiculari-ovalibus 4 x 4 mm dorso 4-costatis valde sulcatis.

VENEZUELA: Depto. Atabapo: Sabana I entre el Caño Cotua y el Cerro Yapacana, 1st. 32° 40' N., long. 66° 50' W., alt. 100 m., 25 May 1978, O. Huber 1791 (Holotype, flower, VEN); same locality, Huber 1791-A (Paratype, fruit, VEN).

This species is distinguished by the dense puberulence of the stem, peduncle, inflorescence, calyx, hypanthium, as well as the outer surface of the corolla, by the acicular, elongated, pilosulous stipular awns, short petioles, small inflorescences, and conspicuously round-knobbed apices of the corolla lobes.

RUDGEA BERRYI Steyermark & Dwyer, sp. nov.

Arbor 5-metralis, ramulis teretibus glabris; stipulis glabris, vaginis 3.5 mm longis 3-5 mm latis apice rotundato-truncatis dorso unam aristam 5 mm longam gerentibus; foliis petiolatis, petiolis 8-12 mm longis; laminis late elliptico-oblongis vel oblongo-lanceolatis apice abrupte obtuseque oblongis vel rotundatis basi acutis 5-16 x 1.8-7.5 cm glabris; nervis lateralibus in quoque latere 6-8 arcuato-adscentibus; inflorescentiis terminalibus umbelliformibus 6-10 floris 5-5.5 x 3-4 cm brevipedunculatis, pedunculo 4-12 cm longo glabro; floribus sessilibus vel 1-4 mm longipedicellatis; inflorescentiarum ramis tribus vel quattuor glabris 1.5-5 mm longis utroque ramulo flores duos usque quattuor gerenti; calycis lobis quinque inaequalibus suborbicularibus vel late ovatis 0.5-1 mm longis dense ciliatis ceterum glabris; hypanthio glabro 1-2 mm longo; corolla alba subhypocrateriformi 5-6 cm longa, tubo 4.5-5 cm longo 1.5-2 mm lato, lobis quinque linear-lanceolatis apice subobtusis cucullato-incrassatis ciliatis 6.5-9 x 1.2-2 mm; antheris quinque usque 4 mm longis; filamentis brevissimis; stylo 4.5-5 mm longo.

VENEZUELA: Terr. Fed. Amazonas: on laterite site of IVIC study area, forest 4 km. from San Carlos de Río Negro, off road to Solano, alt. 120 m., 24 September 1975, "tree 5 m. tall with white flowers", Paul Berry & C. Uhl 1558 (Holotipo, VEN; isotype, MO).

This species is well marked by its combination of the dorsally 1-aristate stipules, densely ciliate calyx lobes, and umbelliform inflorescences with conspicuously long corollas.

RUDGEA MARCANO-BERTII Steyermark, sp. nov. (Fig. 3).

Frutex vel arbuscula omnino glaber, ramis quadrangularibus 3 mm diam.; stipulae vagina parum manifesta truncata 1 mm longa, dorso-in quoque latere aristas duas 2-2.5 mm longas gerenti; foliis

sessilibus subamplexicaulibus ovatis vel ovato-oblongis apice acute
brute acutis basi subcordatis subamplexicaulibus 6.2-10.6 x 2.6 -
6.4 cm, nervo marginali subtus praecipue incrassato, nervis latera
libus in quoque latere 9-11 prominentibus divaricatae patentibus an
te marginem 3-5 mm conjunctis, venulis tertiaris subtus praecipue
prominentibus subtiliter reticulatis subelevatis; inflorescentia
terminali umbellatim 3-flora pedunculata, pedunculo 18-23 x 1.5-2
mm; floribus pedicellatis, pedicellis 5-6 mm longis; calycis tubo
sub fructu 2.5-3.5 mm longo 3-4 mm lato inaequaliter vel subinae -
qualiter 4-lobato, lobis sub fructu suborbicularibus apice acutis
vel rotundatis 1 mm longis 0.5-1.5 mm latis; fructu immaturo sub -
globoso 7 mm longo 9 mm lato.

VENEZUELA: Edo. Táchira: Municipio Lobatera: Parque "Cazadero",
carretera Palo Grande-Minas de Carbón de Lobatera, bosque seca mon
taño bajo, alt. 1700 m., 6 Dec 1979, Luis Marcano Berti & Ismael
Peña 532-979 (Holotipo, VEN; isotipo, MER).

This species is related to R. amplexicaulis Dwyer of Panama,
from which it differs chiefly in the broader, ovate to ovate-oblong
leaves with more numerous lateral nerves, longer pedicels and pe
duncle, and umbellately flowered inflorescences. From R. sanarensis
Steyermark of Venezuela it may be distinguished by the subamplexi -
caul, conspicuously nerved ovate to ovate-oblong leaves and shor
ter pedicels, while from R. cornifolia (H. & B.) Standl., it is di
differentiated by the simply umbellate inflorescence, longer calyx
tube, subamplexicaul, thicker leaves with more conspicuously eleva
ted lateral nerves, and more conspicuous reticulate tertiary nerva
tion.

RUDGEA RUIZ-TERANII Steyermark, sp. nov. (Fig.).

Frutex 2-3-metralis, ramis dense tomentellis; stipulis in va
ginam cupulatam truncatam 4 mm alta dense tomentellam, in dentes

aculeiformes tres 0.8-1 mm longas desentibus; foliis petiolatis,
petiolis 6-10 mm longis tomentosis; laminis late lanceolato-ellip-
ticis apicee abrupte caudatis, acumine acuto 12-20 mm longo, basi
cuneatim angustatis 7.5-14 x 2.5-4.5 cm supra glabris subtus secus
costam medianam nervos lateralesque dense villosulis pilis patenti-
bus ceterum glabris; nervis lateralibus in quoque latere 8-10 ar-
cuato-adscendentibus; inflorescentia terminali pedunculata, pedun-
culo 1.5 cm longo tomentoso, trichotome ramosa corymboso-cymosa, a
xibus principalibus 1 cm longis 3-5-floris tomentosis; bracteis
sub basi inflorescentiae subulato-spathulatis acutis 9 x 0.9 mm to-
mentosis; floribus sessilibus; bracteis sub floribus linearilan-
ceolatis acutis 1.8-2 x 0.5 mm extus puberulis; calyco hypanthio -
que 3 mm longo extus dense puberulo, hypanthio cupulato 1.5 mm lon-
go 2 mm lato; calyce 3.5 mm lato, lobis quinque late suborbiculari-
-deltoides acutis 1-1.5 mm longis 1.5 mm latis intus glabris; dis-
co tubo calycis breviore; corolla alba subcylindrico-subinfundibu-
liforme 8,5 mm longa extus dense tomentella, tubo 6 mm longo basi
2 mm lato superne fauceque 3 mm lato intus praeter pilos breves
paucos 2.5 mm supra basin tubi affixos glabro, lobis quinque lan-
ceolatis apice obtusis 2-2.5 x 1.2 mm corniculatis, corniculo in -
flexo 0.7 mm longo; antheris linearibus 1.8 mm longis, filamentis
0.8 mm longis in medio tubi affixis; style 5 mm longo glabro.

VENEZUELA: Edo. Mérida: Distrito Sucre: bosque nublado, entre
Azulita y Lagunillas, alt. 1860-2050 m., 12 Octubre 1967, Luis
Ruiz-Terán 4703 (Holotipo, VEN; isotipo, MER).

This species finds its nearest affinity in R. buntingii Steyermark., an endemic species of the Venezuelan Coastal Cordillera, from which it differs in the tomentose stem, petioles, and stipular sheaths, shorter, inconspicuous, non-squarrose calyx lobes, few lateral nerves of the leaf blades, caudate leaf apices, and glabrous lower surface of the leaf blades.

SABICEA LIESNERI Steyermark, sp. nov.

Planta scandens, caulis dense villosis pilis divaricatis brevibus munitis; stipulis reflexis suborbiculari-ovatis vel ovatis 7.5 x 4-7 mm extus strigosis intus sparsim strigillosis, marginibus ciliatis; foliis petiolatis, petiolis 0.8-2 cm longis dense villosis, laminis firme membranaceis lanceolato-ellipticis apice acuminate basi acutis 6.5 x 2-3.5 cm supra dense scabrido-hirsutis subtus dense molliter tomentosis pilis 1 mm longis praeditis; nervis lateralibus in quoque latere 11-13 adscendentibus secus marginibus anastomosantibus; inflorescentiis multiramosis laxe multifloris 2.5-3.5 cm diam. brevipedunculatis, pedunculo 3-8 mm longo dense villoso; inflorescentiae axibus primariis brevibus 1.5-2 mm longis hirsutulis in cimas dichasiales furcatas desinentibus; florigibus ad apicem axium pedicellatis, pedicellis 2.5-5 mm longis hirsutulis; calyce hypanthioque post anthesin 7.5-8 mm longo, hypanthio turbinato 2 x 2 mm extus hirsutulo; calycis tubo 2 mm longo 3 mm lato, lobis quinque inaequalibus, majoribus tribus vel quattuor elliptico-lanceolatis vel lanceolatis subobtusis 4-5.5 x 1.2-2 mm ubique hirsutulis pilis 1 mm praeditis, marginibus ciliatis, lobo minore uno linearis-oblanceolato acuto 2.5 x 0.4 mm vel interdum lobis minoribus duabus; corolla non visi; inflorescentiae bracteis linearibus vel linearis-subulatis acutis 4.5-8 x 0.5-1.2 mm extus puberulis, marginibus ciliatis.

VENEZUELA: Edo. Táchira: primary wet forest, sandy soil, vicinity of Las Minas, north of La Laguna, 16 km southeast of Santa Ana, lat. 7° 36' N., long. 72° 13' W., alt. 1150-1250 m., 28 July 1978, Julian A. Steyermark & Ronald Liesner 118876 (Holotipo, VEN; isotipo, MO).

This species is related to S. pearcei Wernh. of Colombia, from which it differs in the longer petioles, broader calyx lobes, and scabrid-hirsutulous hairs of the upper leaf surface. From S.

sastri Steyermark. of Colombia it is differentiated by the unequal ca-
lyx lobes, densely hirsutulous pedicels, the flowers on irregular-
ly branched axes and not umbellate nor fasciculate, and smaller
leaves acute at their bases.

LAMINAS

FIGURA 1. Hillia marciano-bertii Steyermark

A. Habit.

B. Stipule

C. Corolla, interior view with
stamens, and showing posi -
tion over ovary.

D. Bracteoles, ovary and lower
portion of corolla tube.

E. Corolla lobe.

F. Stigmas and upper part of
style.

G. Anther.

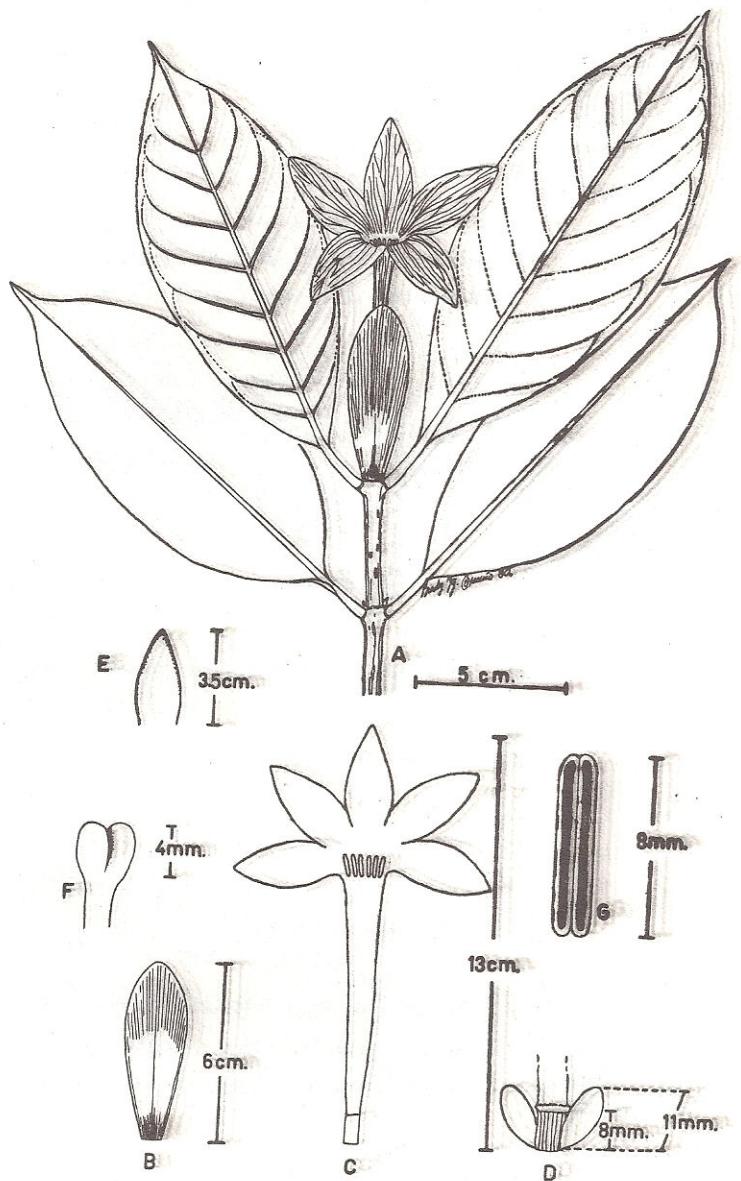


Figura -1-

FIGURE 2. *Palicourea huberi* Steyermark

A. Habit.

B. Bract.

C. Arrangement of bracts on a portion of the inflorescence, ventral view.

D. Same, dorsal view.

E. Stipular sheath with setaceous teeth and petiolar scar.

F. Corolla, interior view, before anthesis.

G. Apex of corolla lobe, ventral view.

H. Same, lateral view.

I. Stamen, ventral view.

J. Same, lateral view.

K. Gynoecium with longitudinal section through ovary, showing disk; calyx opened to show calyx tube and internal squamellae.

L. Style with stigmas.

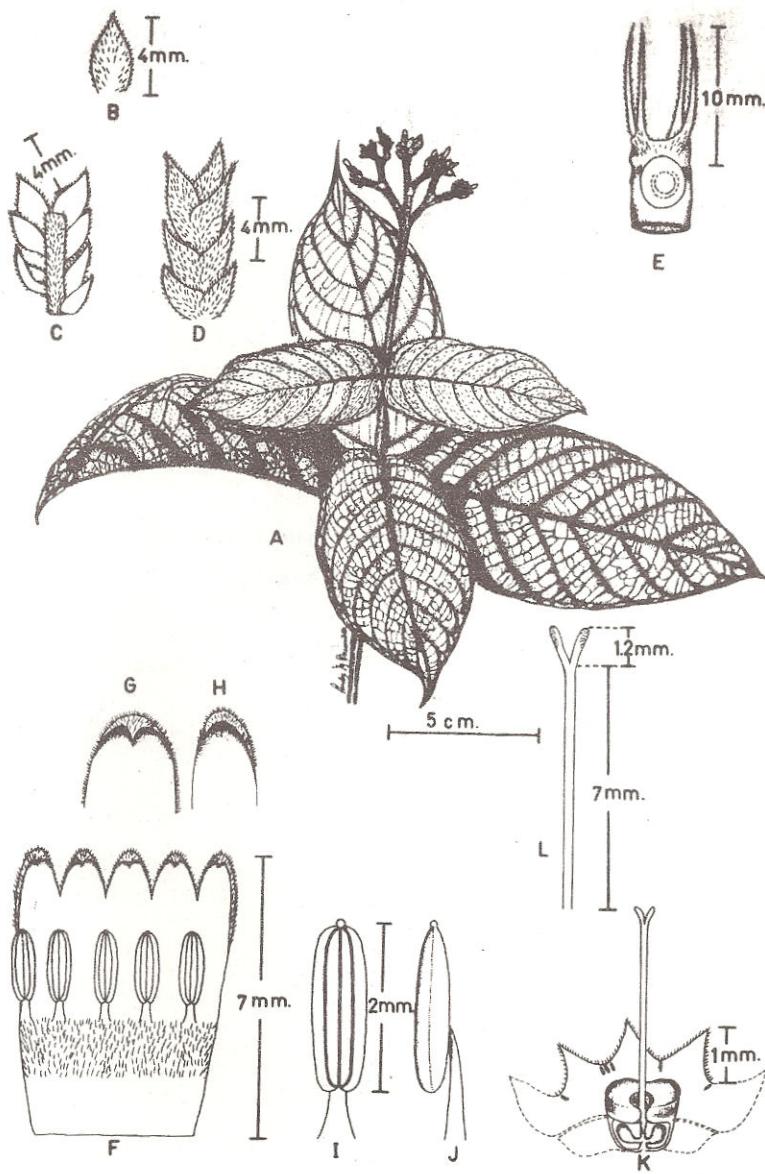


Figura. -2-

FIGURA 3. Rudgea ruiz-teranii Steyermark

A. Habit, X 1/2.

B. Corolla.

C. Corolla lobe, ventral view.

D. Same, lateral view.

E. Calyx and hypanthium with
subtending bract.

F. Stipular sheath with apical
setae.



A

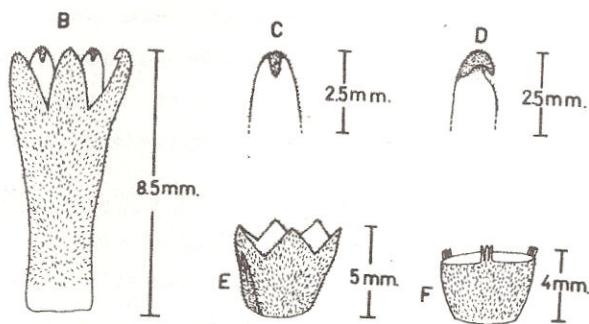


Figura -3-