



Hunt Institute for Botanical Documentation
5th Floor, Hunt Library
Carnegie Mellon University
4909 Frew Street
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

Usage guidelines

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

ASCLEPIADACEAE --- CONVULVACEAE

Asclepiadaceae
Convolvulaceae

Digitized by Hunt Institute for Botanical Documentation

Genera a ~~from~~ *Cynanchum* done to type
back

All done Feb. 1968

Let me see the illustrations.
They are all done.
Legend done!

ASCLEPIADACEAE. Milkweed Family

Reference: Robert E. Woodson, Jr., The North American Asclepiadaceae. I. Perspective of the genera, Ann. Mo. Bot. Gard. 28: 193-244. 1941.

Mostly perennial herbs, erect or scandent, ^{and twining} sometimes prostrate, frequently more or less woody, generally pubescent, sometimes glabrous; ^{the sap usually milky;} leaves commonly opposite, rarely verticillate; stipules none; inflorescence normally cymose, but the cymes usually umbelliform or racemiform, rarely 2-3 $\frac{1}{2}$ times branched, the inflorescences commonly axillary and pedunculate or sessile; flowers small or medium-sized, white, pink, green, or brown-purple, of very complicated structure, perfect, regular; calyx inferior, the tube very short or none, the 5 lobes imbricate or open in bud; corolla ^{SYM}gamopetalous, rotate to campanulate or urceolate, shallowly or deeply 5-lobate, the lobes ^{more commonly}valvate or contorted; a corona often or usually present, simple or of 5 or more scales or ^{lobes}lobes, adnate to the tube of the corolla or to the staminal column, ~~xxx~~ highly varied as to structure; stamens 5, inserted at or near the base of the corolla, the filaments flat, short, usually connate to form a tube, ~~united with~~ the stamens and stigma united to form ^{the} the gynoecium; anthers introrsely 2-celled, often produced at the base, the connective often produced at the apex into a membranous appendage; pollen collected in masses called pollinia, these usually solitary in each anther cell; corpuscles 5, small, usually colored, agglutinate between the anthers to the margin of the stigma disk, after dehiscence of the anthers extruding the pollinia; disk none; carpels of the ovary 2, distinct, superior, included in the stamen tube; styles 2, short, distinct to the stigma; stigma 1, peltately dilated and forming a usually pentagonal disk, flat at the apex or depressed, convex, umbonate, or rostrate; ovules numerous in each cell, pendulous, imbricate upon the placentae; fruit of 2 parallel or divaricate follicles, or the follicles by abortion only 1, ~~united~~ sessile, generally ovoid or lanceolate and ~~longitudinally~~ acuminate, smooth or muricate, sometimes longitudinally winged, ventrally dehiscent; seeds rather large, compressed and often marginate, the testa thick or membranaceous, narrowed at the apex and generally bearing a tuft of long soft white silk-like hairs; endosperm cartilaginous.

* somewhat similar to the column in Orchidaceae.

OK to
Type

thin; embryo large, the cotyledons flat, the radicle short, superior. ~~A~~⁷ group of wide distribution in most temperate and tropical regions of the earth. Authors have recognized as many as 250 genera, but if the family is aligned in accordance with the treatment used here, the number would be probably not more than a fifth as many. The Asclepiadaceae of North America are referred by Woodson to nine genera, about ~~a~~¹ third as many as have been recognized by most authors. All ~~of~~ these genera are represented in the following treatment.

The realignment of the genera by Woodson, while revolutionary, has done much to bring order out of the chaos previously prevailing so far as ~~the~~^{the} North American genera are concerned, and while to some it may appear too radical, it must be recognized that if deviations from it are made, a host of others must accompany them. The complexity of the flowers, or of the androecium, more varied and highly specialized probably than in any other group of plants, has offered unlimited possibilities ^{for} proposal of new genera, and if this is once begun, there are no limits to which ^{an} the enthusiastic ^{amateur} and youthful splitter ~~may~~^{may} extend his work. It must be confessed that this recent disposition of ~~genera~~^{genera} does not make it much easier to place a plant in its genus, but the Asclepiadaceae seldom offer vegetative characters that are useful for distinguishing the generic groups. The Central American plants of the family fall naturally into two groups, those with erect stems and those with twining ones. Unfortunately, because of flower structure, it is necessary in ⁵ ~~one~~ of the Guatemalan species to place two plants with erect stems in groups whose other representatives have scandent stems.

Plants of this family are of little economic importance. The silky fiber of the seeds looks much like silk, but it is brittle and ^{un} ~~not~~ suitable for textile purposes. ^{of Asclepias} During the present war this fiber has been gathered in large quantities in the United States for use in ~~stuff~~ padding jackets, to give them added warmth. In Central America the young and tender seed pods ^{some of} ~~of~~ the scandent Asclepiadaceae are ~~much~~ used as a vegetable, cooked in various ways or sometimes, it is said, eaten raw.

fl Pollinia pendulous, their faces uniformly flattened or rounded, uniformly fertile up
to the point of attachment of the translators. Plants erect or scandent.
Asclepiadeae.

☐ Plants erect or nearly so, herbaceous, never scandent.....²Asclepias.

Plants scandent, herbaceous or somewhat woody.

☐ Flowers very small, mostly 2-3 mm. long, rarely slightly larger; ~~flowers~~ umbellate
or racemose.....Cynanchum.

Flowers larger, usually much larger, 5 mm. long or more; umbellate.

3 Lobes of the corolla linear, 15-20 mm. long; leaves ovate-cordate...Oxypetalum.

Lobes of the corolla not linear or, if so, much less than 10 mm. long.

4 Corona of 5 subvesicular sacs attached separately to the ^Cbacks of the anthers;

6 plants glabrous; leaf blades rounded at the base.....Blepharodon.

4 Corona of 5 closed vesicles joined at their bases by a fleshy ring adnate to

the corolla throat; plants glabrous or usually pubescent; leaf blades acute
to cordate at the base.....Sarcostemma.

fl ☐ Pollinia horizontal or erect.

☐ Pollinia strictly erect, their faces uniformly rounded, uniformly fertile to the

3 point of attachment of the translators; inflorescences usually 2-3 times
branched. Plants scandent or in one species erect.Tylophoreae...Marsdenia.

☐ Pollinia usually horizontal or nearly ⁴so, occasionally ascending or descending, but

3 one or both faces more or less excavated, and with a sterile hyaline margin or
indentation near the point of attachment of the translators. Plants usually
scandent, erect in only one species...Gonolobeae.

☐ Corolla lobes conspicuously crisped; anthers very conspicuously hypertrophied and

4 vesicular throughout. Plants scandent.....Fischeria.

☐ Corolla lobes not crisped; anthers not conspicuously hypertrophied and vesicular.
Anthers relatively simple, not with dorsal appendages; plants scandent, except
for one species, this an erect herb.....Matelea.
Anthers with spreading, more or less laminate, fleshy, dorsal appendages;

plants scandent.....Gonolobus.

Page 1a to insert after the
generic description on page 1

The genus Asclepias with more than
100 species in temperate North America
and Mexico has relatively few species
in Central America. There are ten
species in ~~Guatemala~~ ^{Guatemala}, none of which is
endemic, and ~~all~~ ^{all} of them extending
southward from Mexico. No additional
species are known in Central America.

Only the ubiquitous and often weedy
A. curassavica ^{extends} as far south as Panama.

There is an additional ^{american} center of dispersal of Asclepias
in subtropical South America.

Then go back to page 1

Truss

(Reference: *Wats. & Woodson: North American Species of Asclepias, in Ann. Mo. Bot. Gard. 41: 1-211. 1957.*)
ASCLEPIAS L. Milkweed

Perennial herbs, usually erect, glabrous or pubescent, sometimes tomentose; leaves opposite or verticillate; flowers variously colored, usually white or purplish, sometimes bright red or orange, small or medium-sized, umbellate, the umbels usually many-flowered, terminal or in the upper leaf axils; calyx 5-parted, 5-10-glandular within at the base, the lobes usually acute; corolla rotate or finally reflexed, deeply 5-lobate, the lobes usually valvate, not barbate within; scales of the corona 5, affixed to the stamen tube, erect, concave-cucullate, ligulate within; stamens affixed to the base of the corolla, the filaments connate into a tube; anthers tipped with an inflexed membrane; pollinia solitary in each cell, oblong, pendulous from the apex of the cell; stigma flat at the apex, ~~5~~ pentagonal or obtusely 5-lobate; follicles usually thick, acuminate, smooth or rarely spinose-tuberculate; seeds comose.

Probably all the Central American species are included in this list, but one other may occur in southern Central America.

Leaves sessile or essentially so, often cordate or subcordate at the base.

☐ Leaves linear; usually not more than 3 mm. wide; stems and lower surface of the

3 leaves more or less tomentose..... A. rosea. ✓

☐ Leaves much broader than linear, mostly 2 cm. wide or usually wider; plants not at all tomentose.

☐ Stems and leaves hirsute or villous..... CONTRAYERBA. A. setosa.

Stems and leaves glabrous or the stems sometimes pubescent at the apex... A. glaucescens. ✓

Reya put page 1a here

3. Column ~~sessile~~ or gynostemium
sessile or nearly so, ~~the~~ horns poorly
developed A. elata

3. Column or gynostemium stipitate
(sometimes subsessile), the horns well
developed and exerted A. glaucescens

fl. Leaves usually conspicuously petiolate, the blades obtuse to attenuate at the base.

□ Leaves linear or nearly so, less than 1 cm. wide; flowers white and pale green
or greenish white..... A. ~~sublinearis~~ Woodsoniana.

Leaves lanceolate or broader, usually much more than 1 cm. wide, if narrow the
flowers scarlet and yellow.

Digitized by ^{me} Hun Institute for Botanical Documentation

□ Scales of the corona ^{more} than twice as long as the stamens.

3 Scales of the corona 6-7 mm. long; leaves usually obtuse, rough-villosulous
on the upper surface..... OENOTHERIOIDES.
A. longicornis

3 Scales of the corona about 9 mm. long; leaves acuminate, glabrous on the upper
surface..... A. auriculata.

□ Scales of the corona not or scarcely exceeding the stamens.

3 Follicles glabrous.

Corolla bright red; hoods of corona yellow or orange;
leaves not prominently bicolored on the surfaces A. ~~auriculata~~ curassavica

Corolla dull rose; hoods ^{of corona} white to
rose-colored; leaves obviously lighter
in color below than above A. ~~auriculata~~ pellucida.

3 Follicles pubescent; hoods of the corona
white or greenish white; corolla greenish-
white or purple A. similis

Asclepias auriculata HBK. Nov. Gen. & Sp. ^{pl.} 3: 22/191, pl. 228. 1819. Otaria
fragrans Benth. Pl. Hartweg. 89. 1841 (type from Guatemala, Hartweg, without number,
the locality not indicated). A. fragrans DCne. in DC. Prodr. 8: 571. 1844. A. Pur-
pusii Brandegee^{ex}, Zoe 5: 251. 1908. Hierba de cantil, Viborana blanca (fide Aguilar).

Retyped

Usually in open pine-oak forest, 1,200-1,900 meters;
Zacapa; Santa Rosa; Guatemala; Chimaltenango; Huehuetenango. Southern Mexico.

A stout erect herb, sometimes a meter high, usually simple, the stems terete, more or
less pubescent or glabrate; leaves opposite, on short stout petioles, lance-oblong
or lanceolate, mostly 9-12 cm. long and 2.5-3.5 cm. wide, acuminate, acute at the
base or rarely obtuse, green above, pale beneath, glabrous or nearly so; umbels
few, terminal and in the upper leaf axils, long-pedunculate, lax, many-flowered,
the slender pedicels about 2.5 cm. long, pubescent; calyx lobes puberulent, narrowly
lanceolate, short; corolla pale green or whitish, glabrous, the lobes oblong-ovate,
subacute, reflexed; corolla white, ~~about~~ the lobes about 9 mm. long, about twice as
long as the stamens, white, ovate-oblong, broadest at the base.

It is ^{possible} that Asclepias plumerifolia
Ramirez-Joyena, Fl. Nic. 2: 658. 1944, from Nicaragua
belongs here as a synonym.

Asclepias contrayerba Sessé & Mocino, Fl. Mex.
ed. 1, 2: 79. 1887. Sicaquina; jicaca.

A. setosa Benth. Pl. Hartw. 24. 1839, non Forsk.

Asclepias setosa Benth. Pl. Partweg. 34. 1839. Sicaquina (Guatemala); Jicaca.

Moist or rather dry, open fields, or most often in grassy pine-oak forest, 1,950 meters or lower; ~~reported from~~ Petén; Jalapa; Guatemala; Sololá; Huehuetenango. = Croton rangelii Benth.
Mexico; ^{El} Salvador. ⁴⁰ Plants herbaceous, erect, ~~45~~ cm. high or less, the stems stout, simple or branched, villous-hispid, usually bearing numerous leaves; leaves opposite, sessile or nearly so, thick, ^{oblong-lanceolate} ~~lanceoblong~~ or narrowly oblong, mostly 4-6 cm. long, ^{acute or} ~~rounded or very~~ obtuse at the apex, rounded or subcordate at the base, rather densely villous on both surfaces with several-celled pale hairs; ~~hairs to the touch~~; umbels usually 1-2 at the apex of the stem, or rather short, slender peduncles, the slender pedicels mostly 1.5-2 cm. long, short-villous; calyx lobes lanceolate, short, short-villous; ^{5-6 mm. long} corolla pale green, glabrous, 5¹⁰ mm. long, the lobes reflexed; gynostegium borne on a distinct thick column, the corona hoods whitish, 4 mm. long, broad, cucullate, the horns short-exserted; pedicels reflexed in fruit; follicles ⁶⁻¹¹ ~~about 7~~ cm. long and ^{12-25 cm. broad,} ~~25~~ mm. thick, densely hispid. ⁴ Called 'ishcaco' in Salvador.

Viborrana;

Asclepias curassavica L. Sp. Pl. 215. 1753. Viborrana, (sometimes corrupted to Vibarona); Mariguana amarilla, (Chimaltenango); Hierba de leche; Olh'én (Cobán, Queziché); Seda (Cobán); Hierba de cantil, Hierba de culebra (fide Tejada); Cantil. ⁴ Moist or wet thickets or fields, often along roadsides or in waste ground about dwellings, 1,900 meters or lower; Petén; Alta Verapaz; El Progreso; Izabal; Chiquimula; Jalapa; Santa Rosa; Escuintla; Guatemala; Sacatepéquez; Chimaltenango; Suchitepéquez; Retalhuleu; Quezaltenango; San Marcos; Huehuetenango; doubtless in ^{most} ~~several~~ other departments. ⁴ Florida; Mexico; British Honduras to ⁴ Salvador and Panama; West Indies; South America. ⁴ An erect herb, usually 60-75 cm. high, the stems often several,

mostly simple, green, glabrous or somewhat pubescent above; leaves opposite or sometimes partly ternate, lanceolate or linear-lanceolate, 5-16 cm. long, attenuate-acuminate, acute or attenuate at the base, short-petiolate, glabrous or sparsely and inconspicuously pubescent, slightly paler beneath; umbels usually several, rather few-flowered, the pedicels 1-2 cm. long, pubescent; corolla bright red or orange-red, 6-8 mm. long, the lobes ovate to oblong; hoods of the corona erect, broadly ovate, 4-5 mm. long, rounded or very obtuse at the apex, bright yellow, shorter than the conspicuous horns of the corona; fruiting pedicels erect; follicles narrowly fusiform, 4-10 cm. long, glabrous; seeds about 6 mm. long. Called Polly Redhes in British Honduras; "Señorita", "Flor de agua" (Salvador); "Flor de culebra" (Veracruz); variously known in Yucatan as "Chaonich", "Chilillo-xiu", "Analcac", "Chontalpa", "Cabal-cumche", "Cochinita" (Tabasco); "Quema-casas" (seeds; Tabasco). About Cobán the milk of the stems is collected on cotton and when dry is placed in the nostrils. It produces sneezing, and is believed to have a beneficial effect on head colds. The latex often is placed in cavities in the teeth to relieve toothache, and sometimes it is used internally as an emetic and purgative. In Guatemala it is popularly believed to be useful in treating bites of poisonous animals. The plant is one of the most common weeds of the lowlands of Central America, rather showy because of its bright red and yellow flowers. There is sometimes found in Central America (we have not observed it in Guatemala) a form in which the flowers are bright yellow throughout, without any red coloring, A. curassavica var. flava Kuntze.

Asclepias glaucescens HBK. Nov. Gen. & Sp. 3: 190. pl. 227. 1819. A. elata Benth. Pl. Hartweg. 290. 1844. Polín (Huehuetenango); Curario (Huehuetenango).

Open or brushy fields and hillsides, often in pine-oak forest, 500-2,000 meters; reported from Petén, Alta Verapaz; Chiquimula; Jalapa; Guatemala; Chimaltenango; Sololá; Huehuetenango. Southwestern United States; Mexico; Salvador; Costa Rica. Plants stout, erect, sometimes a meter high but usually much lower, the stems simple or sparsely branched, glaucescent, glabrous; leaves opposite, very thick, sessile or practically so, narrowly to broadly oblong or lance-oblong, mostly 5-13

Open slopes in oak or pine woods, spreading to cultivated ground. Huchuetanang; ^{Chimantán} Southwestern U.S.; Mexico.

Asclepias elata Benth. Fl. Hartw. 290. 1848;
Woodson, Ann. Mo. Bot. Gard. 41: 186, fig. 1954.

A. glaucescens var. elata Fourn. Ann. Sci. Nat.
Bot. ser. VI, 14: 382. 1882.

Perennial herbs ^{with} ~~from~~ a stout simple stem up to 70 cm. tall. Leaves sessile, broadly oval to oblong, obtuse or rounded, the base subcordate and the lobes often clasping the stem, 7-14 cm. long and 2.5-7 cm. broad, glabrous and glaucous; inflorescence usually ~~axillary~~ ^{terminal} from upper leaves or terminal, exceeding the leaves, subumbellate, the pedicels 1.5-3 cm. long, tomentulose; calyx lobes ovate, 3-4 mm. long; corolla pale green, the lobes 8-12 mm. long; ~~gyno~~ gynostemium sessile, the hood saccate at the base, $\neq$ truncate, 4-6 mm. long, the crest adnate and $\neq$ about as long as the hood; follicles fusiform, 8-12 cm. long, pilosulose to glabrous; seeds ~~about~~ oval, about 7 mm. long, the coma 2.5-4.5 cm. long.

As. elata page 2.

The species is known from a single collection in Guatemala. The species has been confused with A. glaucescens from which it may be ~~so~~ distinguished easily by ^{its} ~~the~~ sessile gynostemium.

Det. J. P. S.

Asclepias glaucescens HBK. Nov. Gen. 4
Woodson, ann. no. Bot. Gard. 41: 97, 1954.
Sp. Pl. 3: 190, t. 227. 1819; Polin (Tehuacanango).
Petén;

Native in open pine or oak woods but found
in disturbed ground and old fields. Solola Alta Verapaz;
Guatemala; Jalapa; Chimaltenango; Tehuacanango;
Chiquimula, perhaps to be found in most departments.
Mexico; El Salvador; Costa Rica.

Digitized by Hunt Institute for Botanical Documentation
Herbaceous perennials, ~~stout~~ and erect
to 1 m. tall but usually less, glabrous and glaucous.
Leaves sessile or nearly so, ovate to oval or oblong,
often narrowly so, obtuse or broadly acute, the base
cordate or amplexicaul 5-18 cm. long and 2-7 cm.
broad; inflorescences one or few from axils of upper
leaves or occasionally terminal; flowers borne in
often long pedunculate subumbellate heads, the
pedicels about 1 cm. long, glabrous; calyx lobes
ovate-lanceolate, 4-5 mm. long; corolla lobes reflexed
about 9 mm. long; gynostemium short stipitate to
subsessile, the column about 1 mm. long, hood
obovate, conduplicate, rounded and frequently

As. glaucescens 2

emarginate, 5-7 mm. long; foliicles narrowly fusiform, erect, 8-10 cm. long and 1 cm in diameter, smooth and glabrous; seeds oval, 6-8 mm. long, the coma 2.5-3.5 cm. long.

Asclepias glaucescens and A. data are difficult to separate. and ~~may in fact be the same species~~, Woodson gives characters for their separation and placed them in different subgenera but was dubious as to the systematic value of these subgenera.

The species is known in El Salvador by the expressive names "Metacoyte", "jicaca" and "oreja de burro".

2 types
1967

Asclepias oenotherioides Cham. & Schlecht.

~~to~~ Linnaea 5: 123. 1830.

A. longicornu Benth. Fl. Hartw. 24. 1839.

Moist or dry open fields or hillside, sometimes
on disturbed soils, at 1400 m. or less. Petén;
Guatemala; ^{Zacapa} Izabal; ^{Jutiapa} Progreso; Retalhuleu; San
Marcos, and probably in other departments.
Mexico, El Salvador, Honduras; Nicaragua and
Costa Rica.

Retyped
1967

as. *Oenothera* cont.

as
Type

Retyped

Plants herbaceous, erect, stout, mostly 50 cm. high or less, the stems mostly simple, often densely leafy, rough-villosulous; leaves short-petiolate, lance-oblong or ovate-oblong, 5-12 cm. long, rather thick, narrowed to an obtuse or rounded apex, sometimes subacute, acute or cuneate at the base, sparsely short-villosulous with harsh hairs and somewhat rough to the touch, the margins ^{generally} usually undulate; umbels usually several, in the upper leaf axils, short-pedunculate or almost sessile, the flowers pale green, few or numerous, on long slender pedicels; corolla pale green, hispidulous outside, the lobes lanceolate, reflexed, 9 mm. long; hoods of the corona very narrow below, dilated above, 7 mm. long, fully twice as long as the gynostegium, the horns short-exserted; corona sessile or nearly so; pedicels reflexed in fruit; follicles thick, 8 cm. long, tomentose or glabrate. ~~4~~

Known in Salvador by the names "Matacoyote", "Angelito", and "Cuchemper" (the zoque); "Cabalcunché" (Yucatan, Maya). The latex of this and probably all the other species is used commonly for allieving toothache, and it often is employed in Central America for removing warts, a use made of milkweed sap in many parts of the United States.

Asclepias pellucida Fourn. Ann. Sci. Nat. ser. VI,

14: 381. 1882.

Known from a single collection in Guatemala, Santa Eulalia, Huehuetenango.

Simple, erect perennial herbs, glabrous or somewhat pilose at the nodes, to m. tall but usually much less.

Leaves ovate to oblong-elliptic, acuminate, the base rounded or obtuse, glabrous or pilose on the mid-vein below, 7-30 ~~cm.~~ cm. long and 2.5-9 cm. broad, petioles 2-3 cm. long; inflorescences

one-flw ~~in~~ at the upper internodes, the flowers few to many disposed in ~~few~~ many a subumbell with pedicels 2-4 cm.

long; calyx lobes ~~long~~ lanceolate, 3-4 mm. long;

corolla lobes elliptic-ovate, 6-8 mm. long;

gynostemium short ~~pedicel~~ stipitate, column

obconic, the hood cucullate, ovate 2.5-3.5 mm.

long, with a short falciforme horn; follicles glabrous broadly ovoid, 7-8 cm. long; seeds oval, naked, about 1.5 cm. long.

This and ~~the next species~~, *A. similis* are separated easily in the key which we present but it may be difficult to separate the species if specimens are not good nor complete.

Retyped

Asclepias rosea HBK. Nov. Gen. & Sp. ^{Pl.} 3: 189. 1819. Viborana, Platail, Cicuta
(fide Aguilar).

Open slopes or grassy fields, 800-2,000 meters; Santa Rosa; Guatemala; Chimal-
tenango; Sololá; Quiché; Huehuetenango(?). Central and southern Mexico; Honduras;
El Salvador; Honduras; Nicaragua

~~Mexico; Honduras; Salvador.~~ Plants low, mostly 50 cm. high or less, the roots often
greatly tuberous-thickened or hard and woody, the stems usually several, erect or as-
cending, sometimes sparsely branched, glabrous or when young somewhat whitish-tomen-
tose; leaves opposite, rather thick, linear, 2-¹⁸ cm. long, ascending, 2-⁶ mm. ^{broad,}
often with revolute margins, narrowed at each end, glabrous above or nearly so,
whitish-tomentose beneath when young; ^{in flower} ~~flowers~~ few, on long slender ^{terminal or lateral} peduncles, these
usually longer than the leaves, few-flowered or many-flowered, the pedicels pubescent
or tomentose, mostly 7-²⁰ mm. long; corolla greenish white or tinged with pink,
glabrous, ^{4-7 mm. long} ~~about 4 mm. long~~, the lobes ^{4-7 mm. long} ~~about 4 mm. long~~; gynostegium borne on a very short
column; hoods of the corona white, scarcely more than 3 mm. long, little exceeding
the anthers, the horns not or scarcely exerted; fruiting pedicels reflexed; folli-
cles slender, 6-¹⁵ cm. long, about 7 mm. broad, tomentulose. This is doubtless the species
reported by Loesener from Huehuetenango as A. Michauxii Dcne.

Asclepias similis Hemsl. Biol. Centr. Amer. Bot. 2: 326. 1881. A. guatemalensis Donn.-Smith, Bot. Gaz. 18: 207. 1893 (type from Santiago, Guatemala, Rosalfo Gómez 809). Mishito (Chimaltenango); Chumimi (Huehuetenango). Moist thickets or open forest, most often in pine-oak forest, 1,400-2,600 meters; Alta Verapaz; Zacapa; Jalapa; Guatemala; Sacatepéquez; Chimaltenango; Sololá; Huehuetenango; Mexico; Honduras. An erect, rather stout herb a meter high or less, the stems usually simple, pubescent at first, glabrate in age; leaves opposite, short-petiolate, oblong-ovate to oblong-lanceolate, mostly 7-13 cm. long, acute or acuminate, rounded to acute at the base, green above, ^{to} sparsely pubescent or glabrate, pale beneath, puberulent beneath on the veins, or sometimes more densely pubescent or glabrate; umbels few at the ends of the stems and in the uppermost leaf axils, long-pedunculate, many-flowered, the slender pedicels 12-25 mm. long, puberulent; calyx lobes oblong-lanceolate, subacute, glabrous; corolla purplish or usually greenish white or pale green, 7-8 mm. long; ^{to} gynostegium borne on a distinct thick column; hoods of the corona white, sessile, about 4 mm. long, the horns usually exserted and conspicuous; pedicels reflexed in fruit; follicles about 13 cm. long and 1.5 cm. thick, variously pubescent or in age glabrate. ^{to} It is presumably this species that was reported from Huehuetenango by ^{to} Loesener as A. ovata Mart. & Gal. ~~although it would not be surprising to find that species growing in some part of Guatemala.~~

Asclepias Woodsoniana Standl. & Steyerl. Bot. Soc. Field Mus. Bot. 23: 224. 1947; ^{Bot.} Dugand, Cactacea 9, No. 45: 403. 1966. ^{fields} Known only from the type, Jutiapa, salt flats, ^{fields} between Trapiche Vargas and Asunción Mita, 500 meters, Steyermark, 31781. ^{Mexico, El Salvador, Nicaragua, Colombia} An erect perennial herb, 40 cm. high or ^{possibly} taller, the stems slender, rather sparsely leafy, whitish-pubescent in 2 lines; leaves rather thick, on a stout petiole 3-5 mm. long, almost linear, gradually long-attenuate from a ^{or} truncate or subhastate base 4-¹² mm. wide, ^{broad, 2-5-17} 5-17 cm. long, glabrous or very sparsely puberulent, 1-nerved, glaucescent; ^{in flower} umbels 2-4 at the apex of the stem ^{or} and from the uppermost leaf axils, on slender peduncles 1.5-3.5 cm. long, about 12-flowered, the pedicels slender, 10-14 mm. long, ^{to} grayish-puberulent; calyx

lobes oblong, acute, 2 mm. long or shorter; puberulent; corolla apparently pale green or whitish, 4.5 mm. long, glabrous, the lobes broad, obtuse, reflexed; stamen column thick, 1 mm. high; hoods of the corona ovate, obtuse, contracted and short-unguiculate at the base, the horns exserted; anthers 2.3 mm. long, the apex white and scarious.

The species is apparently not ^{an} uncommon one, usually in savannas, from Mexico to Honduras but is often difficult to find.

Re typed
1967

Illus. simon

Elephantopus Decaisne
Detyped 1967

Scandent perennial plants, ~~usually~~ herbaceous or suffrutescent; leaves opposite, often subcoriaceous; inflorescence cymose or subumbellate, few-many-flowered, borne on a peduncle from the axils of leaves; flowers medium-sized to small; calyx 5-lobed and with 5 glands within at the base; corolla valvate, 5-lobate nearly to the base, the lobes ciliate; corona with 5 scales affixed to the stamens tube, free at the apex, erect, concave, cymbiform or cucullate; stamens affixed to the base of the corolla, the filaments connate into a short tube; anthers terminated by an inflexed membrane, the basal auricles elongated; pistillia solitary in each cell, ovoid, pendulous; stigma depressed or umbonate at the apex; follicles smooth.

apparently a single species in North America which may be considered typical of the genus, there are some twenty more described from South America. Decaisne's generic description is ~~as~~ seems to be based on ~~two~~ ^{a mixture of two genera} ~~multiple concepts~~. We accept the name based upon B. mucronatum.

This similar

BLEPHARODON Decaisne

Plants usually scandent, herbaceous or suffrutescent, most often glabrous; leaves opposite, not cordate, often subcoriaceous; flowers small or medium-sized, the cymes umbelliform or short-racemose, pedunculate in the leaf axils; calyx 5-parted, 5-glandular within at the base, the segments ovate or oblong, membranaceous; corolla rotate, 5-lobate, the lobes generally broad, valvate, usually ciliate; scales of the corona 5, affixed to the stamen tube, free at the apex, erect, concave, cymbiform, or cucullate; stamens affixed to the base of the corolla, the filaments connate into a short tube; anthers terminated by an inflexed membranæ, the basal auricles elongate; pollinia solitary in each cell, ovoid, attached by short caudicles below the apex, pendulous; stigma depressed or unbonate at the apex; follicles smooth, rather short and thick. ~~About 20 species, in tropical and subtropical America. Only one is found in Central America.~~

25

Blepharodon mucronatus (Schlecht.) Don. in DC. Prodr. 8: 603. 1844. Astephanus mucronatus Schlecht. Linnaea 8: 518. 1833. Bejuco de pescado. Moist to wet or dry thickets, or in mixed or pine-oak forest, often in second growth, 1,450 meters or lower; Alta Verapaz; Izabal; Chiquimula; Santa Rosa; Guatemala; Suchitepéquez; Quezaltenango; Huehuetenango; ^{Probably to be expected in this department.} Mexico; British Honduras to ^{El} Salvador and Panama; South America. A large or small, slender, branched vine, glabrous throughout; leaves subcoriaceous, on short or rather long, slender petioles, lance-oblong to elliptic, 3-7 cm. long, cuspidate-acuminate, rounded or obtuse at the base, pale beneath and with rather conspicuous but very slender nerves; umbels axillary, on long slender peduncles, shorter than the leaves, few-flowered, the pedicels filiform, 1-2.5 cm. long; calyx lobes oblong-ovate, obtuse, about 1.5 mm. long, pale-marginate; corolla greenish white, ~~about~~ 1 cm. broad, the lobes lance-oblong, obtuse, densely short-villous within along and on the margins; lobes of the corona oval, obtuse, shorter than the gynostegium; follicles glabrous, about 9 cm. long and 2 cm. broad, smooth. Sometimes called "Tistie" in British Honduras; "Cancelxiu", "Hulkin-xiu" (Yucatan, Maya). The flowers have an odor suggestive of lemon.

Cryptostegia grandiflora (Roxb.) R. Br., ~~the Xing-gang-xxxxxx~~ a rubber vine,

native of India, is planted rarely in Guatemalan for ornament. It is a large woody vine, glabrous or nearly so, with petiolate, oval to elliptic-ovate, somewhat coriaceous leaves 5-10 cm. long, and cymose, pink or purplish flowers 5-7 cm. long. The latex yields a considerable amount of rubber, and the vine has been exploited in the past for this product. ~~It has been planted rather extensively during the present war in various regions of North America and the West Indies.~~

The plant is at home in the ^{wet-dry} ~~dry~~ regions of Central America and produces follicles and viable seeds in abundance. It should perhaps not be used as an ornamental, or otherwise, because of its potential as a weed, although we have not yet seen it naturalized in Central America. I. M. Johnston reports his collection 3838. Drouet and Richards, in 1939, report Their number 3838 as being established on lower slopes of mountains just east of Guaymas, Sonora, Mexico. L. H. MacDaniels ~~to~~ number 8 from Mazatlán, Sinaloa was taken by the collector as a native plant.

The plant is reported poisonous to live stock.

varios ejemplares subpotipicos y uno topotipico de *C. racemosum* Jacq. y el Tipo de *Rouliniella columbiana* Vail. Además, los sépalos en la planta guatemalteca son muy cortos, pues no alcanzan en longitud a la mitad del botón floral, mientras que los de *C. racemosum* exceden notablemente la mitad del botón o son tan largos como éste, y casi tanto como los pétalos cuando éstos hallanse bien abiertos en la antesis.

Según he podido observar (no sólo en el herbario sino en plantas vivas) el tamaño de las puntas, dientes o lacinias subuladas que adornan los segmentos corales en *C. racemosum* pueden variar en una misma planta. A veces exceden apenas el estigma, y otras veces lo sobrepasan notablemente, incurvándose sobre él. Por lo tanto no dudo que la *Rouliniella columbiana* de Vail sea tan sólo una variante, muy ligera por cierto, de la especie de Cartagena.

Pittier (en Contr. U.S. Nat. Herb. 13: 111, 1910) había señalado ya la posibilidad de que ambos conceptos fueran idénticos, y conjeturó además que la planta de Guatemala, llamada *Rouliniella racemosa* por Vail, no era igual a la de Colombia. Mi examen corroboró esta suposición por lo tanto aquella puede llamarse:

Cynanchum guatemalense Dugand, sp. nov.

Rouliniella racemosa Vail in Bull. Torrey Bot. Club 29: 665, 1902 non *C. racemosum* Jacq. 1763!

Planta volubilis ramosissima. Caules angulosi, graciles, angusta linea pubescenti excepta glabri. Folia petiolo 2-4 cm. longo; lamina ovato-cordata 6-9 cm. longa, longe acuminata, basi sinu aperto lobis lateralibus rotundatis. Inflorescentiae racemosa; foliis breviores; pedunculo 4-7 cm. longo, 10-20-floro. Flores 5 mm. diam. in alabastra subglobosi; calycis segmenta lanceolata acuminata sinu glandulosa; corolla viridi-alba, loborum marginibus crispatis; corona segmenta ad basin coalita apice obtuse trilobata, lobo centrali ligulato quam lateralibus involutis duplo longiore. Stigma rotundatum vix conoideum. Pollinia oblonga, caudicula lata brevique macula saturate aurantiaca vel crocea secus marginem superiorem notata; corpusculo majusculo vivide rubro. Fructus ignotus.

GUATEMALA, Patulul, Depart. Solola, alt. 3000 ped., Jan. 1894. Heyde & Lux 6349 (TYPUS in NY!).

Vail cita además un ejemplar de Venezuela (cerca de Tovar, Fendler 1055, herb. Gray) pero sin examinarlo considero prudente excluirlo, al menos provisionalmente.

Calceola

9, no 45: 412, 1966

= *C. rensonii*

Atendiendo al Art. 36 del Código Internacional de Nomenclatura Botánica doy arriba la descripción latina de *Cynanchum guatemalense*, pues la sola referencia a la *Roulinella racemosa* Vail (non Jacq.) no validaría el nombre de este nuevo taxon por cuanto la descripción de Vail está en inglés. La mía es transcripción casi literal de la de Vail, con las modificaciones necesarias a la versión latina.

Cynanchum racemosum Jacq. antecede por más de un siglo y medio al homónimo inadvertidamente establecido por Brandegee en 1920 para una planta de Vera Cruz, México; la cual por lo tanto puede llamarse como sigue:

Cynanchum veracruzianum Dagand, nom. nov.

Cynanchum racemosum Brandegee, Univ. Calif. Publ. Bot. 7: 331, 1920, non Jacq. 1763.

MÉXICO. Llanuras racosas cerca de Acasónica, Vera Cruz, Purpus 8378 (Herb. Univ. Calif. N° 200783 Typus).

Fischeria blepharopetala Blake, Contr. U.S. Nat. Herb. 20, pt. 7: 244, 1919.

COLOMBIA. Bolívar: San Martín de Loba and vicinity, Lands of Loba, April-May 1916, Carrón 206 (Tipo en US), Magdalena: Santa Marta region, H. H. Smith 990 (US); Edge of forest 10 km. south of Codazzi, 100 m., May 1914, Wright 1175 (US).

Se distingue esta especie de la siguiente (*F. calycina* Decne.) por tener los pétalos (lóbulo) ovados y obtusos, y en general más ciliados en la margen; aunque este último carácter parece ser variable.

Fischeria calycina Decne. in DC. Prodr. 8: 600, 1844 (in America aequinoxiali, Poeppig 2598, Perú).

COLOMBIA. Meta: Villavieja, Jan. 1899, Sprague 99 (US ex Kew); misma localidad, 500 m., March 1909, Killip 34358 (US), Norte de Santander: región del Sarare, hoya del río Margua, Junin, 920 m., Nov. 1951, Cuatrecasas 13363 (US), Putumayo: vicinity of Puerto Asis, 5 km. above the town, Jan. 1945, Ecuán 16756 (US).

J. L. Simon

CYNANCHUM L.

Plants slender, usually scandent and herbaceous, sometimes suffrutescent, glabrous or pubescent; leaves opposite, coriaceous to membranaceous, often very small and narrow, acute to cordate at the base; flowers whitish or yellowish, usually very small, the inflorescences umbelliform or racemiform, sessile or pedunculate; calyx small, deeply 5-lobate, 5-glandular within at the base or eglandular, the lobes most often obtuse; corolla campanulate to urceolate or subrotate, 5-lobate, the lobes valvate, often villous within; corona of 5 scales, these distinct or connate, laminate to filiform, sometimes variously compound or with internal processes, rarely wholly lacking; stamens inserted near the base or middle of the corolla tube, the filaments connate into a short or elongate tube; anthers terminated by an inflexed membrane; pollinia solitary in each cell, ovoid or oblong, often compressed, pendulous; stigma flat at the apex or apiculate; follicles terete, acuminate, usually slender, smooth; seeds bearing a coma of silky white hairs. A very large genus, with perhaps 200 species, widely distributed in both hemispheres, chiefly in tropical or warm regions. ~~They are most numerous in America.~~ ^{there are four or five} One or two species besides those listed here ^{that} may occur in southern Central America. As here treated, the group includes plants that have been treated previously under the names Metastelma, roulinia, Rouliniella, Ensenia, Vincetoxicum, Ditassa, and various others. ~~The following account of the local species is not altogether satisfactory, although it probably~~

The species referred ^{here} to the genus Cynanchum ~~here~~ certainly are all closely related, with the exception of C. rensonii. The flowers are small and quite as complex as those of the larger flowered Asclepiads. To this is due the confusion which has existed in the genus. The genus, however, is not impossible as Woodson once hinted that it might be for there are good characters that may be seen with a microscope. ~~xxxx~~ The genus in North America offers a very nice problem for a ~~master's~~ doctorate / ^{problem}. ~~those of such genera as Conoclobus and Asclepias.~~

Key to *Cynanchum*

Inflorescences subracemose, with evidently elongated nodes;
leaves broadly ovate, cordate at the base, mostly 2-5 cm.
broad (*Cynanchum* sug. *Mellichampia*) *C. rensonii*.

Inflorescence subumbellate, the internodes suppressed or
very short; leaves linear to oval, acute to rounded to
the base, usually less than 2 cm. broad (*Cynanchum*
subg. *Metastelma*).

Lowest veins of the leaves subparallel to the margin
of the leaves. *C. sepium*.

Lowest veins of the leaves not parallel to the
margins or the veins obsolete. *C. chiapense*,
and *C. collinum*.

Lateral veins of the leaves obsolete; leaves mostly
linear. *C. chiapense*,
and *C. collinum*.

Lateral veins of the leaves evident; leaves mostly
broader than linear.

Inner surface of the corolla lobes nearly glabrous, or obscurely puberulent;
peduncles of inflorescences 1.5-2 cm. long;
inflorescence few-flowered *C. pedunculare*.

Inner surface of the corolla lobes densely and
obviously pubescent.

Lobes of the corona as long as the corolla or
nearly so; inner face of corolla evenly pubescent;
leaf blades usually sharply reflexed ~~xxxxxx~~
from apex of petiole; British Honduras endemic... *C. stenomeres*.

Lobes of the corona much shorter than the corolla;
inner face of the corolla lobes densely and often
retroscissile white barbellate; ~~xxxxxx~~ leaf blades
usually not sharply deflexed from apex of petiole;
common species in Mexico, Guatemala and British Honduras
..... *C. schlechtendalii*.

Leaves densely pubescent on both surfaces..... *C. trichophyllum*.
Leaves glabrous on both surfaces.

fl Inflorescences subracemose, with evidently elongate nodes; leaves broadly ovate,
[] cordate at the base, mostly 2-5 cm. wide or larger, ^{(Subgenus MELLICHAMPIA).}.....C. Rensoni.

fl Inflorescences subumbellate, the internodes suppressed or obscure and very short;
[] leaves linear to oval, acute to rounded at the base, usually much less than
2 cm. wide, (Subgenus METASTELMA).

[] Corolla in bud globose or ovoid-oblong, ~~much longer than broad, the lobes~~ little
3 longer than broad, the lobes usually ovate or lance-ovate; leaves often linear
or linear-lanceolate.

[] Corolla lobes densely white-pilous within. Leaves linear.....C. collinum.
Corolla lobes glabrous within or obscurely puberulent.

3 Leaves linear or nearly so, usually 2.5 mm. wide or narrower.....C. chiapense.
Leaves lanceolate or oblong-lanceolate, mostly 5-15 mm. wide...C. sepium.

[] Corolla in bud oblong or oblong-ovate, much longer than broad, sometimes twice as
3 long; leaves never linear, lanceolate to oblong or elliptic-oblong.

[] Leaves oblong, oblong-ovate, or elliptic-oblong, rounded to acute and mucronate at
the apex.....C. Schlechtendalii.

Leaves lanceolate or linear-lanceolate, long-attenuate.....C. stenomeris.

Do not type

Cynanchium chiapensis (Gray) Standl. & Steyerl. Field Mus. Bot.

23: 226. 1947. Metastelma chiapensis A. Gray, Proc. Am. Acad. 21:

397. 1886.

Twinning on shrubs or grasses or rocky and brushy hillsides,
600-1,400 meters or higher; ^{Paten;} Alta Verapaz; Quezaltenango; Huehuetenango; ^{Jutiapa;}
the type from Chiapas
Chiquimula; Jalapa. Mexico; Honduras.

Plants slender, often forming dense ^{or} tagles
of stems, sometimes low and suberect, herbaceous or often woody below, the stems
bifariously puberulent or almost glabrous, subterete, often with greatly elongate
internodes; leaves short-petiolate, linear or nearly so, 1-5 cm. long, usually
about 2 mm. ^{long} wide, thick and firm, often revolute-margined, 1-nerved, acute, ^{or ciliate} glabrous;
umbels sessile or on very short ^{or} peduncles, mostly 3-6-flowered, the pedicels short,
puberulent or glabrous; flowers white or greenish white, 2.5 mm. long, glabrous
outside; calyx lobes ovate, obtuse; corolla in bud broadly ovoid or ovoid-globose,
the lobes ovate, subacute, puberulent ^{and retrorse barbellate} ~~or almost glabrous~~ within, erect or ascending;
gynostegium subsessile; scales of the coroma narrowly linear, less than one-third as
long as the corolla lobes, equaling the pyramidal apex of the stigma.

This species has consistently linear leaves without visible lateral
nerves. The stems may be quite pubescent (rarely) or more often pubescent
in lines, the leaves are often obscurely ciliate.

Cynanchum collinum (Blake) Standl. & Steyer. ~~Bot. Ser. Field Mus. 23:~~

Metastelma collinum Blake, Contr. U. S. Nat. Herb. 24: 19. 1922. Grassy hillsides, sometimes in lowland pine forest, 900 meters or less; so far as known, endemic;

Izabal (type collected along trail from Los Amates to Izabal, S. F. Blake 7793);

Zacapa (Sierra de las Minas). A slender vine, arising from a tuberous-thickened root 2-3 cm. long and 5-10 mm. thick, the stems very slender, pale green, bifariouly puberulent; leaves short-petiolate, linear, 1.5-3 cm. long, about 1.5-2 mm. wide, ^{the lobes never obsolete}

acute, rounded at the base, more or less revolute, thick, 1-nerved, ciliate, glabrous; umbels about 4-flowered, puberulent, the pedicels and pedicels 1-3 mm. long; calyx

almost 1 mm. long, the lobes lance-triangular, obtuse; corolla white, 3 mm. long, glabrous outside, the lobes triangular-ovate, densely white-pilous within; corona lobes narrowly spatulate, obtuse, exceeding the stigma. A species of dubious status,

perhaps to be united with C. chiapense.

probably

Cynanchum pedunculare (Dcne.) L. Wms. Fieldiana, Bot. 0. 030 ;
Metastelma pedunculare Decaisne in DC. Prodr. 8: 514. 1844.

Twinning over shrubs or on trees, 1,500-2,000 m.; Guatemala (type from Cuesta de Pinula, Hartweg 601); Sacatepéquez; ~~Cerro de los Hornos~~ Chiquimula. Endemic.

Rampant or twinning herb^b or subshrubs, slender, the stems glabrous. Leaves ellipti-lanceolate or elliptic-oblong, acute or short acuminate, glabrous, about 1.5-5 cm. long and 0.5-1.7 cm. broad, lateral nerves 8-10 pairs and inconspicuous, petiole slender, puberulent or glabrous, 3-6 mm. long; inflorescence subumbellate, few-flowered, born on a relatively long peduncles, (1-2) 1.5-2 cm. long, puberulent; flowers white or greenish-white; calyx-lobes ~~sub~~ subtriangular, acute or obtuse, fleshy, glabrous, about 1 mm. long; corolla rotate, the lobes ligulate-lanceolate, acute, the tips reflexed in natural position, obscurely puberulent within but often appearing glabrous, about 2 mm. long and 0.8 mm. broad, the corolla tube about 1 mm. long.

This species is easily distinguished by the long pedunculate, few-flowered inflorescence. The nearly glabrous inner surface of the corolla lobes is also unusual.

- Cynanchium rensonii (Pittier) Woodson, Ann. Mo. Bot. Gard. 28: 210.
1941. Roulinia rensonii Pittier, Contr. U. S. Nat. Herb. 13: 101, f. 8.
1910. Cynanchium guatemalense Dugand, Caldesia 9, No. 45: 412. 1966.
Cuchamper.

Moist or wet thickets or often in roadside hedges, 1,4⁰⁰_A meters or lower;
Zacapa; Chiquimula; Santa Rosa; Guatemala; Suchitepéquez. El Salvador;
Honduras.

A slender vine (Etc)

4 *Cynanchum Rensoni* (Pittier) Woodson, Ann. Mo. Bot. Gard., 28: 210. 1941. Roulinia f. 8.
Rensoni Pittier, Contr. U. S. Nat. Herb. 13: 101. 1910. Cuchamper. Moist or wet thickets or often in roadside hedges, 1,400 meters or lower; Zacapa; Chiquimula; Guatemala; Suchitepéquez, ^{Honduras} Salvador. A slender vine, glabrous almost throughout, the young stems sometimes bifariously puberulent, the petioles and inflorescence sparsely puberulent or glabrous; leaves slender-petiolate, membranaceous, ovate-cordate or deltoid-cordate, 4-7 cm. long, 1.5-5.5 cm. ^{broad} wide, shortly cuspidate-acuminate, shallowly or deeply cordate at the base, somewhat paler beneath; inflorescences axillary, racemose, usually much shorter than the leaves, the peduncles 3 cm. long or shorter, the pedicels 2.5-3.5 mm. long, the flowers yellowish white, scarcely 3 mm. long; calyx glabrous outside, the lobes oblong-elliptic, obtuse; corolla globose in bud and rounded at the apex, glabrous, the lobes obtuse or rounded at the apex; lobes of the corona obscurely hastate-trilobate, exceeding the gynostegium; follicles about 10 cm. long and 2-3 cm. thick, attenuate to the apex, terete, smooth, glabrous. Sometimes called Champer in Salvador. The young fruits often are used as a vegetable. The status of this species is very uncertain, and it is quite probable that an older name may be found for it. It has been reported from Guatemala as Ensenia ligulata Benth. and Roulinia unifaria Engelm.

Cynanchum Schlechtendalii (Dcne.) Standl. & Steyerl. Bot. Ser. Field Mus. Bot. 23: 226. 1947.
~~*Metastelma parviflorum* Schlecht. Linnaea 6: 731. 1831, not W.R. Br. 1899. *Metastelma Schlechtendalii* Dcne. in DC. Prodr. 8: 513. 1844. *M. pedunculare* Dcne. op. cit. 514. 1844 (type from Cuesta de Pinula, Guatemala, Hartweg 601). *M. decipiens* Pittier, Contr. U. S. Nat. Herb. 13: 98. f. 4. 1910 (type from San Miguel Uspantán, Quiché, Heyde & Lux 3060). *Ditassa mexicana* Brandeg. Univ. Calif. Publ. Bot. 10: 414. 1924 (type from Chiapas). Mata-chaparro (fide Aguilar).~~

Moist or dry thickets, often in rocky places, sometimes in oak forest or moist or wet, mixed forest, 2,000 meters or lower; reported from Petén; Zacapa; Chiquimula; Jutiapa; Santa Rosa; Guatemala; Sacatepéquez; Sololá; Quiché; Huehuetenango; Quezaltenango. Southern Mexico; British Honduras to Salvador and Costa Rica.

Usually a small vine, the stems sometimes elongate, much branched and forming very dense tangles over shrubs, bifariously puberulent or glabrous; leaves short-petiolate, thick-membranaceous, mostly oblong-ovate to elliptic-oblong, chiefly 2-4 cm. long.

Cynanchum schlechtendalii (Dcne.) Standl. & Steyer. Field Mus. Bot.
23: 226. 1947. Metastelma schlechtendalii Decaisne in A. DC. Prodr.
8: 513. 1844. M. decipiens Pittier, Contr. U. S. Nat. Herb. 13: 98,
fig. 4. 1910 (type from San Miguel Uspantán, Heyde & Lux 3060).

Moist or dry thickets, often in rocky places, 2,000 meters or less;
Petén; Alta Verapaz; Quezaltenango; Sololá; Guatemala; Santa Rosa; Jutiapa;
Zacapa. Mexico; British Honduras.

Usually a small vine, the stems sometimes elongated, much branched
and forming mats over other plants; bifariously puberulent or glabrous;
leaves short petiolate, ~~oblong-ovate to elliptic-oblong~~ ^{lanceolate to ovate-lanceolate}, about 2-4 cm. long

C. schlechtendalii

and 1-1.5 cm. ^{broad}wide, rounded to subacute or short-acuminate at the apex and usually mucronate, rounded at the base, glabrous or nearly so, paler beneath, penninerved; inflorescences usually numerous, umbelliform, laxly few-flowered, puberulent, on long ^{relatively} or usually short peduncles, ~~generally shorter than the leaves~~, the flowers on short slender pedicels, ²⁻white or whitish, about 3 mm. long, sometimes slightly longer; calyx short, the lobes oblong or ovate-oblong, obtuse, puberulent or glabrous; corolla glabrous outside, oblong or obovate in bud, obtuse or somewhat pointed at the apex, the lobes oblong-lanceolate, subacute, erect or ascending, densely white-villosous ^{hydrillate} within; gynostegium stipitate, the stipe about equaling the anthers; corona scales

ligulate or linear-subulate, exceeding the gynostegium; follicles slender, about 5.5 cm. long and 7 mm. thick, narrowly long-acuminate, smooth, glabrous. ~~Known in Salvador by the names "Cuchamperito", "Cuchamper de zope", and "Ojo de pescado".~~ Plants of this

and related species are abundant in many parts of Guatemala, often forming dense tangles over thickets. We have collected relatively few specimens of them because during the verano, when most of our collecting has been done, most of the plants are sterile, the flowers usually but not always being produced during the rainy season.

It may be that more than one species is represented by the rather ample material we have referred to *C. Schlechtendalii*, but it is not obvious by what characters they are to be separated, and such a separation, if it can be made, must await careful monographic work on the group. We have seen authentic representation of both

~~*Metastelma Schlechtendalii* and *M. pedunculare*, and find no differences between these species, not did Decaisne suggest any. *M. decipiens* was separated by Pittier merely because it did not agree wholly with Decaisne's descriptions, and by the same criteria almost any specimen of the genus could be exploited as a new species.~~

~~The plant has been reported from Guatemala as *Metastelma barbigerum* Scheele.~~

Cynanchum sepium (Dcne.) Standl. Contr. U. S. Nat. Herb. 23: 1177. 1924. *Vincetoxicum sepium* Dcne. in DC. Prodr. 8: 526. 1944. *Bejuco de San Julián* (Chimaltenango, fide Morales). Moist or dry, often rocky, brushy hillsides, 600-2,500 meters; Alta Verapaz; El Progreso; Chiquimula; reported from Santa Rosa; Chimaltenango; Huehuetenango; Quezaltenango. Southern Mexico; ^{Honduras}Costa Rica; Panama. ~~Find~~ A small or

C. schlechtendalii

This is the commonest species in south Mexico and Guatemala. It seems not to extend into Central America further. Cynanchum chiapense is a closely related species but is usually distinguished by the narrower leaves which do not have obvious lateral nerves.

Cynanchium sepium (Dcne.) Standl. Contr. U. S. Nat. Herb. 23:1177. 1924.
Vincetoxicum sepium Dcne. in DC. Prodr. 8: 526. 1844. Bejuco de San Julian.

Known in Guatemala from a single specimen, San ^Martin, Chimaltenango, ⁽¹⁾
Mexico, ⁽¹⁾ possibly Costa Rica.

A small vine, usually herbaceous but possibly sometimes woody, glabrous or with sparse pubescence on petioles and new growth; leaves on short slender petioles 3-5 mm. long, the blade lanceolate or narrowly lanceolate, acuminate, 2.5-6 cm. long and 0.4-2 cm. broad, glabrous or nearly so, the lowest veins of the leaves nearly parallel to the margin, only 3-5 pairs; inflorescence umbellate, axillary, the peduncle 1 ~~1~~ cm. long or less, with ten or fewer flowers; flowers greenish-white, 1.5-2 mm. long; calyx lobes lance-ovate, obtuse or acute, puberulent, about 0.5 mm. long; corolla lobes ovate, acute, glabrous outside, inner face except the margins pulvinate, about 1 mm. long; follicles not known.

This is the only species in Guatemala in which the lowest veins on the leaves follow the leaf margin, there are relatively few lateral veins. This name has been used for a wide variety of species of *Cynanchium* in Guatemala, and elsewhere.

large vine, herbaceous, or the stems sometimes woody and covered with very thick, deeply ridged, corky, pale bark, the stems very slender, bifariously puberulent or glabrous, pale green; leaves on short slender petioles, membranaceous or thick-membranaceous, lanceolate or narrowly lanceolate, sometimes ovate-lanceolate, mostly 3-5 cm. long, and 7-15 mm. wide, narrowly long-attenuate, obtuse or acute at the base, sparsely puberulent above, puberulent or glabrous beneath, penninerved; umbels short-pedunculate or almost sessile, 4-12-flowered, puberulent, the flowers slender-pedicellate, greenish white, about 1.5 mm. long; calyx lobes minute, ovate, obtuse, puberulent, pale-marginate; corolla globose in bud, glabrous outside, the lobes ovate, obtuse, glabrous within; corona deeply 5-lobate, the lobes contiguous, emarginate or erose-denticulate, equaling the gynostegium; follicles very slender, smooth, glabrous, about 4 cm. long, long-attenuate. [#] This has been reported from Guatemala as Vince-toxicum mexicanum Wats.

Cynanchum stenomeres Standl. & Steyerlm. Bot. Ser. Field Mus. 23: 224. 1947. ^{Field Mus.}

British Honduras, at or little above sea level, in open places or in thickets, often or usually in open pine forest; endemic; type from All Pines, W. A. Schipp

674. [#] A very slender vine, herbaceous or suffrutescent, the stems sometimes 2 ^meters long, obscurely and bifariously puberulent or glabrous, sometimes purplish; leaves thick-membranaceous, on slender petioles 4-5 mm. long, penninerved, glabrous or sparsely and minutely puberulent on the veins, linear-lanceolate, 3-6 cm. long, 4-7 mm. ^{broad} wide, narrowly long-attenuate, obtuse or acute at the base, deep green above, the ^{paler beneath,} costa and nerves often shallowly impressed, the costa prominent, beneath, the lateral nerves ^{obscure; 10 or more pairs} ~~obscure~~ inflorescences umbelliform, about 10-flowered, on slender peduncles 8 mm. long or shorter, the pedicels glabrous or sparsely puberulent, 2.5-4 mm. long; flowers white, fragrant, ~~about~~ 4 mm. long; calyx lobes minute, ovate-oblong, obtuse, sparsely and minutely puberulent or glabrous; corolla in bud oblong-ovoid or oblong, obtuse, deeply lobate, the lobes lance-oblong or oblong-linear, usually somewhat narrowed near the base, glabrous outside, densely white-pilous within; gynostegium long-stipitate, the stipe more than twice as long as the calyx; lobes of the corona with a small ovoid base, attenuate into a long hair-like tip, almost equaling the

the corolla lobes; stigma short-rostrate, the beak little longer than the appendages of the anthers. ~~This has been reported from British Honduras as Metastelma pedunculare, Dcne.~~

Cynanchum sp. A single collection from Cerro Chinaja, Alta Verapaz, if properly referable to this genus, represents another and probably ~~an~~ undescribed species, but the material is far too imperfect for description. The plant is noteworthy for its very thick, ovate, acuminate leaves, broadly rounded at the base and on longer petioles than are found in most members of the genus.

The leaf blades are sharply reflexed from the apex of the petioles and this shows even in many herbarium specimens. The lobes of the corona are as long as the corolla or nearly so, the only species in this flora with
corona
such long/lobes.

Cynanchum trichophyllum L. Wms. Field Mus. Bot.

Pak-chan.

Moist or dry thickets or forests, 800-1,200 m. Huehuetenango.

Mexico; Honduras.

Slender, often twining plants forming dense mats over ~~mo~~ trees and shrubs, stems to several meters long and mostly about 1 mm. in diameter, herbaceous or at most suffrutescent, entire plant soft pilose pubescent; leaves oblong lanceolate to ovate-lanceolate, acuminate, apiculate, obtuse or rounded at the base, lateral nerves evident, sparsely or densely pubescent on both surfaces, about 1-3 cm. long and 0.5-1 cm. broad, petioles slender, 2-4 mm. long; inflorescences abundant, subumbellate, usually born in alternat axils of each succeeding pair of leaves, sometimes in the axils of both leaves of a pair, each bearing 4-10 flowers, from shorter to about as long as the subtending leaf or rarely longer, pedicels 2-10 mm. long, pedicels very slender, mostly 2-3 mm. long; flowers white or cream color; calyx deeply 5-lobed, pilose outside, the lobes about 0.5-0.7 mm. long, lanceolate-oblong, obtuse; corolla subcampanulate, divided almost to the base, 2.5-3 mm. long, the lobes 2-2.5 mm. long and 0.6-0.8 mm. broad, linear-oblong or linear-lanceolate, obtuse, tip reflexed, glabrous outside, prominently barbellate at the tip inside with two lateral lines of pubescence extending to the base of the lobe; corona about 1 mm. long or less, the lobes linear-lanceolate, slightly longer than the gynostemium; capsule 2.5-5 cm. long, rostrate, densely pubescent.

Known from Guatemala from a single specimen. Abundant in Central Honduras.

Illus. *Simoes*

FISCHERIA De Candolle

Herbaceous ~~or~~ suffrutescent vines, often large, setose or villous; leaves opposite, usually large and long-petiolate, membranaceous; flowers medium-sized, umbellate or short-racemose, axillary, long-pedunculate, the inflorescence usually blackening when dried; calyx 5-parted, 5-glandular within at the base, the lobes narrow; corolla subrotate, deeply 5-lobate, the lobes broad, contorted; outer corona annular, thick-carnose, adnate to the base of the corolla, the ^{outer} margin somewhat 5-sinuate; hoods of the corona 5, thick-carnose, obtuse; stamens inserted near the base of the corolla, the filaments connate into a short tube; anthers terminated by an inflexed, membranaceous or thickened appendage; pollinia solitary in each cell, oblong or subobovate, subcompressed, the caudicle short, pendulous or oblique; stigma depressed at the apex, 5-angulate; follicles thick and ~~hard~~, the seeds comate. ~~4~~

~~About 20 species, in tropical America. One other is found in southern Central America.~~
~~*Fischeria funcbris* (Donn. Smith) Blake, Journ. Wash. Acad. Sci. 14: 293, July, 1924.~~
~~*Fischeria Bracteata* Standl. Field Mus. Bot. 11: 129, 1922. Moist or wet thickets or forest, 800 meters or less; Alta Verapaz, British Honduras, the type from Oaxaca, and Chiapas, Honduras.~~
~~Nineteen Mile, Stann Creek Valley, W. A. Schimper 1922; Tabasco, A suffrutescent vine, sometimes 10 meters long with a stem 2.5 cm. in diameter, the young stems ^{to densely spreading} densely puberulent and sparsely hirsute; petioles 7 cm. long or shorter, puberulent~~

C. G. R. C.

There are perhaps not more than a dozen species of *Fischeria* in the American tropics. The genus is doubtfully distinct from *Matelea*. One other species is known in Central America.

Fischeria martiana Dcne. in DC. *Prodr.* 8: 601. 1844. *F. martiana* var. *funnebris* Donn.-Sm. Bot. Gaz. 24: 398. 1897. *F. funnebris* Blake, Journ. Wash. Acad. Sci. 14: 293. 1924. *F. briquetiana* Standl, *Field Mus. Bot.* 11: 139. 1932/ (type from British Honduras, Schipp # 962)

Thickets in the lowlands, 700 meters or less; ^{Petén} British Honduras; Mexico; Costa Rica; Panama; probably in all the Atlantic lowlands of Central America. South America to Brazil.

A suffrutescent vine often to ten meters long and 2.5 cm. in diameter, the young stems densely puberulent and with sparse to dense

spreading hirsute pubescent, ⁸petioles to 7 cm. long or shorter, puberulent

and hirsute; leaf blades broadly elliptic ^{to} or ovate-~~elliptic~~, 7-22 cm. long, 3.5-15 cm. wide, ^{hood}obtuse or rounded at the apex and short-caudate, shallowly cordate at the base, with rounded lobes, ^{or hirsute-pilose}rough-hirtellous above, almost concolorous beneath, ^{or hirsute-pilose}densely velutinous-pilosulous; peduncles ⁵⁻¹⁰cm. long, the umbels many-flowered, the slender pedicels 12-35 mm. long, viscid-puberulent and sparsely hirsute; buds ovoid-globose, very obtuse; ~~sepals~~ calyx lobes lance-linear, long-attenuate, 7-15 mm. long, slightly exceeding the corolla, viscid-puberulent and sparsely hirsute; corolla 12-15 mm. broad, deeply 5-lobate, light green and yellow, the lobes ovate, ^{to ovate-oblong}obtuse, ^{to subvent}crispate, densely hirtellous on both surfaces; outer corona carnosae, entire, half as long as

the gynostegium^{gium}~~is~~; hoods of the corona, carnose, obtuse, longer than the
~~gynostegium~~ gynostegium.

~~Although we have not seen specimens from Guatemala the species has
bee reported and is to be expected.~~

Illegible handwritten note

GONIOLOBUS Michaux

Plants herbaceous or more or less woody, usually scandent, variously pubescent or glabrate; leaves opposite, petiolate, generally cordate; flowers rather large or small, ^{usually} in umbelliform cymes, these lax, mostly few-flowered, axillary, pedunculate or subsessile; calyx 5-lobate, usually 5-glandular within at the base; corolla tube short or almost none, the limb rotate or somewhat campanulate, the lobes broad or narrow, dextrorsely contorted; corona ~~adnate~~ ^{adnate} to the corolla, various in form, ~~entire~~ the outer corona usually annular, often ciliate, a fleshy true corona borne at the base or somewhat 5-lobate, sometimes adnate to the stamen tube; stamens inserted on the of the stamen column; base of the corolla, the filaments connate into a very short tube; anthers short and broad, bearing ~~a~~ ^{more or less} conspicuous, fleshy, usually laminate, dorsal appendage, the appendages variable in form, sometimes reniform, often deeply 2-lobate or entire, sometimes 3-lobate; pollen solitary in the cells, obovate or oblong, horizontal or somewhat pendulous; stigma depressed at the apex, conspicuously 5-angulate; follicles usually thick and acuminate, smooth or tuberculate; seeds bearing a copious coma of long white silky hairs. ~~Perhaps 100 species, but the number very uncertain,~~
all American and chiefly in the tropics. Other species are known in southern Central America. The name "Cuchamper" is applied commonly in Guatemala and other Central American countries to the fruits of this and related genera. When young and tender the fruits are much used as a vegetable, being cooked in various ways. They sometimes are offered for sale in the markets. The name "Catillo" is sometimes given in Guatemala to the pods of these vines, in reference to the abundant "silk" of the seeds.

Digitized by Hunt Institute for Botanical Documentation

GONOLOBUS

[TO FOLLOW THE TECHNICAL DESCRIPTION]

Digitized by Hunt Institute for Botanical Documentation

There have been about 85 species described from Mexico and Central America that may reasonably be referred to Gonolobus. ^{as here defined} This and most of the related genera are much in need of revision and no really good account of them can be prepared until a revision is written.

The name "cuchamper" is applied in Guatemala and Central America to the fruits of Gonolobus and related genera. The tender young fruits are commonly used as vegetables, especially by the country people and even are to be found in the big markets in Guatemala City. "Gatillo" is a name sometimes given in Guatemala to the pods of these vines, in reference to the abundant "silk" of the pods.

α

1

Stemal corolla erect and mostly more than 1. mm.
~~long~~, ciliate at the apex or the surface variously
 pubescent or glabrous

Corolla deeply 5-lobed, the lobes half as long as
 the corolla and rounded. *G. lasiolepis*

Corolla entire, digitate or obscurely lobate.
 The lobes ~~very~~ if any very short.

"
 page 3

Corolla lobes pubescent dorsally with
 a few long segmented ^{or hispid} hairs; calyx
~~lobes hispid~~
~~leaves attenuated to truncate or somewhat~~
~~cordate at the base;~~

G. ~~disperma~~

~~Corolla lobes glabrous dorsally; calyx~~
~~lobes hispid~~

Digitized by the Institute for Botanical Documentation

Pubescence ~~long~~ of back of corolla lobes
 hispid, the lobes about 5 mm.
 long and these, pubescence of
 top of corolla in 5 tufts

G. ~~disperma~~
 or n. sp.

Pubescence of back of corolla lobes
 of long segmented hairs, the lobes
 about 10 mm. long, acute;
 corolla glabrous

G. ~~disperma~~

~~Corolla lobes glabrous dorsally~~



↑

2

Faucal corona adorned with
flattened hairs and with
similar hairs near the
apex of inner surface;
calyx lobes linear-lanceolate.

Xanthotrichum.

Faucal corona glabrous; calyx
lobes linear.

chiapensis

" " Corona lobes glabrous densely.

Faucal corona ciliate ^{only} at the
apex, not pubescent on the
sides and base.

calycosus

Faucal corona ciliate at
the apex and at the base,
the sides sparsely to densely
pilose.

stinospalus
slavifolia
Gr. M. sp.

4
~~Taucal Corona elongated erect and mostly
 more than 1 mm. long, ciliate at the apex
 or the surface variously pubescent or glabrous~~

- glaucous
 - Chrysom +
 - xanthotricha
 - calycous
 + n. sp.
 + lasiostemma
 stagemarii

Taucal Corona not erect, or erect not pubescent.

Corolla calcarate at the ~~base of~~ the juncture
 of the lobes; leaves not cordate at the base *G. longipetiolatus*,

Corolla not calcarate at juncture of lobes;
 leaves cordate.

Corolla lobes densely barbate along one margin
 with long flat hairs

G. barbatus

Corolla lobes short pilose pubescent or
 not barbate, glabrous, short pilose
 or pubescent.

Except the corolla short-pilose or pubescent within,
 the hairs of appreciable length.

Leaves glabrous or glabrate

Corolla lobes linear, cuspidate in a line within

Corolla lobes oblongovate, pubescent within and

leaves pilose on both surfaces.

G. Ctenophorum

G. Salvinii

Corolla distinctly tubular at the
 base, the apex rounded in bud...

G. lasiostemma

Corolla not at all tubular at the
 base, acute or acuminate
 in bud.

↓

Salvinii
 my herb

at ↑
Inflorescence sessile or nearly so,
pedicels mostly less than
1 cm long.

†
G. lanugiflorus

Inflorescence conspicuously
pedunculate, the
pedicels 1-3 cm. long.

*G. ~~uniflorus~~
crinitus*

Corolla

lobes of the corolla glabrous within
or farinose-puberulent.

Corolla lobes farinose puberulent
within along one side.

Calyx lobes lanceolate or linear
lanceolate; corolla bicolorous
and reticulate-veined

G. uniflorus

Calyx lobes ovate, corolla
concolorous, not reticulate-veined.

G. leianthus

Corolla lobes glabrous within,
unless at the very base.



↑ Calyx lobes oval, obtuse or rounded
at the apex

3
J. Calycosus

Calyx lobes ovate or lanceolate and
acute or acuminate, rarely
obtusate but then lanceolate.

Corolla in bud lanceolate or narrowly
lanceolate, long-tapering to the apex.

Calyx lobes linear from a somewhat
broadened base; corolla about 3 cm.
long.

J. Versicolor

Calyx lobes lanceolate; corolla
1.5 - 2 cm. ~~long~~ long.

J. stenanthus

Corolla in bud subglobose or ovoid,
rounded to short acuminate,
not long tapering to the apex.

Corolla dark purple, drying
black, about 7 mm. long

J. niger.

Corolla greenish or yellowish,
not drying black, usually
larger.

↓

Corolla hirsellous or short-pilose,

~~Inflorescence about equalling the leaves, pedicels shorter than the peduncles; calyx lobes acute glabrous or sparsely hirsute dorsally~~

G. Steusepalus

~~Inflorescence much shorter than the leaves; pedicels usually longer than the peduncles; calyx lobes obtuse or subacute, basally pubescent dorsally~~

G. elongiphilus

Corolla glabrous

Basal lobes of the leaves strongly incurved

G. Stegmannii

Basal lobes of the leaves not at all incurved

G. prasinaethus

fl Leaves blades not cordate at the base, or else narrowed to a narrow, shallowly cordate base.

□ Stems and petioles glabrous or nearly so.....G. longipetiolatus. !

□ Stems and petioles densely long-hirsute.
Calyx lobes ovate, obtuse, 2 mm. long.....G. dasystephanus. ✓
Calyx lobes lanceolate or linear, acuminate, much longer.
Pedicels short, mostly 5-10 mm. long.....G. chiapensis. ✓

3 Pedicels elongate, mostly 20-30 ^m cm. long or longer.....G. xanthotrichus. ✓

fl Leaf blades usually deeply cordate at the base, the base not narrowed.

□ Corolla lobes densely barbate within along one ~~st~~ margin with long stiff yellow
3 hairs; Leaves glabrous or nearly so.....G. barbatus. !

□ Corolla lobes glabrous within or various ^{ly} pubescent but never long-barbate.

□ Lobes of the corolla short-pilose or puberulent within, the hairs with appreciable length.

3 Leaves glabrous or glabrate.G. cteniophorus.

Leaves densely pilose on both surfaces.

4 Corolla distinctly tubular at the base, the apex rounded in bud. G. lasiostemma.
Corolla not at all tubular, acute or acuminate in bud.

5 Inflorescences sessile or nearly so, the pedicels mostly 1 cm. long or shorter.

Inflorescence ^s conspicuously pedunculate, the pedicels 1-3 cm. long. G. lanugiflorus.
~~G. edulis.~~

6 Corolla about 2 cm. broad, sometimes as much as 3 cm.....G. edulis. !

Corolla about 4 cm. broad.....G. erianthus. at

□ Lobes of the corolla glabrous within, or merely farinose-puberulent.

3 Corolla lobes farinose-puberulent within along one side.

4 Calyx lobes lanceolate or linear-lanceolate.....G. uniflorus. !

4 Calyx lobes ovate.....G. leianthus. !

3 Corolla lobes glabrous within, unless at the very base.

4 Calyx lobes oval, very obtuse or rounded at the apex.....G. calycosus. !

Calyx lobes ovate or lanceolate and acute or acuminate, rarely obtuse but then lanceolate.

Salvinia nitida

5 Corolla in bud lanceolate or narrowly lanceolate, long-tapering to the apex.

6 ~~Stenanthus~~ Calyx lobes linear from a somewhat broadened base; corolla about 3 cm. long.....G. versicolor.
Calyx lobes lanceolate; corolla about 1.5 cm. long or sometimes as much as 2 cm.

G. stenanthus.
5 Corolla in bud subglobose or ovoid, rounded to short-acuminate, not long-tapering to the apex.

6 Corolla dark purple, blackish when dried, about 7 mm. long.....G. niger.

Corolla greenish or yellowish, not blackening when dried, usually much larger.

7 Corona hirtellous or short-pilose.

8 Inflorescences about equaling the leaves, the pedicels shorter than the peduncles; ~~sepals~~ ^{or sparsely pubescent} calyx lobes acute, glabrate dorsally..G. stenosepalus.

8 Inflorescences much shorter than the leaves, the pedicels usually longer than the peduncles; calyx lobes obtuse or subacute, densely pubescent dorsally.

G. oblongifolius.
7 Corona glabrous.

8 Basal lobes of the leaves strongly incurved.....G. Steyermarkii.

Basal lobes of the leaves not at all incurved.....G. fraternus. *fraternus*

Gonolobus barbatus HBK. Nov. Gen. & Sp. 3: 209, pl. 239. 1819. Vincetoxicum
barbatum Standl. Contr. U. S. Nat. Herb. 23: 1192. 1924. Balsaac (Petén, Maya).

Moist or dry thickets, often in rocky places, 200-1,600 meters; ~~Patán~~ reported from
Petén; El Progreso; Zacapa; Jutiapa; Santa Rosa; Escuintla; Huehuetenango. Western
and southern Mexico; ^{Honduras; El} Salvador; Nicaragua. A small or large vine, herbaceous or
usually somewhat lignescent, the stems pale, finely puberulent, short-pilose, or
glabrate; leaves firm-membranaceous, on long slender petioles, broadly deltoid-cor-
date or ovate-cordate, mostly 2-5 cm. long, acuminate, rather shallowly and openly
cordate at the base, glabrous; flowers umbellate, the umbels sessile or short-pedun-
culate, the pedicels very slender, mostly 2-3 cm. long, puberulent; calyx green,
lobate almost to the base, the segments lanceolate, attenuate-acuminate, sparsely
puberulent or almost glabrous; corolla about 1 cm. long, in bud globose and short-
cuspidate, glabrous or inconspicuously puberulent outside, green and yellow, deeply
lobate, very densely yellow-barbate with long hairs in the throat and along one side
of the lobes; stigma depressed, very deeply 5-lobate; follicles ovoid, 8-12 cm.
long, glabrous, with broad longitudinal wings. Called "Matacoyote" and "Ouchamper
de zope" in Salvador; "Xtuchcahoy" (Yucatán, Maya); "cuayote;" (Honduras).

Gonolobus calycosus (Donn. Smith) Woodson, Ann. Mo. Bot. Gard. 28: 242. 1941.
Fimbristemma calycosa Donn. Smith, Bot. Gaz. 16: 196. pl. 16. 1891. Known only from
the type, Alta Verapaz, ^{this type from} Chucaneb, 1,800 meters, Tuerckheim 1500. ^{Nicaragua,} Leaves long-petio-
late, oblong-cordate, 10-15 cm. long, acuminate, deeply cordate at the base, more or
less pubescent; peduncles shorter than the petioles, 1-2 cm. long, the 6-8 pedicels
longer than the peduncle, the flowers 2.5 cm. broad; calyx deeply 5-lobate, the seg-
ments oval, pale, obtuse or rounded at the apex, pubescent outside; corolla 5-lobate
almost to the base, the lobes dextrorsely convolute, deep yellow, very obtuse, oblong;
outer corona ~~extrapallidum~~ 5-lobate, densely long-fimbriate; lobes of the inner
corona ovate, equaling the fimbriae, bidentate, naked; anthers appendiculate below with
a 2-cornate wing. ~~We have seen no material of this species.~~

Matelea chiapensis Shummers, Sida 1: 366. 1944. (52)

Gonolobus chiapensis (Brandeg.) Woodson, Ann. Mo. Bot. Gard. 28: 242. 1941.

Vincetoxicum chiapense Brandeg. ⁹²Univ. Calif. Publ. Bot. 6: 190. 1915. ⁷Moist mixed forest, 1,300-1,500 meters; San Marcos (Volcán de Tajumulco). ^{Mexico}Chiapas (type from Cerro del Bogueón). ^{Nicaragua} A somewhat woody vine, the stems rather densely hirsute with long spreading brownish multicellular hairs; leaves short-petiolate, lance-oblong or oblanceolate-oblong, mostly 9-12 cm. long and 3-4.5 cm. ^{broad,} ^{wide,} long acuminate, subcordate at the base, thin, copiously hirsute on both surfaces; ^{inflowences} ^{umbels} axillary,

^{Subumbellat} sessile or on very short peduncles, 3-4-flowered, the pedicels 10 mm. long or shorter; calyx lobes lanceolate, hirsute, 4 mm. long; corolla rotate, dull green, pilose outside, 5 mm. long, the lobes broadly lanceolate; corona simple, annular, the margin undulate; disk of the stigma pentagonal, dark purple, flat.

Gonolobus cteniophorus (Blake) Woodson, Ann. Mo. Bot. Gard. 28: 243. 1941. Vincetoxicum cteniophorum Blake, Contr. Gray Herb. 52: 84. 1917. V. tortum Brandeg. ⁹²Univ. Calif. Publ. Bot. 10: 414. 1924. V. Landellii Standl. Field Mus. Bot. 8: 148. 1930 (type from Honey Camp, British Honduras, C. L. Landell 540). ⁹²Moist or wet thickets, sometimes in wooded swamps, 150 meters or less; ^{Poten;} Izabal. Southern Mexico; British Honduras (type from Toledo, ⁹²M. H. Peck 821). A small or rather large, slender vine, herbaceous or suffrutescent, the stems almost glabrous, sparsely appressed-pilous at the nodes; leaves membranaceous, on long slender petioles, oblong-ovate to deltoid-cordate, mostly 5-9 cm. long, acuminate or long-acuminate, deeply cordate at the base, glabrous; peduncles axillary, 2-3 cm. long, glabrous, the flowers few, umbellate, the pedicels slender, unequal, 1-2.5 cm. long; calyx lobes ovate or lance-ovate, acuminate, ciliolate, 3 mm. long; corolla rotate, 3.5 cm. broad, lobate almost to the base, the lobes linear or nearly so, glabrous outside, hispidulous in a line along the middle inside; outer corona short, densely ciliate, the inner corona short, carnos, glabrous, broadly 5-lobate; fruit narrowly ovoid, glabrous, smooth or somewhat white-tuberculate, about 6.5 cm. long and 2.5 cm. wide, acuminate.

MATELEA cteniophora Shummers, Sida 1: 366. 1944.

Gonolobus dasystephanus (Blake) Woodson, Ann. Mo. Bot. Gard. 28: 243. 1941.

Vincetoxicum dasystephanum Blake, Contr. Gray Herb. 52: 84. 1917. Known only from the type, British Honduras, in forest and thickets, Manatee Lagoon, M. E. Peck 323. A rather large vine, the stems slender, hispid and hispidulous, the hairs sub-retrorse, bulbous-thickened at the base; leaves short-petiolate, oblong-oval, 3.5-5 cm. long, 1.2-2 cm. ^{broad} wide, short-acuminate, obtuse or rounded at the base, green above, slightly paler beneath, rather densely hispid-pilose on both surfaces with fulvous hairs; peduncles incurved-hispidulous, 7-10 mm. long, the umbels 6-9-flowered, the pedicels 1.5 cm. long; calyx lobes ovate, obtuse, hispidulous, 2 mm. long; corolla rotate, green when dry, 5-lobate almost to the base, 12 mm. broad, the lobes oval-ovate, obtuse, hispidulous outside, glabrous within; outer corona annular, erect, obscurely 5-lobate, densely pilose-ciliate; inner corona shorter, glabrous, carinose, few-crenulate.

Gonolobus edulis Hemsl. Biol. Centr. Amer. Bot. 2: 331. 1882 (based in part on Vincetoxicum edule Standl. Contr. U. S. Nat. Herb. 23: 1680. 1926, material collected in Guatemala by Friedrichsthal). Ouchampera. Moist or wet thickets 800-1,200 meters, or perhaps also at higher elevations; Alta Verapaz; reported from Santa Rosa; Quiché; ^{Huehuetenango, Hond.} Costa Rica; Panama; perhaps in southern Mexico.

A small or large vine, herbaceous or often lignescent, the stems sparsely or densely pilose with rather long, spreading hairs, sometimes glabrate; leaves membranaceous, slender-petiolate, broadly ovate to oblong-lanceolate, mostly 5-7 cm. long, acuminate, shallowly and broadly cordate at the base, usually densely soft-pilose but sometimes glabrate, paler beneath; flowers umbellate, the umbels pedunculate, the pedicels 1-3 cm. long; calyx lobes lanceolate, about 1 cm. long, pilose outside; corolla yellowish green, pubescent outside, white-lanate within near the base, the lobes 12-14 mm. long or even longer, broadly lanceolate; outer corona 5-lobulate, the inner of 5 trapezoid scales; fruits very large, ovoid, smooth, with thick longitudinal wings.

OUT = unflam

Gonolobus erianthus DCne. in DC. Prodr. 8: 592. 1844. Vincetoxicum erianthum
Standl. Contr. U. S. Nat. Herb. 23: 1192. 1924. [#] Moist or wet thickets, 300-1,800
meters; Santa Rosa; Escuintla. Central and southern Mexico. [#] A large vine, herbaceous
or suffrutescent, the stems densely pilose with fulvous or brownish, mostly short,
spreading or retrorse hairs; leaves membranaceous, slender-petiolate, oblong-ovate to
broadly ovate-cordate, 4-11 cm. long, acute or acuminate, deeply cordate at the base,
green above, sparsely short-pilose, paler beneath, densely velutinous-pilose; inflo-
rescences subumbellate, few-flowered, short-pedunculate, the pedicels mostly 1.5-
2.5 cm. long, densely short-pilose, usually very unequal; calyx 5-lobate almost to
the base, the segments lanceolate or linear-lanceolate, about 1 cm. long, pilosulous;
corolla rotate, about 4 cm. broad, greenish with darker reticulate venation, puber-
ulent outside, lobate almost to the base, the lobes oblong or lance-oblong, acute or
acuminate, glabrous within or nearly so; outer corona annual, adnate to the corolla
throat, very low, somewhat carnose, minutely ciliate.

Gonolobus fraternus Schlecht. Linnaea 13: 521. 1833. Vincetoxicum fraternum
Standl. Contr. U. S. Nat. Herb. 23: 1190. 1924. G. prasinanthus Donn.-Smith, Bot.
Gaz. 46: 114. 1908. (type from Cubilgütz, Alta Verapaz, Tuerckheim, 8711). [#] Moist or
wet thickets, 350-750 meters; Alta Verapaz; Suchitepéquez; probably also in Quezalte-
nango. Southern Mexico; British Honduras. [#] A small or large vine, herbaceous or suf-
frutescent, the stems pilosulous or glabrate; leaves on long slender petioles,
firm-membranaceous, oblong-ovate or rather broadly cordate-ovate, mostly 5.5-8 cm.
long and 3-5.5 cm. wide, acuminate, openly and often shallowly cordate at the base,
sparsely pilose on both surfaces or almost wholly glabrous, paler beneath; peduncles
1.5-2 cm. long, few-flowered, the pedicels 1-2 cm. long; calyx lobes linear or lan-
ceolate, 5-6 mm. long; corolla pale green, rotate, glabrous or sometimes sparsely
puberulent within, deeply lobate, the lobes oblong-ovate, 9 mm. long, obtuse or sub-
acute; outer corona membranaceous, entire, glabrous, free from the gynostegium;
gynostegium 1 mm. high, the stigma 4 mm. broad; follicles smooth.

Gonolobus donnellsmithianus R. Wms. Fieldname,

Bot xx: xxx. 1968.

Known only from the type, Lacandon,
Department of Petén, CONTRERAS 3364.

Digitized by Hunt Institute for Botanical Documentation

Use same descr as
original publ.

This species is allied to *G. xanthotrichus*
Brandegee but is easily distinguish by floral detail.

Gomolobus lanugiflorus Woodson, Ann. Mo. Bot. Gard. 28: 282. 1941. ^{ok} ~~Moist~~ or wet, mixed forest, 2,300-2,800 meters; known only from the vicinity of the type locality, Volcán de Tajumulco, near Tajumulco, the type being Steyermark 36906. [#] Plants scandent, herbaceous or lignescent, densely fulvous-hispid or hirsute on the stems, leaves, and inflorescence, the hairs slightly harsh to the touch, the stems stout; leaves on petioles 2-3 cm. long, membranaceous, ovate-cordate or broadly oblong-ovate, 9-14 cm. long, 4.5-7.5 cm. ^{broad} ~~wide~~, rather abruptly and narrowly long-acuminate, deeply cordate at the base; inflorescence umbelliform, subsessile, many-flowered, the flowers greenish, on pedicels 1 cm. long or shorter; calyx lobes lanceolate, 1 cm. long, acuminate; corolla rotate, fulvous-hispidulous inside and outside, the lobes ovate-lanceolate, 1.5 cm. long, ⁹ ~~narrowly~~ acuminate; annulus of the throat conspicuous, minutely fulvous-hispidulous, entire; corona rotate, 5-parted, glabrous, the margin minutely crenulate; gynostegium subsessile, 4.5 mm. in diameter.

Gonolobus lasiostemma ~~Kuntze~~ (Hemsl.) Woodson, Ann. Mo. Bot. Gard. 28: 243. ^{ok} 1941. *Lachnostoma lasiostemma* Hemsl. Biol. Centr. Amer. Bot. 2: 335. 1882. Gates. [#] Moist or dry, often rocky thickets or in hedges, 1,200-2,300 meters; endemic; type collected in Guatemala by Skinner, the locality unknown; Santa Rosa; Guatemala; Sacatepéquez; Sololá; Huehuetenango. [#] A rather large and coarse vine, herbaceous or somewhat woody, the stems densely short-hirsute with fulvous retrorse hairs; leaves long-petiolate, membranaceous, broadly oblong-ovate, mostly 6-13 cm. long and 3-7 cm. ^{broad} ~~wide~~, acuminate or acute, sometimes abruptly acuminate, rather shallowly and openly cordate, densely velutinous-pilose with short spreading hairs on both surfaces, little paler beneath; inflorescences lax and few-flowered, umbelliform, short-pedunculate, the pedicels mostly 2 cm. long or shorter, densely pilosulous, the flowers 2-3 cm. ⁸ ~~broad~~; calyx densely pilosulous, deeply 5-lobate, 5-glandular within, the segments linear-lanceolate, acute, almost equaling the corolla; corolla green, tubular at the base, more or less hirtellous outside and within, the tube shorter than the lobes, the lobes narrow, obtuse; corona adnate to the corolla tube, the outer corona of 5 large subgaleate scales opposite the corolla lobes, these barbate on all

sides, the inner corona of 5 bifid glabrous scales alternate with the corolla lobes; gynostegium free, the stigma depressed; ovaries glabrous; young follicles broadly ovoid, acuminate, 6 cm. long and more than 3 cm. broad (at maturity doubtless much larger).

Gonolobus leianthus Donn.-Smith; Bot. Gaz. 48: 296. 1909. *Vincetoxicum Schippii* Standl. Field Mus. Bot. 8: 37. 1930 (type from Middlesex, British Honduras, W. A. Schipp 519). *Sucrixcam* (Cobán, ~~Maya~~ Quechchi). # Moist or wet thickets or open forest, sometimes in roadside hedges, 500-2,400 meters, or sometimes at lower elevations; ~~Alta Verapaz; Santa Rosa; Sacatepéquez; Quezaltenango; Huehuetenango.~~ ^{British Honduras.} # A large or small, herbaceous vine, sometimes suffrutescent, rarely trailing over the ground, the stems, petioles, and inflorescence pilose with rather ~~stiff~~ stiff, spreading or reflexed, short hairs, or the stems sometimes glabrate and the peduncles and pedicels glabrous or nearly so; leaves firm-membranaceous, on long slender petioles, oblong-ovate, mostly 6-12 cm. long and 2.5-5 cm. ^{broad} ~~wide~~, acuminate, deeply cordate at the base, rather densely short-pilose on both surfaces or often glabrate, especially on the upper surface, slightly paler beneath; peduncles few-flowered, mostly 2-flowered, 2-4 cm. long or often very short, the pedicels very unequal, mostly 2-5 cm. long; flowers as much as 5 cm. in diameter but often not more than 3.5 cm.; calyx lobes ovate, or broadly ovate, green or pale, 1.5 cm. long or shorter, acute or acuminate; corolla puberulent or almost glabrous outside, papillose-puberulent within along one side of each lobe, deeply lobate, olive-green within, dull yellow-green outside, the lobes lance-oblong, obtuse or subacute, ~~most or less~~ ^{with brown-purple} reticulate-veined within; corona annular, subentire, adnate to the very short gynostegium; gynostegium 6 mm. in diameter. ~~This has been reported from Guatemala as~~ *G. macranthus* Kunze. #

Gonolobus longipetiolatus Woodson, Ann. Mo. Bot. Gard. 28: 282. 1941. Known only from the type, San Marcos, southern slopes of Volcán de Tajumulco, above Finca El Porvenir, 1,300-1,500 meters, *Steyermark* 37428. # Plants slender, suffrutescent, the stems sparsely fulvous-hirsute with short hairs; leaves on long slender petioles, #

membranaceous, oblong-elliptic or oblong-ovate, 4.5-¹⁰ cm. long, 2-⁵ cm. ^{broad} wide, narrowly long-acuminate, rounded or truncate at the base, glabrous; petioles 2-5 cm. long, glabrous; inflorescence subracemose, lax, few-flowered, the peduncle 2-3.5 cm. long, the pedicels of about the same length; calyx lobes narrowly lanceolate, long-acuminate, 7 mm. long, minutely papillose outside; corolla green, rotate, glabrous, the lobes ~~or broadly linear~~, ^{or broadly linear}, 9 mm. long, acuminate, with involute margins, corona conspicuously 5-lobate, the lobes erect, broadly oblong, 2 mm. long, truncate or subemarginate at the apex; gynostegium borne on a stipe 2 mm. long; stigma pentagonal, 3.5 mm. broad. ^{This is the only species of Gonolobus which we know that has calcarate processes at the juncture of lobes of the corolla.} conspicuously rostrate.

Gonolobus niger (Cav.) R. Br. Mem. Wern. Soc. 1: 35. 1809. Cynanchum nigrum Cav. Icon. Pl. 2: ~~pl. 459-1793~~ 45, pl. 159. 1793. Vincetoxicum Cavanillesii Standl. Contr. U. S. Nat. Herb. 23: 1188. 1924. Millona. ^{at} Dry rocky thickets, about 1,600 meters; Huehuetenango (above San Ildefonso Ixtahuacán, Steyermark 50678). Southern Mexico. ^{or racemiform} A slender vine, herbaceous or somewhat woody, the stems minutely puberulent and short-hirsute with sparse fulvous, spreading or reflexed hairs, sometimes glabrate; leaves firm-membranaceous, on long slender petioles, oblong-ovate or deltoid-ovate, 4-7.5 cm. long, acuminate or cuspidate-acuminate, rather shallowly and openly cordate at the base and sometimes subhastate, thinly hirtellous or almost glabrous on the upper surface, paler beneath, puberulent on the veins or glabrate; inflorescences unbelliform, ^{or racemiform}, very open and few-flowered, often equaling the leaves, the peduncles often much longer than the petioles, the pedicels 1-2.5 cm. long, puberulent or almost glabrous; calyx lobes ovate or ovate-lanceolate, much shorter than the corolla, acute, greenish, glabrous or nearly so; corolla deep dark purple, blackish when dried, puberulent outside, glabrous within, about 6 mm. long, ~~the~~ lobate almost to the base, the lobes oblong or ovate, obtuse, reflexed in anthesis; corona very short and shallowly lobate.

Gonolobus oblongifolius (Donn.-Smith) Woodson, Ann. Mo. Bot. Gard. 28: 243. 1941. Trichostelma oblongifolium Donn.-Smith, Bot. Gaz. 48: 296. 1909. Moist or wet thickets, 1,000-2,300 meters; endemic; Baja Verapaz (type from Panzal, Tuerckheim

short calcarate at the juncture of corolla lobes;

OK

II.1747) ² ~~Quesaltenango (Rio Samalá between Zanil and Cantel).~~ ⁴ A large vine, chiefly herbaceous, the stems rather stout, densely hirsute with short, fulvous, spreading or reflexed hairs; leaves membranaceous, slender-petiolate, oblong-ovate or ovate-cordate, 8-15 cm. long, 3-7.5 cm. wide, narrowly acuminate, deeply cordate at the base, densely and rather softly short-hirsute on both surfaces; inflorescences sessile or on short slender peduncles, umbelliform, few-flowered, the pedicels 1.5-3 cm. long, densely hirtellous; calyx lobes lanceolate to oblong, acute or subacute, about 5 mm. long, pale green, hirtellous or glabrate; corolla glabrous, dark green within, 1 cm. long, deeply 5-lobate, the lobes lance-ovate, cucullate at the apex; outer corona sparsely ciliate, the inner corona cupular, scarcely lobate, carnosae, free from the gynostegium.

Praxinosiphon 

Gonolobus oblongifolius (Donn.-Sm.) Woodson, Ann. Mo. Bot. Gard.
28: 243. 1941. Trichostelma oblongifolius Donn.-Sm. Bot. Gaz. 48: 296. 1909
Thickets, 500- 1,00 m.; endemic, Petén; Baja Verapaz (type, Panzal,
Tuerckheim ~~II~~ II 1747)

A woody vine with spreading pilose stems, the pubescence fulvous;
leaves lanceolate-oblong, cuspidate-acuminate, acute to the base or some-
what obtuse and slightly cordate, sparsely pubescent on both sides with
rough segmented hairs, the blade 5-11 cm. long and 1.5-5 cm. broad,
the petioles short, 0.6-2 cm. long, prominently spreading pubescent;
inflorescence cymose, subsessile, the peduncle up to 1 cm. long, the
pedicels of the flowers to 1.5 cm. long, puberulent; calyx pubescent dorsally,
the lobes 3-4 mm. long, ovate lanceolate or lanceolate, acute or acuminate;
corolla sparsely pubescent dorsally, deeply lobate, the lobes, linear-oblong,
obtuse, ~~corollatubo~~ cucullate, glabrous within, about 5 mm. long and 2 mm.
broad; faucal corona about 1 mm. high, obscurely lobate and tufted-pubescent
at the apex, sides and base glabrous; follicles unknown.

A rare species of which only two specimens are known. It is one
of the smaller flowered of the species of this group in Guatemala.

d

Gonolobus prasinanthus Donn.-Sm. Bot. Gaz. 46: 114. 1908. ~~Gonolobus~~

Vine in thickets or over shrubs, up to about 800 m. altitude
Petén;
(type: Cubilquitz, Alta Verapaz, Tuerckheim 8711)/Alta Verapaz; Suchitepéquez;
San Marcos.
Southern Mexico. British Honduras.

Vines, herbaceous or suffrutescent, the branches glabrous or
pubescent. Leaves nearly glabrous above, subglabrous or pubescent below,
the blades lanceolate-ovate, ^ccondate, acuminate, 5-13 cm. long and 3-6
cm. broad, the petioles pubescent, long and slender, ~~4~~ 4-6 cm. long;
Inflorescences borne on peduncles 15-25 mm. long; pedicels 3-6, about
12-20 mm. long; flowers 15-20 mm. across; calyx lobes lanceolate or ⁿnear-lanceolate,
acute, obscurely puberulent outside ~~puberulent~~, 5-6 mm. long and about 1.5 mm.
broad; corolla deeply 5-lobed, the tube very short, the lobes lanceolate
or narrower, acuminate, glabrous, 8-12 mm. long and about 4 mm. broad
at the base; corona fleshy, lobate, less than 1 mm. broad; follicle smooth
when immature.

The specimens which we refer to this species have usually be^{en} referred
to the Mexican G. fraternus Schlecht. ~~xxxxxxx~~ ~~xxxxxxx~~ ~~xxxxxxx~~ ~~xxxxxxx~~ ~~xxxxxxx~~
~~xxxxxxx~~ and G. prasinanthus placed there as a synonym. No authentic
material nor type photographs of G. fraternus are available and the
description is not adequate for determination of the species.

Gonolobus Salvinii Hemsl. Biol. Centr. Amer. Bot. 2: 334. 1882. Cuchamper.

Moist or dry thickets or forest, sometimes in oak forest, 900-2,400 meters; Jalapa; Santa Rosa; Escuintla; Quiché; Quezaltenango (type from Volcán de Zunil, Salvin).
~~Sierra~~ British Honduras; ^{El Honduras} ~~Salvador~~ ^{El Salvador} A small or large vine, the stems pale, puberulent, short-pilose, or almost glabrous; leaves firm-membranaceous, on long slender petioles, oblong-ovate or oblong-deltoid, mostly 5-12 cm. long, acuminate or long-acuminate, rather shallowly and openly cordate at the base, glabrous or nearly so, pale beneath; peduncles mostly 1 cm. long or shorter, few-flowered, the flowers sub-umbellate, the pedicels 2 cm. long or shorter, pubescent; calyx lobes linear or lanceolate, puberulent outside, acute, 5-6 mm. long; corolla subrotate, about 1.5 cm. broad, green, deeply 5-lobate, sparsely puberulent outside and within, the lobes oblong or ovate, obtuse or subacute, reflexed in anthesis; outer corona 5-lobate, the lobes bifid; scales of the inner corona obovate-oblong, recurved at the apex; ovaries glabrous. ^{El} Sometimes called ^{El} ~~Sigamper~~ ^{Sigamper} in ^{El} ~~Salvador~~ ^{Salvador}. The tender fruits are sold there in the markets, being eaten raw ~~and~~ when almost mature, and cooked and eaten at almost all stages of growth.

(OR.)

Gonolobus stenanthus (Standl.) Woodson, Ann. Mo. Bot. Gard. 28: 243. 1941.

Vincetoxicum stenanthum Standl. Field Mus. Bot. 4: 255. 1929. # Moist or wet thickets, at or little above sea level; British Honduras (type from Tower Hill, J. S. Karling 27). ^{Mcxico} (Campeche) Atlantic coast of Honduras. # A slender, herbaceous or woody vine, the stems sparsely puberulent, especially at the nodes, or glabrate; leaves membranaceous, on slender petioles 1-8 cm. long, oblong-ovate or elliptic-ovate, 4-14 cm. long, 2-8.5 cm. ^{broad} ~~wide~~, acuminate or abruptly acuminate, shallowly or deeply and openly cordate, glabrous or sometimes with a few scattered short hairs on the upper surface, paler beneath; inflorescences umbelliform, 1-5-flowered, on peduncles 1-2.5 cm. long, the pedicels unequal, very slender, 1-5 cm. long, sparsely and minutely puberulent or glabrous; calyx lobes narrowly lanceolate, 1.5 cm. long or shorter, attenuate to the apex, glabrous; corolla rotate, 5-lobate almost to the base, ~~rich~~ glabrous within except at the base of the lobes, green, the lobes almost linear, 15-20 mm. long, 3 mm. ^{deep} ~~wide~~ at the base, attenuate, spreading; ~~corolla~~ ~~inner~~ corona ~~very~~ short, ~~monophyllous~~ ~~deeply~~ ~~4~~ mm. broad, conspicuously 5-lobate, the lobes broad, densely hirtellous. # Called Cuchamper in Honduras. The young pods there are ~~boiled~~ ~~and~~ boiled or otherwise cooked with sugar, to make sweetmeats, or dulces.

Gonolobus stenosepalus (Donn. Smith) Woodson, Ann. Mo. Bot. Gard. 28: 243.

1941. Fimbristemma ~~stenosepalus~~ stenosepala Donn. Smith, Bot. Gaz. 18: 208. 1893.

Known only from the type, Santa Rosa, shores of Laguna de Ayarza, 2,400 meters, Hayde & Lux 4004. Leaves oblong or oblong-lanceolate, 10-15 cm. long, 3.5-6 cm. wide, acuminate, cordate at the base; cymes umbelliform, about equaling the leaves, the pedicels shorter than the peduncle; calyx lobes ^{with a few hairs & usually} glabrate except on the margins, membranaceous, lanceolate, acute; corolla lobes broader and longer than the calyx lobes, apiculate, laterally crose; tube of the corona 4 mm. long, pilose, the exterior border narrow, entire, fimbriate, the inner one ~~is~~ not fimbriate, appendaged externally with distant quadrate lobes. ~~We have seen no material of this species, which is incompletely described as to foliage and pubescence. It is said, however, to be similar to G. calycosus.~~

61

Gonolobus stenosepalus (Donn.-Sm.) Woodson, Ann. Mo. Bot. Gard.
28: 243. 1941. Fimbristemma stenosepala Donn.-Sm. Bot. Gaz 18: 208. 1893.

Occasionally common in oak forests or ciliar forests; (the type from Santa Rosa, Heyde & Lux 40040; Huehuetenango; Quiché; Chimaltenango. Mexico Southern Mexico.

hirsute with erect hairs.
Large herbaceous or suffrutescent vines. Leaves oblong-lanceolate to ovate, acuminate, truncate subcordate to cordate at the base, the petioles pubescent with spreading hairs, half or less the length of the blades, strigillose pubescent on both surfaces to ~~near~~ glabrescent above, 4-15 cm. long and 2.5-7 cm. broad; inflorescences of umbelliform cymes shorter than the leaves, peduncles mostly 2-4 cm. long, about as long as the longest pedicels, mostly 5-10-flowered; calyx lobes lanceolate or lanceolate-ovate, puberulent but the margins prominently ciliolate, mostly 6-8 mm. long and 2-4 mm. broad; corolla green, as much as 3 cm. broad at anthesis, divided nearly to the base, ~~lanceolate~~ glabrous outside and glabrous⁰ inside except near the faucal corona, the lobes mostly 8-15 mm. long and 2-4 mm. broad, oblong-lanceolate, acute, obscurely one margin usually/sphacellate; faucal corona mostly 3-4 mm. high, the margin obscurely lobulate, the surface sparsely or usually densely pilose; the gynoestegium longer than the corona; the follicles about 15 cm. long ~~linear~~ lanceolate-ovoid and arcuate, with prominent thin wings.

This species is easily distinguished from all other species of the genus in Mexico and Guatemala by the usually abundantly pilose outer surface of the faucal corona. Assumed to be quite rare it is actually quite wide spread in the area of south Mexico and Guatemala.

D

OK

Gonolobus Steyermarkii Woodson, Ann. Mo. Bot. Gard. 28: 283. 1941. [#] Moist or wet thickets or forest, 1,200-1,400 meters; so far as known, endemic; Suchitepéquez (volcán de Zunil); Quezaltenango (Volcán de Santa María); San Marcos (type from Volcán de Tajumulco, along Río Negro near Finca La Patria, Steyermark, 37661). [#] A large vine, the stems fulvous-hispidulous with spreading hairs; leaves on slender petioles 2-6 cm. long, membranaceous, oblong-ovate or elliptic-ovate, 7-25 cm. long, 2.5-12 cm. ^{broad} wide, narrowly long-acuminate, deeply cordate at the base and subauriculate, thinly fulvous-hispidulous on both surfaces, slightly paler beneath; inflorescences racemiform or sometimes corymbiform, few-flowered, the peduncles 2-4 cm. long, the pedicels 2-3 cm. long, sparsely pilosulous; calyx lobes oblong-lanceolate or ovate-lanceolate, acuminate, 15 mm. long, 5-7 mm. ^{broad} wide, foliaceous, glabrous or papillose; corolla rotate, pale green, glabrous, the lobes broadly oblong-elliptic, ascending, subacute, about 12 mm. long and 5 mm. ^{broad} wide, with revolute margins; throat of the corolla annulate, the ostiole densely pilose; corona annular, the margin minutely crenulate, adnate to the corolla. 5-parted; stigma pentagonal, 4 mm. broad.

This species is closely related to G. calycosus (Donn.-Sm.) Woodson, G. stenosepalus ⁴⁵ (Donn.-Sm.) Woodson and to G. oblongifolius (Donn.-Sm.) Woodson. They may all eventually prove to be variants of a single species.

OK

Gonolobus uniflorus HBK. Nov. gen. & Sp. Pl.

3: 207, t. 228. 1819, Vincetoxicum uniflorum Staudl.
Contr. U.S. Nat. Herb. 23: 1192. 1924.

Moist thickets and open woods, 1300-2000 m.;
alta Verapaz; Huehuetenango, ^{Quiché;} Sta Rosa. ~~Guatemala~~
Mexico, British Honduras, Honduras and Nicaragua.

A small or large vine, the stems slender,
densely fulvous-pilose with short, spreading or reflexed hairs; leaves membranaceous,
on long slender petioles, oblong-ovate, 5-10 cm. long, acuminate or long-acuminate,
deeply cordate at the base with usually somewhat incurved basal lobes, rough-hispidulous on the upper surface, softly short-pilose beneath, usually sparsely so; peduncles mostly shorter than the petioles, 1-few-flowered, the long slender petioles often longer than the peduncle, densely hispidulous; calyx lobes pale, lanceolate ^{to ovate-lanceolate} or linear-lanceolate, 1-1.5 cm. long, long-attenuate, pilosulous; corolla green, rotate, 3-5 cm. broad, sparsely hirtellous outside or glabrous, deeply lobate, the lobes lance-oblong, papillose-puberulent within along one margin, acuminate, annulate,

the annulus densely hirtellous; follicles ovoid, about 10 cm. long and 4.5 cm. broad, acuminate, smooth, glabrous, with narrow thick longitudinal wings, the valves hard and lignescent; seeds blackish, about 7 mm. long, flat.

Genolobus uniflorus - cont.

Ø There are a number of names which have been applied ^{to} the material which we believe represents one rather variable species. The names *which have been* most commonly used are G. macranthus Kunze which may be a synonym and G. leianthus Donn.-~~S~~_m. used in error. The reticulate venation in the corolla makes this one of the more attractive of the Asclepiads in Guatemala.

Gonolobus versicolor Woodson, in Standl. & Steyermark. Bot. §67. Field Mus. 23: 80. 1944. Known only from the type, Huehuetenango, near Maxbal, about 17 miles north of Barillas, 1,500 meters, Steyermark 48768. § A large vine, climbing over trees, the stems pilose with spreading hairs; leaves membranaceous, on petioles 1.5-3.5 cm. long, oblong-ovate, 4.5-8 cm. long, 2-3.5 cm. wide, acuminate, truncate or subcordate at the base, sparsely pilose above along the costa, otherwise glabrous, beneath, setose-pilose on the veins or glabrate; inflorescences extra-axillary, few-flowered, the peduncle glabrous, 3-5 cm. long, the pedicels 2-2.5 cm. long, glabrous; calyx lobes linear-lanceolate, 2 cm. long, long-acuminate, spreading, or reflexed, glabrous, yellowish brown outside near the base, blackish brown above; corolla rotate, the lobes lance-linear, long-acuminate, 2.5-3 cm. long, ascending, glabrous outside, brownish yellow or brownish green, within yellow-brown, pale green, and reddish brown, papillose, the ostiole with a shallowly 5-lobate annulus; corona patelliform, 5 mm. broad, shallowly 5-lobate, the margin entire or obscurely crenulate, pale green; stigma pentagonal, almost flat or somewhat depressed.

Gonolobus xanthotrichus Brandeg. Zoe 5: 251. 1908. Vincetoxicum xanthotrichum Standl. Contr. U. S. Nat. Herb. 23: 1193. 1924. § Moist or wet, mixed forest or thickets, 1,000-1,500 meters; Alta Verapaz; Chiquimula(?); Quezaltenango(?). Southern Mexico. § Plants scandent, usually herbaceous, the stems, petioles, leaf blades, and inflorescence densely hispid-hirsute with long spreading stiff fulvous hairs; leaves membranaceous or thick-membranaceous, on rather short petioles, oblong or obovate-oblong, mostly 8-11 cm. long, shortly cuspidate-acuminate, rounded or shallowly cordate at the narrow base; inflorescences umbelliform, few-flowered, sessile or subsessile, the pedicels mostly 2-3 cm. long, hispid; calyx densely hirsute, the lobes ovate-lanceolate, scarcely half as long as the corolla lobes; corolla rotate, densely

hirsute outside, about 1 cm. long, the lobes triangular-oblong, hirsute within along one margin near the apex; outer corona annular, densely hirsute-barbate, the inner corona consisting of fleshy quadrate scales; gynostegium 2 mm. high; stigma pentagonal, umbonate.

5
5
emo

Hoya carnosa (L.) R. Br., the Wax-plant, native of southeastern Asia, is grown rather frequently in the higher regions of Guatemala, especially about the capital, for ornament. It is a small or large, almost glabrous vine with very fleshy, oval-oblong, short-acuminate leaves, and pedunculate umbels of waxy white flowers. It is grown occasionally as a pot plant in the United States, but is not very common. In Guatemala it is called "Flor de cera."

MARSDENIA R. Brown

*This genus
is close to group
Staphanotaphus
with Macropis.*

Reference: Walter Rothe, Ueber die Gattung Marsdenia R. Br. und die Stammpflanze der Condurangorinde, Bot. Jahrb. 52: 354-434. 1915.

Plants herbaceous or more or less woody, usually scandent, rarely erect, pubescent or glabrous; ~~stems~~ leaves opposite, usually broad; cymes umbelliform or sometimes branched, terminal or solitary in the leaf axils, the flowers small or medium-sized; calyx 5-parted, 5-many-glandular within at the base, 5-squamulate, or rarely eglandular, the segments obtuse; corolla campanulate to urceolate or subrotate, shallowly or deeply 5-lobate, the throat usually closed by hairs or by an annulus, rarely naked, the lobes obtuse, contorted, rarely subvalvate; hoods of the corona 5, adnate to the stamen tube and to the dorsal surface of the anthers, erect, free at the apex, plane, membranaceous or thickened, sometimes 2-auriculate at the base; stamens inserted near the base of the corolla, the filaments connate into a short tube, the anthers terminated by a small, bilobed membrane; pollinia oblong or ovoid, erect; stigma depressed, flat, or convex at the apex, sometimes rostrate; follicles often very thick, acuminate, smooth or longitudinally winged, the pericarp often hard when dried; seeds comose.

There are perhaps more than fifty species of Marsdenia in the tropics and warmer regions of both hemispheres. We believe that there are about twenty six or seven species in Mexico, Central America and Panama.

Plants erect; leaves linear-lanceolate, long-attenuate at the base....M. nerifolia.

Plants scandent; leaves usually much broader than linear-lanceolate.

☐ Leaves abundantly pubescent beneath.

☒ Leaf blades acute or acuminate at the base.....M. trivirgata.

Leaf blades cordate or rounded at the base.

3 | Leaves glabrous on the upper surface or nearly so.....M. propinqua.

Leaves densely pubescent on the upper surface.

4 | Corolla pubescent outside.....M. Gilgiana.

~~4~~ Corolla glabrous outside.

5 ^C Calyx lobes obtuse; pedicels with closely appressed pubescence of short hairs.

M. gualanensis.

Calyx lobes attenuate-acuminate; pubescence of the pedicels of rather long,
stiff, spreading hairs..... M. ^{bourgasana.}
~~gualanensis.~~

☐ Leaves glabrous throughout or nearly so.

☐ Leaves mostly 5-10 cm. wide or larger, broadly rounded at the base.

3 Tube of the corolla about half as long as the lobes..... M. Schlechteriana.

Tube of the corolla about as long as the lobes

Peduncles of the inflorescences ^{much} shorter than the petioles.

Calyx lobes pubescent dorsally; inflorescence pubescent... M. marcophylla.

Calyx lobes ciliate only, glabrous dorsally;

inflorescence glabrous..... M. maculata.

Peduncles of the inflorescence almost equalling the
the petioles.....

M. stephanotidifolia.

☐ Leaves mostly 2-4 cm. wide, if wider the blades acute or subacute at the base.

3 Inflorescences sessile; ~~inflorescence~~ leaf blades attenuate at the base... M. mayana

~~inflorescence~~ conspicuously pedunculate, often long-pedunculate.

4 Calyx lobes glabrous dorsally or essentially so, ciliate.... M. mayana.

Lateral nerves 6-8 pairs visible on lower surface of
leaves; lowland species from British Honduras
and Yucatan.....

M. mayana.

Lateral veins not visible or very obscure on lower
surface of leaves; highland species of Guatemala.

M. cuneata.

Calyx lobes densely strigose ~~ex~~ dorsally..... M. blepharodes.

3 Inflorescences conspicuously pedunculate, often long-pedunculate.

4 Pedicels filiform, mostly 15-25 mm. long; corolla lobate almost to the base.

M. laxiflora.

Pedicels mostly less than 7 mm. long; corolla with a conspicuous tube.

5 Leaf blades acute or subacute at the base; calyx lobes conspicuously ciliate.

M. pseudoedulis.

Leaf blades rounded at the base; calyx lobes eciliate or nearly so.

M. Steyermarkii.

Marsdenia blepharodes Standl. & Steyermark. (Bot. Soc. Field Mus.) 23: 226. 1947.

Known only from the type, Quezaltenango, climbing on a tree fern at border of forest, San Juan Patzulín, about 1,500 meters, Steyermark 33615. A suffrutescent vine, the slender stems terete, when young sparsely puberulent, soon glabrate; leaves on slender petioles 6-15 mm. long, oblong-lanceolate, 7.5-10.5 cm. long, 2-2.5 cm. wide, acuminate or long-acuminate, long-attenuate to the base, glabrous, slightly paler beneath, the lateral nerves about 3 on each side, prominent beneath; inflorescences axillary, sessile, many-flowered, dense, about 1.5 cm. in diameter, the pedicels rather stout, 4-5 mm. long, sparsely puberulent; calyx 2.5-3 mm. long, densely whitish-strigose outside, 5-lobate to the middle, the lobes oval, rounded at the apex, densely ciliate; corolla dull purple outside, grayish within, 4.5 mm. long, glabrous outside, the 5 lobes broadly oblong, very obtuse, densely papillose-puberulent within, somewhat longer than the tube, spreading; scales of the corona broadly rhombic-ovate, scarcely more than 1 mm. long; stigma flat or nearly so at the apex.

Marsdenia bourgeana (Baill.) Rothe in Engler, Bot. Jahrb. 52. 408.
1915. Pseudomarsdenia bourgeana Baill. Hist. Plantes 10: 268. 1890.
M. gymnemoides Rothe, l.c. 409/ ~~XXXXXX~~
(type from Guaxacaná, Seler & Seler 2904). M. gilgiana Rothe, l.c.
410 (type from Mexico, Purpus 2095, or from Guatemala, Heyde & Lux 4542).

Woody vines in thickets or forests or on rocky slopes, 1,200-1,900
meters; Santa Rosa, Escuintla; Guatemala; Sacatepéquez; Huehuetenango;
Southern Mexico. POSSIBLY HONDURAS.

~~Sacatepéquez, Huehuetenango, Southern Mexico.~~ A small or large, more or less woody
vine, the stems and petioles very densely fulvous-pilose with short spreading hairs;
leaves on long or short, slender petioles, membranaceous, broadly ovate to rounded-
ovate, ^{and 3-8 cm. broad,} 5-15 cm. long, ^{rounded to} very obtuse to ~~obtus~~ acuminate, cordate at the base, very densely
velutinous-pilose on both surfaces or sometimes tomentose beneath; cymes pedunculate,
usually lax and many-flowered, mostly longer than the petioles, repeatedly dichoto-
mous, densely hirtellous; calyx lobes linear, ^{to lanceolate} acute, hirtellous; corolla ~~whitish,~~ ^{urceolate,}
sparsely hirtellous outside, ⁻⁶ 4.5 mm. long, barbate within, the lobes semiovate,
rounded at the apex; scales of the corona shorter than the stamens; style with a
short conic beak; follicles densely tomentose, about 9 cm. long and 3 cm. broad,
obtuse. This has been reported from Guatemala as M. mexicana Dcne.

Marsdenia gymnemoides Rothe ^{in Engler,} Bot. Jahrb. 52: 409. f. 3. 1915. In thickets or
forest, sometimes on limestone, about 1,300-1,400 meters; Escuintla; Huehuetenango
(type from Guaxacaná, C. & E. Seler, 2804). A woody or herbaceous vine, the branches
and petioles very densely pilose; leaves on long slender petioles, membranaceous,
ovate or oval-ovate, 5-10 cm. long, 3.5-8 cm. wide, abruptly caudate-acuminate,
broadly rounded at the base, very densely and softly short-pilose on both surfaces;
cymes dense, many-flowered, short-pedunculate, little longer than the petioles, densely
hirtellous; calyx lobes rather long, lanceolate, acuminate, densely hirtellous;
corolla yellowish or purplish, sparsely pilose outside, 6 mm. long, barbate within, the
tube urceolate, the lobes narrow, spreading, rounded at the apex; scales of the corona
dentiform; style with a short-thick-conic beak; ovaries pilose.

Many are
Pourouma

M. sinuata taken out for original ms.

Marsdenia gualanensis Donn.-Sm. Bot. Gaz. 49: 456. 1910.

In thickets or dry rocky slopes, ~~200~~ 200-600 meters. Zacapa (Type from Gualán, Deam 6333); Jalapa. Apparently endemic.

Marsdenia Coulteri Hemsl. Biol. Cent. Amer. Bot. 2: 336. 1882. M. Sclerorum Loeb. Bull. Herb. Boiss. 2: 557. 1894. M. gualanensis Donn.-Smith Bot. Gaz. 49: 456. 1910 (type from Gualán, Zacapa, C. C. Deam 6333). Chato (Petén). Moist or dry, often rocky thickets, 650 meters or less; reported from Petén; Zacapa; Jutiapa. Mexico.

A small or large, coarse, woody vine, the branches and petioles densely pubescent; leaves on short or elongate, slender petioles, membranaceous, oblong-ovate to broadly ovate or rounded-deltoid, 5-10 cm. long, short-acuminate or sometimes narrowed to an obtuse apex, rounded or truncate at the apex or sometimes cordate, very densely and softly pubescent on both surfaces, somewhat paler beneath; inflorescences much branched, many-flowered, about equaling the petioles, the branches and pedicels densely and finely pubescent with mostly appressed hairs, the flowers slender-pedicellate; calyx appressed-puberulent, deeply lobate, the segments oblong, obtuse; corolla about 2.5 mm. long, glabrous outside, barbate within, much longer than the short tube; scales of the corona minute; ovaries glabrous; follicles glabrous, about 8 cm. long and 2.5 cm. thick, obtuse, smooth, the valves very thick and somewhat ligneous. The Maya names of Yucatan are recorded as Kentsul and Solac. A collection reported from Huehuetenango by Loesener as Pseudomarsdenia Bourgeana Baill. probably is referable here, although that species (Marsdenia Bourgeana Rothe) might occur in Guatemala.

This has usually been assumed to be a synonym of Marsdenia coulteri Hemsl., a Mexican species that seems to be quite different.

Edone

Marsdenia laxiflora Donn.-Smith, Bot. Gaz. 40: 7. 1905. [†]Moist or wet thickets
or forest, often on limestone, 350 meters or less; Alta Verapaz (type from Cubil-
^{PETÉN;}gütz, Tuerckheim 8558b); Izabal; British Honduras; reported from Costa Rica. [†]A very
slender, glabrous, herbaceous or suffrutescent vine; leaves on short slender petioles,
[†]membranaceous or chartaceous, often lustrous, lanceolate or oblong-lanceolate,

laniflora broad,
7-14 cm. long, 1.5-5 cm. ~~wide~~, gradually or very abruptly acuminate, acute or obtuse at the base, bearing several small glands on the upper surface at the base of the blade; inflorescences axillary, few-many-flowered, extremely lax and open, longer or shorter than the leaves, the peduncles 4-6 ^{cm} m. long or longer, the filiform pedicels 1.5-2.5 cm. long; calyx lobes ovate, obtuse, 2 mm. long, ciliate; corolla purple, rotate, the tube 2 mm. long, the lobes oblong or triangular-oblong, 5-6 mm. long, glabrous outside and within, ciliate; follicles very slender, 20-25 cm. long, 1 cm. thick, smooth, glabrous; seeds brown, thin, 1 cm. long, the coma of very numerous soft silky white hairs.

Marsdenia macrophylla (Humb. & Bonpl.) Fourn. in Mart. Fl. Bras. ~~64~~ ⁴ pt. 4: 321.
1885. *Asclepias macrophylla* Humb. & Bonpl. ex Roem. & Schult. Syst. Veg. 6: 86.
1820. *Cuchampera*; *Cuchamperillo*. Moist or dry thickets or forest, often in rocky places, sometimes in hedges, 2,250 meters or lower; ~~Peru; Alta Verapaz; Isabela;~~
^{Baja Verapaz;} Jutiapa; Escuintla; Guatemala; Quezaltenango; ^{San Marcos.} Mexico; ^{Central America} ~~Costa Rica;~~

~~Lesser Antilles;~~ northern South America. Usually a large and coarse, more or less woody vine, glabrous or nearly so outside the inflorescence; leaves on rather long, stout petioles, chartaceous or when fresh somewhat succulent; ovate to elliptic, oval, or rounded, 7-²⁵₁₄ cm. long, mostly 7-²⁰₁₃ cm. ^{broad} ~~wide~~, usually rounded or very obtuse at the apex and shortly cuspidate-acuminate, broadly rounded to shallowly cordate at the glandular on the upper side at the base of the blade; base, paler beneath; cymes many-flowered, short-pedunculate or sometimes long-pedunculate, shorter or longer than the petioles, sparsely or densely puberulent, very dense or rather open, the flowers on stout pedicels; calyx segments broad, obtuse or rounded at the apex, ciliate, usually pubescent outside; corolla yellowish or greenish, 5-¹⁰₆ mm. long, glabrous outside, the lobes broad, somewhat shorter than the urceolate follicles terete, about 10-¹³ cm. long and ^{about} 5 cm. in diameter, smooth, tube or about equaling it. The Maya name of Yucatan is recorded as Xemtzul.
"Estropajo cimarrón (Oaxaca). #

~~NOT Crossed off~~

Marsdenia maculata Hook. f. Bot. Mag.

73: t. 429a. 1847. Bejuco de leche.

A vine over shrubs and trees at
600 m. or less. Petén. ~~to~~ Mexico, Honduras,
Panama. Lesser Antilles. perhaps SOUTH AMERICA.

A large coarse vine to 20 meters or
perhaps more, the stems to 1 cm. in
diameter or possibly more. Leaves elliptic-
oblong to ovate or suborbicular, the base
truncate to cordate, glabrous, with 5-6
pairs of secondary nerves. 9-25 cm. long
and 5-21 cm. broad, petiole 1.5-4 cm.
long, with a group of 2-5 small mammillate
callus at its juncture with the blade;
inflorescence subumbellate, many-flowered,
peduncle shorter than the petiole, to about
1.5 cm. long, pedicels 1 cm $\pm$ or less long;

M. maculata p. 2.

calyx divided to the base, the lobes ovate, obtuse, the margins sphenolate, ciliate, 3-4 mm. long and 2-2.5 mm. broad; corolla divided to about the middle, the tube 3-4 mm. long, the lobes 3-4 mm. long and oblong-ovate, obtuse, ciliate, otherwise glabrous except obscurely pubescent at the base within; corona scales linear-oblong, obtuse, shorter than the style; follicles ellipsoidal, up to 22 cm. long and 5 cm. in diameter.

This species is one of the complex often called *M. macrophylla*. The group is in need of restudy. ~~when it may be found that the North American material is distinct from that of~~

HA crossed #
Marsdenia mayana Lundell, Contr. Univ. Mich. Herb. 4: 23, 1940. ⁴ ~~Moist forest,~~
about 1,200 meters; Huehuetenango (Paso del Boquerón, Río Trápicillo, below La Li-
bertad, Steyermark 51206). British Honduras, the type from Valentín, El Cayo

(M. mayana?) Mexico.
on limestone,
District, C. L. Lundell, 6192. A large woody vine as much as 10 meters long, glabrous except in the inflorescence; leaves short-petiolate, the petioles 12-20 mm. long, the blades membranaceous or chartaceous, narrowly oblong or oblong-lanceolate, 10-15 cm. long, 2.5-4.5 cm. ^{broad} wide, acuminate or long-acuminate, long-attenuate to the base, green above, often lustrous, paler beneath, the lateral nerves 6-8 on each side; inflorescences sessile, dense, many-flowered, shorter than the petioles, the pedicels 3 mm. long or less, sparsely puberulent or glabrate; calyx lobes broadly ovate, 2.5-3 mm. long, rounded at the apex, ciliate, glabrous dorsally or nearly so; corolla greenish, 5 mm. long, glabrous outside, minutely tomentulose within, the tube campanulate, lightly longer than the lobes, these broadly ovate, rounded at the apex; scales of the corona oblong, 3 mm. long; ovaries glabrous.

Marsdenia nerifolia (Dcne.) Woodson, Ann. Mo. Bot. Gard. 28: 244. 1941.

Elepharodon nerifolium Dcne. in DC. Prodr. 8: 604. 1844. Nephrazenia nerifolia Benth. & Hook. ex Hemsl. Biol. Centr. Amer. Bot. 2: 336. 1882. N. fruticosa Donn.-Smith, Bot. Gaz. 16: 196. 1891 (type from Rio Huixtla, Alta Verapaz, ^{bl}Therckheim 1251). Along stream banks or on rocks in streams, 200-750 meters; Alta Verapaz, Oaxaca and perhaps elsewhere in southern Mexico. An erect glabrous shrub 1-2 meters high, sparsely branched; leaves on short slender petioles, linear-lanceolate, mostly 8-20 cm. long and 1-2.5 cm. wide, narrowly long-acuminate, long-attenuate to the base, deep green above, somewhat paler beneath; inflorescences umbellate, axillary, solitary, slender-pedunculate, mostly 5 cm. long or shorter, few-flowered, the pedicels long and slender; calyx lobes ovate or suborbicular, ciliate, rounded at the apex; corolla cream-colored, about 1.5 cm. broad, glabrous outside, the lobes broad, obtuse; stigma convex, not at all umbonate or rostrate.

Marsdenia propinqua Hemsl. Biol. Centr. Amer. Bot. 2: 337. 1882. Moist or dry thickets, 300-1,400 meters; Jutiapa; Escuintla; Guatemala; Huehuetenango. Southern Mexico. A large, coarse, more or less woody vine, the stems somewhat puberulent or glabrous; leaves thick, on rather short, slender petioles, oval to rounded-oval or ovate-oval, mostly 8-17 cm. long and 7-10 cm. ^{broad} wide, usually rounded and abruptly short-

pointed at the apex, broadly rounded or subcordate at the base, glabrous above or nearly so, velutinous-tomentose or densely short-pilose beneath; cymes very dense and many-flowered, short-pedunculate, about 3 cm. in diameter, the branches and stout pedicels tomentulose; calyx ^{thinly} tomentose, the lobes broad, obtuse; corolla 7-8 mm. long, sometimes dark red, pubescent outside and sparsely pilose within, the lobes broad, rounded at the apex; follicles 11-15 cm. long, obtuse, smooth, the valves thick and hard; seeds nearly 1 cm. long, flat, comate with long silky white hairs.

Marsdenia pseudoedulis Woodson, Ann. Mo. Bot. Gard. 28: 284. 1941. Known definitely only from the type, San Marcos, lower southern slopes of Volcán de Santa María, along the great barranco between Finca Pirineos and San Juan Patzulín, 1,300-1,500 meters, Steevermark 33633. ^{Fig. 5} A slender woody vine, the stems puberulent when young; leaves membranaceous, on slender petioles 1-2.5 cm. long, elliptic, 4.5-11 cm. long, 1.5-5 cm. wide, acuminate, acute or subacute at the base, ~~gla~~ glabrous, slightly paler beneath; inflorescences umbelliform, few-flowered, the peduncles 5 mm. long, sparsely pilosulous, the pedicels of about the same length; calyx lobes ovate, obtuse, 2 mm. long, pilosulous; corolla campanulate, white, sparsely pilosulous outside, more densely pilosulous within, the lobes slightly longer than the tube, ovate-elliptic, obtuse, spreading; stigma flat or nearly so; anthers 1 mm. long; scales of the corona reniform, obtuse, 0.5 mm. long.

Marsdenia Schlechteriana ^{in Engelm.} Rothe, Bot. Jahrb. 52: 418, 1915. Known only from the type, Sololá, La ⁵ Corona, 1,100 meters, J. D. Smith 2773. ^{Fig. 5} A woody vine, the branches glabrous; leaves on petioles about 3 cm. long, oval, 5-11 cm. long, 4-7 cm. wide, acuminate, truncate at the base, membranaceous, glabrous; inflorescences umbelliform, dense, many-flowered, pedunculate, the peduncle 3 cm. long, the pedicels about 1 cm. long, stout; calyx lobes spreading, pilosulous outside, ciliate, 2.5 mm. long; corolla tube 2 mm. long, the lobes 4 mm. long, rounded at the apex, ciliate; gynostegium 2.5 mm. high; scales of the corona acuminate; stigma bearing a short thick-conic beak. ^{Fig. 5}

^{Fig. 5} This is closely related to M. macrophylla, and it may be that some of the specimens we have referred to that species belong rather with M. Schlechteriana. The key characters used by Rothe, however, would refer all our material rather to M. macrophylla, from which M. Schlechteriana may not be distinct.

Marsdenia stephanotidifolia Woodson in Standl. & Steyerl. Bot. 1 Sep. Field Mus. Bot.

23: 79. 1944. ⁹ Moist or wet, mixed forest or thickets, 2,200 meters or less; ~~Peten~~; Quezaltenango (type collected near Santa María de Jesús, along Río Samalá, Standley 84593). ⁹ A large, more or less woody vine, glabrous except in the inflorescence, the stems stout, conspicuously lenticellate; leaves on stout petioles 2.5-4.5 cm. long, subchartaceous, oblong-ovate to rounded-ovate, 10-25 cm. long, 6-17 cm. wide, obtuse or rounded at the apex and ^ucuspidate-acuminate, broadly rounded or subcordate at the base; inflorescences extra-axillary, umbelliform or corymbiform, repeatedly dichotomous, few-many-flowered, the peduncles almost equaling the petioles, papillose-puberulent, the pedicels about 8 mm. long, papillose-puberulent; calyx lobes ovate, obtuse, 5 mm. long; corolla urceolate, 11 mm. long, glabrous outside, densely villosulous within except on the margins of the lobes, the lobes erect or somewhat spreading, equaling the tube; gynostegium included, the beak of the stigma exserted; anthers 5 mm. long; beak of the stigma 4 mm. long. ⁹ The determination of the single collection recorded from Peten is questionable, the material being sterile.

*Marsdenia
pedone*

Marsdenia Steyermarkii Woodson, Ann. Mo. Bot. Gard. 28: 285. 1941. # Moist or wet forest or thickets, 1,300-2,500 meters; San Marcos (type collected on Volcán de Tacaná, along Quebrada Cangula between Sibinal and Cangula, Steyermark 36019) (C) Mexico (Chiapas). ~~Probably also in Quetzaltenango (material sterile)~~ known at present only from Guatemala but to be expected in Chiapas. #

A small or large, more or less woody vine, glabrous throughout or nearly so; leaves on slender petioles 1-2 cm. long, oblong or elliptic-oblong, mostly 6-10 cm. long and 2-3.5 cm. ^{wide}, abruptly short-acuminate, rounded at the base, rather thick, deep green and often lustrous above, somewhat paler beneath; inflorescence few-flowered, the peduncle 2-fid, 2.5 cm. long, the pedicels 4 mm. long, sparsely puberulent or glabrate; calyx lobes ovate, acute, 2 mm. long, minutely papillose-puberulent; corolla campanulate, white, glabrous outside, pilosulous within, the tube 3 mm. long, the lobes ovate, obtuse, 2.5 mm. long, spreading; gynostegium 3 mm. long; scales of the corona 2 mm. long; stigma broad, conic.

Marsdenia trivirgata Bartlett, Proc. Amer. Acad. Sci. 44: 632. 1909. # Dry rocky slopes, climbing over Opuntia, about 200 meters; Zacapa (near Papéza, Steyermark 29320). ^{Honduras; #} Southwestern Mexico; Panama. A very slender, somewhat woody vine, the stems puberulent in 2 lines or glabrate; leaves slender-petiolate, membranaceous, elliptic, narrowly elliptic, or ovate-elliptic, usually 2.5-7.5 cm. long, acuminate or long-acuminate, acute or attenuate at the base or rarely obtuse, rather densely puberulent on both surfaces; cymes almost sessile, few-flowered, sparsely puberulent, the flowers on rather stout, short pedicels; calyx lobes ovate, very obtuse, white-ciliate, sparsely puberulent; corolla glabrous outside, white or pale pink striped with lilac, 6 mm. long, the lobes linear-oblong, several times as long as the short tube, spreading, obtuse, sparsely and minutely hirtellous within; stigma ending in a beak ~~1-1.5~~ 1-1.5 mm. long. #

Illus. revision

MATELEA Aublet

Plants herbaceous or sometimes woody below, usually scandent, sometimes prostrate or erect, pubescent or almost glabrous; leaves petiolate, various in form, ^{most} often cordate; flowers small or medium-sized, sometimes rather large, the cymes usually umbelliform; calyx 5-lobate, ~~gla~~ 5-glandular within at the base; corolla usually rotate or nearly so, shallowly or deeply 5-lobate, the lobes narrow or broad, dextrorsely contorted; corona very variable in form, the outer corona entire or lobate, often annular or fimbriate, sometimes consisting of a large disk adnate to the corolla throat; stamens inserted near the base of the corolla, the filaments connate into a short tube, the anthers not evidently vesicular, without dorsal appendages; pollinia solitary in each cell, clavate or obovoid, horizontal or subpendulous; stigma depressed at the apex, more or less pentagonal; follicles slender or broad, smooth or costate, often tuberculate-muricate. More than 100 species are listed for North America by Woodson, and many others are found in South America. A few additional species are found in southern Central America. The genus is wholly American.

We have followed Woodson (Ann. Mo. Bot. Gard. 28: 217, ^{-232,} 1941) in the treatment of Matelea with some misgivings. Looking at the material from Mexico and Central America that has been placed here there would seem to be several genera involved. Some of these have been described, as Woodson points out, as distinct genera. Certainly some species included here are less closely related (M. balbisii and M. guirosii are examples) to one another than certain other Mateleas are to Gonolobi or even to Fischerias.

leaves not cordate at the base.

- ☐ Plants erect, not scandent, herbaceous, hirsute.....M. Balbisii.
☐ Plants scandent.

☒ Leaves glabrous beneath.

- 3 | Leaves ~~in~~ 13-18 cm. long; corolla glabrous outside.....M. glaberrima.
| Leaves 4.5-7.5 cm. long; corolla puberulent outside.

4 | Peduncles 3-5 mm. long; calyx lobes broadly ovate; corolla 1 cm. broad.
| M. tenuis.

Peduncles 8-12 mm. long; calyx lobes linear-lanceolate; corolla about 2 cm.
broad.....M. belizensis.

☐ Leaves pilose beneath, at least on the nerves.

- 3 | Leaves long-hirsute beneath on the nerves, membranaceous,.....M. Tuerckheimii.
| Leaves sparsely puberulent beneath on the nerves, thick; corolla scarcely 1
cm. broad.....M. campechiana.

leaves cordate at the base.

☐ Leaf blades broadest at or above the middle, narrowed to a narrow, shallowly cordate
base. Stems hirsute.

☐ Calyx lobes lance-linear; inflorescence lax, few-flowered, the pedicels mostly 2-3
cm. long.....M. grandiflora.

Calyx lobes ovate or broadly ovate; inflorescence dense and congested, many-flow-
ered, the pedicels usually very short. M. pleistantha.

3 | Inflorescence bearing numerous large green ovate bracts.....M. obovata.

Inflorescence ebracteate.....M. pleistantha.

☐ Leaf blades broadest at the base or at least below the middle, not at all narrowed
toward the base.

☒ Corolla densely pilose within, large, about 3.5 cm. broad..... M. sylvicola.

Corolla glabrous within or rarely arachnoid-tomentose.

3 | Lobes of the corolla linear, 1-2 mm. wide or sometimes slightly wider.

4 | Inflorescence racemose; leaf blades deeply cordate at the base..M. Prosthecidiscus.

Inflorescence umbellate; leaf blades shallowly cordate or rounded at the base.

5 | Leaves glabrous beneath; pubescence of the calyx of minute appressed hairs.
| M. belizensis.

| Leaves hirsute beneath on the nerves; pubescence of the calyx of stiff ~~hairs~~.
| spreading hairs.

6 | ~~Stip~~ Corolla lobes pale green, 1 mm. wide.....M. Medusae.
| Corolla lobes purple-brown, 2-2.5 mm. wide.....M. gonoloboides.

3 Lobes of the corolla triangular-lanceolate to suborbicular, usually much more than
2 mm. wide.

- 4 Lobes of the corolla rounded at the apex, usually as broad as
1 long, rarely only oval.
- 5 Flowers small, the corolla 3-7 mm. long.
- 6 Calyx lobes acute, longer than broad.
- 7 Plant glabrous; calyx lobes less than 3 mm. long..... M. pusilliflora.
- 7 Plants hirsute; calyx lobes more than 5 mm. long.... M. molinarum.
- 6 Calyx lobes suborbicular, apex rounded..... M. velutina.
- 5 Flowers relatively large the corolla usually more than 1
1 cm. long (sometimes only 8 mm. in some flowers.
- 6 Calyx lobes rounded at the apex and subulate-cuspidate. Plants densely hirsute
throughout..... M. guatemalensis.
- Calyx lobes acute to very obtuse at the apex, not cuspidate.
- 7 Calyx lobes very obtuse.
- 8 Corolla merely puberulent outside..... Vincetoxicum hatchii.
~~M. xoxoxoxoxoxoxo~~
- 1 Corolla hispid or hirsute outside..... M. velutina.
- 7 Calyx lobes acute or acuminate.
- 8 Leaves lance-oblong, shallowly cordate at the base; lobes of the corolla much
longer than broad..... M. Steyermarkii.
- 8 Leaves rounded-ovate, deeply cordate at the base; lobes of the corolla about
as broad as long..... M. Quirosii.
- 4 Lobes of the corolla acute or at least pointed, sometimes attenuate, usually much
longer than broad, sometimes broadly triangular.
- 5 Corolla glabrous outside.
- 6 Corolla 7-8 mm. long; M. megacarpa.
- 6 Corolla usually 15-18 mm. long. M. Decaisnei.
- 5 Corolla sparsely or densely pubescent outside.
- 6 Corolla arachnoid-tomentose within in the throat..... M. araneosa.
- 6 Corolla not arachnoid-tomentose within.
- 7 Leaves oblong-ovate.
- 8 Corolla about 14 mm. long, the lobes linear-lanceolate..... M. patalensis.
- 8 Corolla about 7 mm. long, the lobes broadly ovate..... M. violacea.
- 7 Leaves broadly ovate-cordate.

8 | Corolla lobes broadly ovate; calyx long-hirsute; follicles glandular-puberulent.

M. pseudobarbata.

| Corolla lobes triangular; calyx hirtellous; follicles glabrous.

9 | Calyx lobes 4-5 mm. long; corolla about 8 mm. long.....M. diffusa.

| Calyx lobes about 8 mm. long; corolla about 15 mm. long...M. ceratopetala.

Matelea araneosa (Donn.-Smith) Woodson, Ann. Mo. Bot. Gard. 28: 222. 1941.
Gonolobus araneosus Donn.-Smith, Bot. Gaz. 47: 257. 1909. ~~Typical~~ Known only

from the type, Alta Verapaz, mountains between Tactic and Cobán, 1,650 meters, Tuerckheim II. 2332. Plants scandent, suffrutescent, the branches, petioles, inflorescence and calyx pilose with spreading hairs; leaves on petioles 1-2 cm. long, oblong-ovate or lance-ovate, 6-8 cm. long, 2.5-3.5 cm. wide, acuminate, shallowly cordate at the base, with a broad open acute sinus, softly pilose; inflorescence umbelliform, slightly longer than the petioles, the peduncle ~~3-5~~ 3-5 mm. long, the 4-5 pedicels 3-7 mm. long; calyx lobes linear-lanceolate, 5 mm. long; corolla reticulate-veined, lobate to the middle, whitish-arachnoid within below the lobes, 8 mm. long, rotate, the lobes glabrous within, sparsely pilosulous outside, ciliate at the apex; corona cyathiform, equaling the gynostegium and free from it, 5-denticulate, 1 mm. high, 2 mm. broad. ~~We know this species only from the description.~~

Matelea Balbisii (Dcne.) Woodson, Ann. Mo. Bot. Gard. 28: 231. 1941. Asclepias villosa Balb. Mem. Acad. Sci. Torino 7: 386. 1803, not Mill. 1768. Lachnostoma Balbisii Dcne. in DC. Prodr. 8: 602. 1844. Gonolobus pogonanthus Hemsl. Biol. Centr.

Amer. Bot. 2: 333. 1882. Pherotrichis Balbisii Gray, Proc. Amer. Acad. 21: 400. 1886. Grassy open slopes, 2,000 meters; Huehuetenango (southeast of Huehuetenango, Mexico). Steyermark, 48172. Plants herbaceous, erect, arising from a usually somewhat tuberous-thickened root, the stems usually simple, stout, abundantly leafy, densely hirsute with spreading yellowish hairs; leaves short-petiolate, rather thick, broadly ovate to lanceolate or even oblanceolate, 3.5-8 cm. long, ~~3-5~~ 1-5.5 cm. wide, rounded or very obtuse at the apex, usually rounded or very obtuse at the base, rarely attenuate, sparsely or densely hirsute on both surfaces or sometimes glabrate; flowers pale green, umbellate, the umbels appearing in most of the leaf axils above the middle of the stem, sessile or nearly so, rather few-flowered, densely hirsute, the pedicels 6 mm. long or shorter; calyx lobes short, lanceolate, hispidulous; corolla campanulate-rotate, 5-7 mm. long, ~~whitely~~ white-barbate within; crown composed of 5 quadrate, excised-truncate scales, these longer than the hyaline-tipped anthers; stigma bearing a large, globose or conic appendage; follicles rather slender, terete,

narrowly long-acuminate, not tuberculate, very densely hirsute with long spreading hairs. ~~The single Guatemalan collection consists of two stems, one of which has narrower leaves than any of the Mexican specimens we have examined, most of the leaf blades being long-attenuate at the base. The other stem, however, bears leaves that are ~~about~~ similar to those of most Mexican plants.~~ In general appearance this plant resembles an *Asclepias*, and is very unlike other Central American species of *Matelea* and perhaps does not belong in *Matelea* this genus.

Matelea belizensis (Lundell & Standl.) Woodson, Ann. Mo. Bot. Gard. 28: 232.
1941. *Vintetoxicum belizense* Lundell & Standl. ex Standl. Field Mus. Bot. 17: 268.
1937. *Dana de la noche*. Known only from the type, British Honduras, Corozal District, little above sea level, P. H. Gentle, 299. Stems herbaceous, scandent, appressed-pilose; leaves on petioles 5-17 mm. long, ovate or ovate-oblong, 4.5-7.5 cm. long, 2-4.5 cm. ^{broad} ~~wide~~, acutely acuminate, shallowly cordate at the base or only rounded, rather thick, glabrous above except for a few appressed hairs along the nerves, paler beneath, with a few short hairs along the costa, otherwise glabrous; peduncles 8-12 mm. long, puberulent, the inflorescence subumbellate, 8-12-flowered, the pedicels slender, puberulent, 6-10 mm. long; calyx 5-parted, the segments linear-lanceolate, 3 mm. long, subobtusate, puberulent outside, alternating with 5 small basal appendages; corolla ^{campanulate} rotate, 5-lobate almost to the base, ^{about 10 mm. long,} ~~18-20 mm. broad~~, the lobes narrowly lanceolate, 9 mm. long, ²⁻ ~~3 mm. wide~~, subacute, glabrous within, sparsely puberulent outside; outer corona glabrous, fleshy, deeply 5-lobate, the lobes ³⁻ ~~4~~-dentate.

Matelea campechiana (Standl.) Woodson, Ann. Mo. Bot. Gard. 28: 234. 1941. *Vintetoxicum campechianum* Standl. Carnegie Inst. Wash. Publ. 461: 82. 1935. Moist or wet thickets, about 100 meters; ^{Petén;} Alta Verapaz ^(D) (savanna north of Concepción, near the Patén boundary, Steyermark 45243). ^{MEXICO} (Campeche); British Honduras. A somewhat woody vine, the stems slender, rather densely pilose with short spreading hairs or in age glabrate; leaves on petioles 5-15 mm. long, subcoriaceous, lance-oblong to oblong-ovate or broadly ovate, 3-7 cm. long, 1-4.5 cm. wide, acute or short-acuminate, rounded at the base, somewhat lustrous above, appressed-pilosulous along the costa,

paler beneath, glabrous; inflorescences umbelliform, 3-6-flowered, the peduncle 3-5 mm. long, the pedicels stout, 3-6 mm. long, puberulent; calyx 1.5-2 mm. long, the lobes oval or broadly ovate, obtuse or rounded at the apex, minutely appressed-pilous; corolla spreading or reflexed, dull green with bronze-green reticulations, minutely hirtellous outside, 5 mm. long, the lobes broadly elliptic or almost rounded, rounded at the apex, glabrous within or puberulent only at the base; gynostegium pentagonal, 2 mm. broad, borne on a short thick stipe; corolla pale, narrow, subentire; follicles narrowly lanceolate, narrowly long-acuminate, about 7.5 cm. long and almost 2 cm. broad, glabrous, bearing few thick fleshy tubercles 2-4 mm. long.

Matelea ceratopetala (Donn.-Smith) Woodson, Ann. Mo. Bot. Gard. 28: 236. 1941. ad
Dictyanthus ceratopetalus, Donn.-Smith, Bot. Gaz. 18: 208. 1893. Cochita; Cochitos; Chununa; Corazón de loro (Escuintla); Sombreros, Sombreritos (flowers). # Moist or dry, brushy, often rocky plains and hillsides, 1,350 meters or lower; Jalapa; Jutiapa; Santa Rosa (type from Santa Rosa, Heyde & Lux, 3999); Escuintla. Southern Mexico (Oaxaca, Puebla). ^{Honduras} A small or rather large, more or less woody vine, or the stems sometimes prostrate, the older stems ochraceous, the stems thinly hispid with bulbous-based hairs and minutely puberulent; leaves on long slender petioles, broadly ovate-cordate, membranaceous, 2-7 cm. long, acuminate or short-acuminate, usually deeply cordate at the base, scaberrulous and hispidulous above, hispidulous beneath on the ^Snerve and veins, the veins usually elevated and closely reticulate; inflorescence umbellate, 2-8-flowered, sessile or short-pedunculate, the flowers slender-pedicellate; calyx lobes lanceolate, 12 mm. long or shorter; corolla green ~~with~~ and brown-purple within, ²about 2 cm. long, rotate-campanulate, puberulent outside, more or less puberulent within or almost glabrous, 5-lobate to about the middle, the lobes triangular, acute or with a narrow obtuse tip, the margins revolute; follicles glabrous, 6.5-10 cm. long, narrowly long-acuminate, bearing few or numerous, fleshy, long or short tubercles. # The young fruits of this and other species are cooked and eaten. - Called "Cuchampel and Chanchitos" in Honduras.

M. viridiflora (DC.) Woodson ? - plant with
Matelea Decaisnei Woodson, Ann. Mo. Bot. Gard. 28: 232. 1941. Polystemma viridiflora, Dcne. in DC. Prodr. 8: 602. 1844, not M. viridiflora, Woodson, 1941. Malacate.

Moist or dry, often rocky, brushy slopes, 200-900 meters; Zacapa; Chiquimula. Southern Mexico. ^{Honduras} A small woody vine, the slender stems puberulent and sparsely hispid; leaves slender-petiolate, broadly or narrowly ovate-cordate, 2.5-6.5 cm. long, usually long-acuminate, rather deeply and narrowly cordate at the base, densely puberulent and sparsely hispidulous on both surfaces, membranaceous; ^m umbels 1-4-flowered, often equaling the leaves, the peduncles 2 cm. long or shorter, the pedicels equaling or longer than the peduncles; sepals pale green, lanceolate, about 8 mm. long, acuminate, puberulent and hispidulous; corolla in bud lanceolate and long-acuminate, glabrous outside or very minutely puberulent, 1.5-2 cm. long, green within and glabrous or nearly so, the lobes triangular-lanceolate, attenuate to an obtuse tip; corona adnate to the gynostegium, composed of 5 ligulate scales and 20 small hair-like ones; stigma flat; follicles rather slender, smooth, about 9 cm. long and 1.5 cm. thick, glabrous. # So far as known, the range of this species in Guatemala is narrowly limited, and confined to the dry hills and plains of Zacapa and Chiquimula. Woodson has referred some of the specimens to M. Decaisnei and some to M. rupestris (Brandeg) (ff) Woodson, but apparently all the material represents a single species. If the name M. rupestris is applicable to the Guatemalan specimens, ~~it is applicable~~ and is synonymous with Polystemma viridiflora, it has priority over the name M. Decaisnei.

→ Matelea diffusa Woodson, Ann. Mo. Bot. Gard. 28: 236. 1941. Dictyanthus prostratus Brandeg, ^{Ch} Univ. Calif. Publ. Bot. 7: 329. 1920, not M. prostrata Woodson, 1928. Chinuna, ^{El} Dry open slopes, 800-1,600 meters; ~~Machukla~~ Jalapa; Huehuetenango. Southern Mexico; ^{El} Salvador. # A small vine, the stems herbaceous or ~~prostrate~~, suffrutescent, sometimes prostrate, densely puberulent and thinly hispid; leaves thick-membranaceous, very broadly ovate-cordate, mostly 2-2.5 cm. long and about as wide, acute or short-acuminate, deeply and narrowly cordate at the base, densely hispidulous on both surfaces, the veins prominent beneath and closely and conspicuously

diffusa (cont)

reticulate; peduncles very short, mostly 2-flowered, the peduncles and pedicels together scarcely equaling the petiole; calyx lobes ovate, acuminate, 3 mm. long; corolla broadly campanulate or rotate-campanulate, about 7 mm. long, puberulent outside, minutely puberulent within, dark brown-purple, the lobes triangular, narrowed to a narrow obtuse tip, revolute; outer corona deeply 5-lobate, the lobes narrow, wholly adnate to depressions in the lower half of the corolla tube; stigma pentagonal, umbonate; follicles about 5 cm. long and 1.5 cm. broad, long-acuminate, glabrous, somewhat lustrous, bearing few large stout fleshy spine-like tubercles. Here probably belongs a collection reported from Huehuetenango by Loesener as Dictyanthus parviflorus Hemsl.

Matelea glaberrima Woodson, Ann. Mo. Bot. Gard. 28: 281. 1941. ⁴ Known only from the type, Petén, Uaxactún, H. H. Bartlett, 12300. ⁴ A glabrous woody vine; leaves on petioles 1-3 cm. long, ovate-elliptic, 13-18 cm. long, 5-11 cm. ^{lvs 22} wide, acuminate, rounded at the base; ^{Coriaceous} inflorescence umbelliform, few-flowered, subsessile, the pedicels about 1 cm. long; flowers green and brown; calyx lobes ovate-lanceolate, 5 mm. long, acuminate, minutely papillose-puberulent; corolla rotate, glabrous outside, papillose-puberulent within, 17 mm. broad, the lobes ovate-elliptic, acute, 8 mm. long, spreading; crown cup-shaped, strongly pentagonal, the margin undulate, the sinuses ^{hi} ~~hi~~ lamellate and bearing an inconspicuous ligule; gynostegium substipitate; stigma strongly pentagonal, depressed.

We have not seen material of this species. The large, coriaceous leaves should help in distinguishing this species.

Matelea gonoloboides (Rob. & Greenm.) Woodson, Ann. Mo. Bot. Gard. 28: 222. (ok.)

1941. Urosteghanus gonoloboides Rob. & Greenm. Amer. Journ. Sci. III. 50: 159. 1895.

Moist thickets or forest, 1,800-2,300 meters; Sclolá; (between San Pedro and San Juan);
also collected elsewhere (Barranco de los Condenados?), at a locality of uncertain
position. Mexico ^{Chiapas,} ~~(Morelos)~~. A very slender, apparently herbaceous vine, the stems
hirsute with deflexed fulvous hairs; leaves thin, ovate-cordate to oblong-ovate,
5-6.5 cm. long, acuminate or long-acuminate, rather shallowly and narrowly cordate at
the base, thinly hirsute on both surfaces; inflorescence umbellate, 1-5-flowered,
the peduncles 4 mm. long, the pedicels ^{longer than} ~~about equaling~~ the peduncle; calyx lobes ovate-
lanceolate, acute, almost 4 mm. long, hirtellous; corolla brown-purple, about 1² cm.
long, rotate, 5-lobate almost to the base, the lobes linear to narrowly deltoid-
lanceolate, mostly 2-3 mm. ^{broad} wide, arachnoid-pubescent within near the base, thinly hir-
tellous outside; corona attached to the lower part of the stamen tube, almost equaling
the gynostegium, shallowly lobate at the summit with 5 internal horn-like processes
opposite the stamens and 5 outer lobes alternate with them and produced on their outer
surface into 2 filiform flexuous tails; stigma depressed.

Matelea grandiflora (Standl.) Woodson, Ann. Mo. Bot. Gard. 28: 235. 1941. 66

Vincetoxicum grandiflorum Standl. Carnegie Inst. Wash. Publ. 461: 83. 1935. Gonolobus
fulvidus Ballard, Bot. Mag. 163: ^{t.} ~~961~~ 9611, 1940. Moist or wet forest or thickets,
270 meters; ^{Petén;} Alta Verapaz. (~~Chenán, Harry Johnson 249~~). British Honduras, the type from
Machaca, W. A. Schipp, S575. A large coarse vine, probably somewhat woody, as much as
9 meters long, the stems stout, very densely villous or hirsute with long spreading
fulvous several-celled hairs; leaves rather thick, on petioles scarcely 1 cm. long,
oblong, mostly 10-16 cm. long and 4-7 cm. ^{broad} ~~wide~~, shortly cuspidate-acuminate,
narrowly rounded at the base and deeply and narrowly cordate, densely setose-pilose
on the upper surface with long subappressed hairs, paler beneath, densely setose-
pilose with long spreading yellowish hairs; flowers large, bright yellow, umbellate,
the umbels short-pedunculate, few-flowered, the slender pedicels 3.5 cm. long or
shorter; sepals lance-linear, ^{about} 1 cm. long, long-attenuate, pilose; corolla rotate,
⁴⁻⁵ ~~about 4-5~~ cm. broad, 5-lobate almost to the middle, ^{or less} ~~setose-pilose~~ outside, the lobes

ovate-orbicular^a, rounded at the apex and shallowly emarginate, pilose or pilosulous within, especially near the base, conspicuously reticulate-veined; corona double, arising from the staminal column near its base, the outer corollaⁿ yellow, a short fleshy cup, pentagonal; inner corona of 10 minute liguliform appendages; carpels of the ovary pubescent.

Matelea guatemalensis (Schum.) Woodson, Ann. Mo. Bot. Gard. 28: 235. 1941.

Gonolobus velutinus var. calycinus Donn.-Sm.^Q Bot. Gaz. 13: 189. 1888 (type from Pansamala, Alta Verapaz, Tuerckheim 1124). ~~Gonolobus~~ G. guatemalensis Schum. in Engler & Prantl, Pflanzenfam. 4, pt. 2: 302. 1895. Moist or wet forest or thickets, sometimes on limestone, 2,000 meters or lower; Alta Verapaz; Izabal (?); Huehuetenango; endemic. [#] A large or small, herbaceous or suffrutescent vine, densely hirsute throughout with long, spreading, stiff, yellowish or brownish hairs; leaves slender-petiolate, ovate or oblong-ovate, mostly 6-11 cm. long and 3.5-5.5 cm. wide, shortly caudate-acuminate at the broad apex, rather deeply and narrowly cordate at the base; inflorescences umbelliform, very slender, few-flowered, equaling or somewhat shorter than the leaves, the peduncles as much as 8 cm. long, the pedicels very unequal, 4.5 cm. long or shorter; calyx lobes almost equaling the corolla, oval, rounded and caudiculate at the apex, sparsely hirsute, pale; corolla 2.5 cm. broad, flat, glabrous or nearly so, yellowish brown, lobate almost to the base, the lobes oval-orbicularⁿ, rounded at the apex, venose; corona dark-colored, cupular, about 3 mm. broad, carunculate, no outer corona present; young follicles slender,

Vincetoxicum hatchii Standl. Field Mus. Bot. 17: 269. 1937.

Probably a forest plant at about 1,000 meters, Alta Verapaz (type Hatch & Wilson 107). Apparently endemic.

Pinea Seamay, Senahú, Alta Verapaz, W. R. Hatch & G. L. Wilson 107). Known in Guatemala only from the locality cited, at 900 meters. Oaxaca; type from Costa Rica.

[#] A large, herbaceous or suffrutescent vine, the stems hirtellous and puberulent; leaves on very long, slender petioles, thin, orbicular-cordate, ^{about 20 cm} mostly 13-25 cm. long and of about the same width, acute or acuminate, or usually abruptly cuspidate-

acuminate, deeply and narrowly cordate at the base, finely and rather densely hirtellous; cymes umbelliform, few-flowered, the slender peduncles 5-12 cm. long, the pedicels 5-6 cm. long or sometimes shorter; calyx lobes broadly elliptic, 10-14 mm. long, obtuse; corolla brownish or green, ^{about} 3.4 cm. broad, rotate, pubescent outside, glabrous within, the lobes suborbicular, rounded at the apex; outer corona annular, the inner one thick, torulose, with 5 erect rounded lobes. ^{the} The status of Vincetoxicum

The type specimen is inadequate and the species should not have been described from it. In June 1941 Woodson annotated the type as $\frac{1}{2}$ "*Matelea magnifolia* (Pittier) Woodson" but did not publish it. It would seem not to belong to that species.

The reduction.

Matelea medusae Woodson, Field Mus. Bot. 23: 78. ~~12~~ 1944. (cl)

Rocky slopes and thickets, 1,400-1,900 meters, Huehuetenango, Mexico (Chiapas). (Type from Cerro Pueblo Viejo, Steyermark 50987.)

Plants very slender, scandent, herbaceous or suffrutescent, the stems very densely and finely glandular-puberulent and sparsely short-hirsute; leaves thin-membranaceous, on slender petioles about 1.5 cm. long, oblong-elliptic or oblong-ovate, 4-9 cm. long, 1.5-3.5 cm. wide, ^{sparsely appressed hirsute with multicellular hairs} minutely glandular-puberulent, hirsute on the nerves, scarcely paler beneath, inconspicuously glandular above at the very base of the blade; inflorescences extra-axillary, umbelliform, 5-8-flowered, the peduncles 5-10 mm. long, the pedicels about equaling the peduncle; calyx lobes ^{linear-} lanceolate, caudate-acuminate, ³⁻⁴ mm. long, ^{hirsute dorsally;} puberulent and hirtellous; corolla ~~rotate~~ ^{linear-} pale green, cleft almost to the base, the lobes linear, ¹⁵⁻²⁰ mm. long, ¹⁻² mm. ^{broad} ~~revolute~~, glabrous within, pubescent outside; gynostegium long-stipitate, the corona purple, columnar, 1.3 mm. long, the 5 lobes spreading, obtuse, callous-emarginate; stigma flat, 1.3 mm. broad.

Matelea megacarpa (Brandeg.) Woodson, Ann. Mo. Bot. Gard. 28: 236. 1941. *Vincetoxicum megacarpum* Brandeg. ^{ex.} Univ. Calif. Publ. Bot. 4: 381. 1913. *Pachystelma cordatum* Brandeg. ^{ex. l.c.} op. cit. 7: 330. 1920. *Dictyanthus brachistanthus* Standl. Field Mus. Bot. 8: 38. 1930. (type from Atitlán, Sololá, Heyde & Lux 6346). ⁴⁰⁰ Moist or wet thickets, about 600-1,000 meters; El Progreso; Sololá; Quiché. ⁴ Mexico (Chiapas) - Honduras; Nicaragua. ⁴ A slender vine, herbaceous or somewhat lignescent, the stems puberulent and short-hirsute;

sparsely appressed hirsute pubescent with multicellular hairs

4-7
leaves membranaceous, on long slender petioles, deltoid-ovate, 4⁷ cm. long, acuminate or long-acuminate, shallowly cordate at the base, green above and rather densely short-hirsute, paler beneath, densely puberulent or short-pilose; cymes umbelliform, few-flowered, the peduncles usually longer than the petioles, the pedicels long and slender, very unequal; calyx deeply lobate, the lobes ovate-lanceolate, puberulent and sparsely hirtellous, conspicuously ciliate, acuminate; corolla ^{rotate,} 5-lobate to the middle, about 6 mm. long, dull brown-purple, puberulent outside, very minutely puberulent within, the lobes deltoid, narrowed to the obtuse apex, reticulate-veined; outer corona deeply lobate, the lobes narrow, elongate, partially adnate to the corolla, obtuse; gynostegium sessile; stigma depressed at the apex, pentagonal. ~~This has been reported from Solola as Dietzanthus parviflorus Hemsl.~~

Mabelea nigrescens (Schlecht.) Woodson, Ann. Mo. Bot. Gard. 28: 233. 1941.
Gonolobus nigrescens Schlecht. Linnaea 8: 522. 1833. *Vincetoxicum nigrescens* Standl.

Contr. U. S. Nat. Herb. 23: 1192. 1924. 1924. Moist forest or thickets, 900-1,200 meters; Huehuetenango (Cerro Jolontac, Steyermark 49149). Southern Mexico. A large or small vine, herbaceous or perhaps somewhat lignescent, the stems rather stout, densely and finely puberulent and also hirsute with long, spreading, yellowish or brownish, stiff hairs; leaves membranaceous, on long slender petioles, rather broadly ovate-cordate, mostly 5-8.5 cm. long, abruptly short-acuminate at the broad apex or sometimes merely acute or subacute, rather shallowly and usually narrowly cordate at the base, densely and minutely velutinous-puberulent and sparsely hirsute on both surfaces; inflorescences sometimes slightly longer than the leaves, often shorter, long-pedunculate, few-flowered, the pedicels hirsute, very unequal, 3.5 cm. long or less; calyx lobes lanceolate or ovate-lanceolate, acute or acuminate, hirsute with long spreading stiff hairs; corolla small, dull orange or when dry often blackish, minutely puberulent outside, long-hirsute within, ^{toward the base,} ~~the~~ about 8 mm. broad, the lobes broadly ovate, rounded and emarginate at the apex, spreading; corona of 5 broad, more or less carunculate lobes, these ~~usually~~ adnate to the throat of the corolla.

1 Not in Guatemala 1-Mexico

Matelea molinarum L. Wms. Field Mus. Bot.

1968.

06

A vine growing over brush or in open forests, at about ~~1,200~~ 1,200 meters; Alta Verapaz; Huehuetenango; apparently endemic.

^
(type, MOLINA d MOLINA 12167)

Descr.

Not in Guatemala

Matelea obovata (HBK.) Woodson, Ann. Mo. Bot. Gard. 28: 225. 1941. Macroscepis obovata HBK. Nov. Gen. & Sp. 3: 200. 1819. ^{are plants} # Moist or rather dry thickets or hedges, sometimes in dry rocky places, or in mixed forest, 900 meters or less: Alta Verapaz; Izabal; Zacapa; Santa Rosa; Huehuetenango. Southern Mexico. A large, coarse, usually woody vine, the stems densely hirsute with long, stiff, spreading, yellowish or brownish hairs; petioles stout, sometimes 4 cm. long but usually much shorter; leaf blades membranaceous, obovate to rounded-obovate, mostly 6-15 cm. long, sometimes larger, rounded or obtuse at the apex and shortly cuspidate-acuminate, narrowed to the base and there rather deeply and narrowly cordate, usually rather densely hirsute on both surfaces, glandular-puberulent beneath and paler; cymes sessile or nearly so, few-flowered, bearing large foliaceous ovate bracts, or these deciduous in age, the flowers pedicellate; calyx lobes pale green, ovate, about 1 cm. long, acute or subacute, hirsute and long-ciliate; corolla green outside, coffee-brown within, short-salverform, the tube ovoid or campanulate, the whole corolla 1.5 cm. long, puberulent outside, somewhat puberulent within, the limb rotate, the lobes oval or ovate-oval, rounded or very obtuse at the apex; corona adnate to the corolla tube, composed of 5 fleshy inflexed subexserted scales; stigma flat or umbonate; follicles ovoid, about 10 cm. long, ~~XXXXXX~~ more or less puberulent, often lustrous, winged along the angles. # The Maya name of Yucatan is recorded as "Entzul". This is more common and more widely distributed in Guatemala than most species of the genus.

Matelea patalensis (Donn.-Smith) Woodson, Ann. Mo. Bot. Gard. 28: 223. 1941. Gonolobus patalensis Donn.-Smith, Bot. Gaz. 47: 256. 1909. # Known only from the type, Baja Verapaz, Petal, 1,600 meters, Tuerckheim II, 2371. # Plants scandent, suffrutescent, the stems, petioles, and inflorescence pilose with spreading hairs; leaves on petioles 1.5-3 cm. long, oblong-ovate, 7-11 cm. long, 3.5-6 cm. wide, acuminate, shallowly cordate, sparsely and minutely strigillose; peduncles 10-13 mm. long, about 5-flowered, the pedicels 15-20 mm. long; calyx lobes linear-lanceolate, 5 mm. long; corolla rotate, 14 mm. long, glabrous and reticulate within, sparsely pilose

outside, deeply lobate, the lobes oblong, obtuse; corona cyathiform, free from the gynostegium and almost enclosing it, ~~xxxxxxxx~~ 2 mm. high, 3 mm. broad, the scales minute, bifid.

Matelea picturata (Hemsl.) Woodson, Ann. Mo. Bot. Gard. 28: 233. 1941; *Gono-*
lobus picturatus Hemsl. Biol. Centr. Amer. Bot. 2: 332. ~~1882~~ ¹⁸⁸² pl. 56, B, fl. 5, 6.
1882. Moist or wet forest, 1,300-1,500 meters; endemic; Quezaltenango (type from Volcán de Zunil, Salvin; collected also on Volcán de Santa María, between Santa María de Jesús and Calahuaché). Plants scandent, herbaceous or suffrutescent, glabrous throughout or nearly so except for the flowers, or the young parts sometimes minutely puberulent; leaves membranaceous, on long slender petioles, cordate-ovate, mostly 7-12 cm. long, rather abruptly long-acuminate, shallowly cordate at the base; peduncles long and slender, often 5 cm. long, few-flowered, the flowers umbellate, about 2.5 cm. broad, the slender pedicels mostly 1-2.5 cm. long; calyx lobes oblong-lanceolate, 3-4 mm. long; obtuse; corolla rotate, yellowish green or often with brownish lines, glabrous outside, rather densely villous within with very slender, weak hairs, the lobes broadly ovate or rounded-ovate, obtuse or rounded at the apex; gynostegium very short; corona very short, fleshy, undulate; stigma depressed at the apex. *H Matelea pittieri* from Panama is closely related and possibly synonymous.

Matelea pleistantha (Donn.-Sm.) L. Wms. Fieldiana, Bot. 34: . 1968.
Macroscepis pleistantha Donn.-Sm. Bot. Gaz. 20: 543. 1895 (type, Heyde & Lux 6350). *Macroscepis congestiflora* Donn.-Sm. l. c. 25: 149. 1898 (type, same as preceding). *Matelea congestiflora* Woodson, Ann. Mo. Bot. Gard. 28: 224. 1941.

Most common in dry thickets or on rocky slopes, 200-1,200 meters; Huehuetenango; Zacapa; Santa Rosa (type ~~is~~ from Mataquescuintla, Heyde & Lux 6350); El Salvador; Honduras; Nicaragua, ^{Costa Rica}. A rampant vine with stout stems, stout, densely setulose-hirsute with long, spreading, fulvous or brownish hairs; leaves membranaceous, on petioles 3.5 cm. long or usually much shorter, broadly obovate or rounded-obovate, 10-20 cm. long, 7-12 cm. wide, broadly at the apex and shortly cuspidate-acuminate, narrowed to the rounded, narrow, shallowly cordate

base, densely hirtellous or puberulent on both surfaces and long-hirsute on the nerves and veins; inflorescence short-pedunculate or almost sessile, very dense and head-like, few-many-flowered, the bracts very small or none, the inflorescences little longer than the petioles or sometimes shorter, the pedicels sometimes 12 mm. long but mostly much shorter; calyx lobate almost to the base, the lobes ovate, acuminate, about 9 mm. long; corolla glabrous outside, the tube 6 mm. long, the lobes papillose within, the limb spreading, almost 2 cm. broad, lobate to the middle, the lobes rounded; corona scales deltoid, incurved and truncate at the apex, connate below; ovaries glabrous, the stigma flat. ^{El} In Salvador the name "Cuchamper de mico" sometimes is applied to ^{the} plant.

Matelea Prothecidiscus Woodson, Ann. Mo. Bot. Gard. ~~28~~ 28: 223. 1941. Prothecidiscus guatemalensis, Donn.-Smith, Bot. Gaz. 25: 150, ^{pt.} 12. 1898, not Matelea guatemalensis, Woodson. ^W Moist forest, 1,100-1,300 meters; Santa Rosa (type from Cerro Gordo, Heyde & Lux, 3845); Huehuetenango (^S Paxo del Boquerón, below La Libertad). Nicaragua (Managua). ^W A large coarse vine, probably somewhat lignescent, the stems, petioles, and inflorescence densely glandular-pubescent and sparsely setose-hirsute; leaves membranaceous, on long slender petioles, broadly rounded-ovate, 7-13 cm. long, 8-12 cm. ^{broad} ~~wide~~, rounded at the apex or obtuse and shortly cuspidate-acuminate, very sparsely setose-hispidulous on the upper surface with short whitish hairs, paler beneath, rather densely glandular-puberulent, somewhat setose-hispidulous on the nerves and veins, the veins dark and conspicuous when dry; inflorescences short-racemose, shorter than the leaves, few-flowered, the peduncles equaling or shorter than the petioles, the flowers long ^P-pedicellate, the pedicels refracted in age; calyx deeply lobate, the lobes lanceolate, 3-5-glandular within; corolla lobate almost to the base, abruptly reflexed, pale green, ^Cblackish when dried, glabrous within, sparsely pubescent outside, the lobes linear, 2 cm. long; outer corona elongate-annular, 5-crenate, the inner ones reduced to 5 keels adnate to the dorsal surface of the filaments; immature follicles 9 cm. long, densely glandular-pubescent, densely covered with long spine-like fleshy tubercles.

Matelea pusilliflora L. Wms. Field Mus. Bot.

1968.

Mosquito whist, (British Honduras).

Slender vine growing over other plants, known only at low elevations;
Petén. British Honduras (type, Gentle 6050).

use English descr from

Descr. of n. sp.

Digitized by Hunt Institute for Botanical Documentation

Prob. to be excluded
if what is specimen

Matelea pseudobarbata (Pittier) Woodson, Ann. Mo. Bot. Gard. 28: 235. 1941.

Gonolobus pseudobarbatus Pittier, Contr. U. S. Nat. Herb. 13: 105. f. 14. 1910.

Vincetoxicum pseudobarbatum Standl. Journ. Wash. Acad. Sci. 17: 14. 1927. [#]Moist limestone forest, about 1,100 meters; Alta Verapaz (between Campur and Socoyó, Petén Highway, Standley 91707). [#]Costa Rica. A small vine, the stems densely and finely puberulent and hirsute with long, spreading, stiff, fulvous or brownish hairs; leaves slender-petiolate, rounded-ovate to ovate-lanceolate, mostly 4-6 cm. long and 2-4.5 cm. wide, acuminate, rather deeply cordate at the base, sparsely or densely pilose on the upper surface and densely white-punctulate, paler beneath, covered with minute, purple or pale, often gland-like hairs, pilose on the veins; peduncles about 2 cm. long, 6-10-flowered, the flowers umbellate, the pedicels 3 cm. long or shorter; calyx lobes lanceolate, acute, 5 mm. long, dense ^{ly}hirsute with long spreading fulvous hairs; corolla densely long-pilose outside, ~~glabrous within~~ dark snuff-brown, the lobes ovate, obtuse, 7 mm. long, reticulate-veined within, glabrous within except along one villous margin; corolla fleshy, corulose, with 5 spatulate scales; follicles about 11 cm. long and almost 3 cm. thick, long-acuminate, very densely glandular-pubescent, rather densely furnished with spreading spine-like fleshy tubercles about 1 cm. long.

Matelea Quirosii (Standl.) Woodson, Ann. Mo. Bot. Gard. 28: 224. 1941; Labidostelma guatemalense Schlechter, Bull. Herb. Boiss. II. 6: 843. 1906, not M. guatemalensis Woodson, 1941 (type from Nentón, Huehuetenango, C. & E. Seler 3279). Vincetoxicum Quirosii Standl. Field Mus. Bot. 18: 959. 1938 (type from Puntarenas, Costa Rica). [#]Moist or wet thickets or forest, 300-⁸⁰⁰~~1,500~~ meters; ^{perhaps higher} Baja Verapaz; Chiquimula; Guatemala; Huehuetenango. Southern Mexico ^{El} ~~(N)~~; ^{Handwritten} Salvador; Nicaragua; Costa Rica.

[#]A large or small vine, ^{both} herbaceous or lionescent, the stems slender, densely puberulent and sparsely hirsute with long spreading slender hairs, also short-hirtellous; leaves long-petiolate, membranaceous, broadly ovate or usually rounded-cordate, mostly 5-9 cm. long, rather abruptly acuminate or cuspidate-acuminate, deeply cordate at the base, green above, densely pilose with long and short hairs, paler beneath,

densely velutinous-pilose; peduncles long and slender, mostly 1-3-flowered, or the flowers sometimes more numerous, subumbellate, the pedicels 2.5 cm. long or shorter; calyx pale green, lobate almost to the base, the lobes oblong-lanceolate, acuminate, 8 mm. long, sparsely pilose outside, long-ciliate; corolla rotate, about 2.5 cm. broad, puberulent outside, glabrous within, white toward the base, reticulate-veined with brown-purple, shallowly lobate, the lobes triangular or rounded-triangular, obtuse; corona scales 5, adnate to the base of the gynostegium and to the corolla, carnosae, connate only at the base, bearing near the apex 2 falcate-ligulate processes; anthers short, hyaline-appendaged; follicles very slender, 7-13 cm. long, 1 cm. thick, long-attenuate to each end, smooth, glabrous.

This species is a very distinctive one because of the complicated gynostegium. It is found mostly at low elevations near the Pacific. It is the type species of Schlechter's genus *Labidostelma*.

Digitized by Hunt Institute for Botanical Documentation

Matelea Steyermarkii Woodson, Ann. Mo. Bot. Gard. 28: 278. 1941. Moist or wet, mixed forest, 2,500-3,500 meters; endemic; San Marcos (type from Volcán de Tajumulco, southern slopes near Las Canoas, Steyermark 35810). A large or small, chiefly herbaceous vine, the stems slender, densely hirsute with brownish, spreading or reflexed hairs; leaves slender-~~teretiform~~ petiolate, membranaceous, oblong-ovate, 5-13 cm. long, 1.5-7.5 cm. wide, narrowly long-acuminate, shallowly cordate at the base, green above, densely short-hirsute, densely short-hispid beneath along the nerves and veins; inflorescences umbelliform, few-flowered, the peduncle 2.5 cm. long, the pedicels 1.5 cm. long, fulvous-hispidulous; calyx lobes oblong-ovate, 7-8 mm. long, acuminate, brownish-pilose; corolla rotate, white with green veins, glabrous or minutely papillose, the lobes 12 mm. long, broadly ovate, rounded at the apex, spreading; gynostegium 4 mm. high; corona urceolate, 3 mm. high, deeply much cleft in the upper half, slightly inflated at the base and minutely papillose.

Schlechter

Matelea sylvicola L. Wms. Field Mus. Bot.

1968.

1200 meters
In forest near Panamalá, Alta Verapaz (type, Tuerckheim 680). Endemic.

use original description

Matelea tenuis Woodson, Ann. Mo. Bot. Gard. 28: 279. 1941. ⁷ Known only from the ^{OK} type, Izabal, near Quirigua, 75-225 meters, Standley 24036. ⁷ Plants scandent, the stems slender, inconspicuously pilosulous; leaves on petioles 5-7 mm. long, elliptic-oblong, 5-7 cm. long, 1.5-2.3 cm. ^{wide}, acuminate, obtuse at the base, thin-membranaceous, glabrous; inflorescence extra-axillary, racemiform, few-flowered, the peduncle 3-5 mm. long, the pedicels 5 mm. long, minutely papillose-puberulent, the flowers

* The species is a very distinctive one because of the complicated gynostegium. It is found mostly at low elevations near the Pacific.

green; calyx lobes broadly ovate, acute, 2.5 mm. long, papillose-puberulent; corolla almost rotate, 1 cm. broad, the lobes ovate, obtuse, minutely puberulent outside and inside; corolla patelliform, obscurely 5-lobate, 4 mm. broad; gynostegium borne on a stipe 2 mm. long; stigma pentagonal, 2 mm. broad.

Matelea tuerckheimii (Donn.-Sm.) Woodson, Ann. Mo. Bot. Gard. 28: 234. 1941.
Gonolobus tuerckheimii Donn.-Sm. Bot. Gaz. 44: 116. 1907 (type from Alta Verapaz, Tuerckheim II 1301). Vincetoxicum trichoneuron Standl. in Yuncker, Field Mus. Bot. 17: 388. 1938 (type from Honduras).

Twinning over shrubs in deciduous or pine forest regions, mostly at less than 1,300 meters; Petén; Alta Verapaz. British Honduras; Honduras.

~~Honduras~~ ⁴ Honduras. A slender vine, the stems puberulent and short-hirsute with fulvous, spreading or refracted hairs; leaves on petioles 1-2 cm. long, membranaceous, oblong or lance-oblong, 7-12 cm. long, 3-4 cm. ^{wide} ~~wide~~, long-acuminate, broadly rounded or subtruncate at the base, green above, appressed-pilose on the nerves, paler beneath, softly pilose with short spreading brownish stiff hairs; flowers umbellate, the umbels 1-9-flowered, the peduncle short and stout, the pedicels 1.5 cm. long or shorter; calyx green, 7-8 mm. long, pilosulous, lobate almost to the base, the lobes oblong-lanceolate, long-acuminate; corolla yellow and brown-reticulate within, almost 2 cm. broad, rotate, minutely pilosulous outside, glabrous within, lobate to the middle, the lobes orbicular, rounded at the apex; corona simple, the lobes seniorbicular; gynostegium 1.5 mm. long; ovaries glabrous; stigma 2.5 mm. broad, the center depressed.

Matelea velutina (Schlecht.) Woodson, Ann. Mo. Bot. Gard. 28: 234. 1941.
Gonolobus
~~Gonolobus~~ velutina Schlecht. Linnaea 8: 521. 1833. Vincetoxicum velutinum
Standl. Contr. U. S. Nat. Herb 23: 1189. 1924. V. gentlei Lundell & Standl.
ex Standl. Field Mus. Bot. 17: 269. 1924 (type from British Honduras, Lundell
1799). Matelea gentlei Woodson, l.c.

Usually at edges of forests from near sea-level to 2,000 m. Chimaltenango;
Petén. Southern Mexico; British Honduras.

~~Matelea velutina (Schlecht.) Woodson, Ann. Mo. Bot. Gard. 28: 234. 1941. Gono-
lobus velutinus Schlecht. Linnaea 8: 521. 1833. Vincetoxicum velutinum Standl.
Contr. U. S. Nat. Herb. 23: 1189. 1924. At edge of forest, about 2,300 meters;
Chimaltenango, (Los Positos, above Las Calderas, Standley 80219). Southern Mexico.
A large, herbaceous or suffrutescent vine, the stems, petioles, and inflorescence
densely glandular-pubescent and also hirsute with long spreading hairs; leaves mem-
branaceous, on long slender petioles, ^{broadly ovate to rounded ovate} rounded-cordate, mostly 6-16 cm. long, short-
acuminate or more often abruptly and shortly cuspidate-acuminate, deeply cordate at
the base, very densely velutinous-pilosulous on both surfaces, somewhat paler and
yellowish beneath; peduncles longer or shorter than the petioles, few-many-flowered,~~

the pedicels slender, unequal, mostly about 2 cm. long; calyx deeply lobate,
the lobes whitish or pale green, ovate or broadly ovate, ^{4-10 mm} ~~about 1 cm.~~ long, acute
or acuminate, densely pubescent and sparsely long-pilose; corolla yellowish
green, about 3 cm. broad, densely short-pilose outside, glabrous and reticulate-
veined within, the lobes suborbicular, ^{slightly} minutely retuse at the apex; corona annuli-
form, the outer margin entire, bearing within 5 somewhat inflated lobes adnate to the
gynostegium; immature fruit 6-7 cm. long, densely glandular-pubescent, bearing very
numerous, slender, fleshy, spine-like tubercles 1 cm. long or even longer.

Matelea velutina is a fairly widely distributed species covering an unusually large altitudinal range. Lundell and his associates have made about a dozen collections of the species around Tikal in recent years.

Matelea violacea Woodson, Ann. Mo. Bot. Gard. 28: 280. 1941. ⁷ Known definitely only from the type, San Marcos, southeastern slopes of Volcán de Tacaná, 2,000-3,000 meters, Steyermark 36445. ⁷ A suffrutescent vine, the stems fulvous-pilose with short hairs; leaves membranaceous, on petioles 3.5 cm. long or shorter, oblong-ovate, 9-13 cm. long, 4-6 cm. wide, ^{long} long-acuminate, shallowly and openly cordate at the base, densely and softly short-pilose on both surfaces; inflorescences subsessile, few-flowered, the peduncle 5 mm. long or less, the pedicels 1 cm. long, pilose; calyx lobes broadly ovate, long-acuminate, fulvous-pilose; corolla rotate, pale purple and brown-reticulate, fulvous-pilosulous outside, ⁷ minutely papillose within, the lobes broadly ovate, obtuse, 5 mm. long, spreading; gynostegium sessile; stigma pentagonal, almost flat; corona rotate, spreading, broadly 5-lobate, about 1 cm. in diameter, multilacinate.

Matelea Warscewiczii (Karst.) Woodson (Callaeolepium Warscewiczii Karst.; Fimbristemma Warscewiczii Benth. & Hook.) has been reported from Guatemala by Hemsley and others, but there is apparently no good reason for such a record.

Illus. Simon OK

OXYPETALUM R. Brown

Mostly scandent herbs, sometimes suffrutescent, usually pubescent; leaves opposite, generally cordate and long-petiolate; flowers medium-sized, white or purplish, the cymes usually umbelliform, terminal or ~~axillary~~ axillary; calyx 5-parted, glandular or eglandular within at the base; corolla tube very short, campanulate or subglobose, the limb deeply 5-lobate, the lobes usually narrow, contorted; scales of the corona 5, shortly adnate to the corolla or free from it, distinct from the stamen tube or more or less connate with it, erect, usually thick, retuse, emarginate, or bifid, appendaged within or naked; stamens inserted near the base of the tube, the filaments connate into a short tube; anthers terminated by an inflexed membrane; pollinia solitary in each cell, oblong, pendulous; stigma with or without a 2-fid or 2-parted beak; follicles slender or thick, smooth or tuberculate; seeds with a coma of soft white hairs. Fifty species or more, all American and mostly South American. Only one has been found in Mexico and Central America.

Oxypetalum cordifolium (Vent.) Schlechter, in Urban, Symb. Antill. 1: 269.

1899. Gothofreda cordifolia Vent. Choix Pl. Cels. 7, pl. 60. 1803. O. riparium
HBK. Nov. Gen. & Sp. 3: 197. 1819. Reported from Santa Rosa, Ojo de Agua, Santa Rosa, Heyde & Lux, 4000; to be expected elsewhere in Guatemala, but we have not found it. Southern Honduras, Mexico, Costa Rica, West Indies; South America. A slender, chiefly herbaceous vine, finely velutinous-pilous on the stems, leaves, and inflorescence; leaves slender-petiolate, soft, membranaceous, cordate-ovate, mostly 5-10 cm. long, acuminate or cuspidate-acuminate, shallowly and openly or deeply and narrowly cordate at the base, paler beneath; umbels few-flowered or only 1-flowered, on long slender peduncles, often longer than the subtending leaves, the very slender pedicels often longer than the peduncles; calyx lobes linear-lanceolate, linear-subulate, densely pubescent, about equaling the corolla tube; corolla pale yellowish, puberulent outside, glabrous or minutely papillose within, the campanulate tube about 4 mm. long, the lobes linear-attenuate, ascending or spreading, 1.5-2 cm. long; follicles about 8 cm. long, long-acuminate.

Reference:

^{Richard}
R. W. Holm, The American species of
Sarcostemma, Ann. No. Bot. Gard. 37: 477-560.
1950.
SARCOSTEMMA R. Brown

Ellen
Brown

Slender vines, herbaceous or suffrutescent, pubescent or glabrous, often glaucous; leaves opposite; flowers rather large or small, umbellate, the umbels axillary, usually pedunculate, ^{generally} ~~usually~~ white or greenish white, sometimes purplish; the corolla in bud ^{mostly} ~~generally~~ depressed-globose; calyx small, 5-parted, minutely 5-glandular within, the lobes acute; corolla very broadly campanulate or subrotate, very shallowly or rather deeply 5-lobate, the lobes contorted; outer corona submembranaceous, annual, adnate to the base of the corolla, its margin entire, the ~~inner~~ inner corona of 5 scales adnate to the base of the stamen tube, their blades free, broad, membranaceous or subcorneous, flat or concave or saccate; stamens inserted on the base of the corolla, the filaments connate into a short tube, the anthers terminated by an inflexed membrane; pollinia solitary in each anther cell, oblong or elongate, pendulous from the apex; stigma flat or umbonate at the apex or bearing a short bifid beak; follicles rather thick or often slender, acuminate, smooth. ⁴ About 35 species, in tropical and warm regions of both hemispheres. ^{One other species has been described} ~~Only the following are known from Central America.~~

~~Additional species are known from Mexico and Central America.~~
~~Leaves not cordate at the base, usually obtuse, sometimes acute, linear to oblong.~~

S. clausum.

Leaves cordate at the base, broadly cordate to lanceolate.

□ Corolla densely pubescent outside.....S. odoratum.

□ Corolla glabrous outside, sometimes pubescent on the margins of the lobes. S. bilobum.

□ Leaves broadly ovate-cordate; pedicels puberulent.....S. elegans.

□ Leaves ovate-lanceolate; pedicels hirsute.....S. ^{bilobum} ~~resurrectum~~.

Sarcostemma clausum (Jacq.) Dene. in DC. Prodr. 8: 540. 1844. *Cynanchum clausum* Jacq. Stirp. Amer. 1: 87. 1763. *S. cumanense* HBK. Nov. Gen. & Sp. 3: 195. 1819.
~~*Phyllanthus crassifolius* (Sw.) Griseb. in DC. Prodr. 8: 540. 1844. *S. crassifolium* Dene. in DC. Prodr. 8: 540.~~

Sarcostemma.

Key

Leaves not cordate at the base, usually
obtuse or sometimes acute, linear to
oblong. S. clausum.

Leaves cordate at the base.

Corolla glabrous outside.

Leaves lanceolate-oblong to oblong-ovate;
petals ciliate; highland species. . . S. refractum.

Leaves ovate to orbicular;
petals eciliate; lowland species S. bilobum

Corolla densely pubescent outside S. odoratum.

04

Sarcostemma bilobum Hook. & Arn. Bot. Beech. Voy. 438. 1841⁶

Philibertia biloba Gray, Proc. Am. Acad. 21: 395. 1886⁶ P. refractum

Donn.-Sm. Bot. Gaz. 18: 207. 1893 (type, Sacatepéquez, Rosalío Gómez⁷⁸⁷)⁶

Occasional in damp or dry thickets ^{near} sea-level to 2,000 meters; Petén; *alta Verapaz*,
Sacatepéquez. Mexico; British Honduras; Honduras.

Trailing or twining pilosulose vines; leaves oblong ovate to suborbicular, *short*
with the basal lobes converging,
acuminate, deeply cordate, 2-5 cm. long and 1.5-4 cm. broad, pilosulose on both
surfaces, sometimes glabrate, petiole 1-2.5 cm. long; inflorescence umbelli-
form with as many as 25 flowers, peduncles 1.5-6 cm. long, pedicels to 3 cm.
long, very slender; calyx lobate to the base, the lobes linear to ovate,
about 2.5 mm. long, puberulent outside, glabrous within; corolla subrotate,
the tube about 2 mm. long, the lobes lanceolate, obtuse, reflexed, puberulent
within, ciliate, about 5-6 mm. long; corona ring fleshy, free from the
vesicles, vesicles pyramidal, widest below the middle, about 2 mm. long;
follicles subfusiform, up to 8 mm. cm. long and 2 cm. thick, puberulent,
striate; seeds about 7 mm. long with coma about 3 cm. long.

(4)

Sarcostemma clausum (Jacq.) Schult. Syst. Veg. 6: 114. 1820. Cynanchum clausum
 Jacq. Stirp. Amer. 1: 87, ¹⁶⁰1763. S. cumanense HBK. Nov. Gen. & Sp. 3: 195. 1819.
S. crassifolium Dcne. in DC. Prodr. 8: 540. 1844. Philibertia crassifolia Hemsl.
 Biol. Cent. ^{Feddo}Amst. Bot. 2: 318. 1881. P. cumanensis Hemsl. ^{l.c.}~~l.c.~~ Funastrum cu-
manense Schlechter, ^{Feddo}Repert. Sp. Nov. 13: 284. 1914. F. clausum Schlechter, ^{l.c.}~~op. cit.~~
 283. Bejuco de pescado; Flor de Castilla, (Guatemala, fide Morales). [#] Wet to dry
 thickets or thin forest, often in thickets along streams, 1,275 meters or lower;
 Petén; ^{alta Vera paz} Izabal; ^{Jutiapa;} Zacapa; Chiquimula; ^Q Santa Rosa; Escuintla; Guatemala; Suchitepéquez;
 Retalhuleu; ^{Sololá;} San Marcos. Mexico; British Honduras to ^Q Salvador and Panama; West Indies;
 South America. [#] A small or large, herbaceous vine, often forming large and dense
 tangles over shrubs, pale and usually glaucescent, the stems glabrous or nearly so;
 leaves short-petiolate, rather thick and fleshy, almost linear to ~~narrowly~~ oblong,
 3-7 cm. ^{long}, acuminate or cuspidate, usually obtuse or rounded at the base, glabrous,
 or sometimes pubescent beneath; umbels long-pedunculate, few-many-flowered, the pedi-
 cels long and slender, short-pilose; calyx densely short-pilose; corolla ~~mm~~ 10-14
^{greenish white,} mm. broad, ^{greenish white,} rather deeply lobate, densely short-pilose outside, the lobes broadly ovate,
 rounded or very obtuse and apiculate; follicles 5-6.5 cm. long, about 1 cm. broad,
 long-acuminate, pubescent or glabrate. [#] Called "Dama de noche" in British Honduras.
 The plant is abundant in the lowlands of Guatemala, especially in rocky or gravelly
 thickets along or near streams, where it often forms dense masses that almost conceal
 the foliage of the supporting plants. When in full flower it is a conspicuous vine.
 The flexible tough stems are used commonly for stringing fish (hence the ^{name} ~~name~~ ^m bejuco
 de pescado) and as a substitute for twine. Along sandbars the branches often lie
 flat on the ground, sometimes running over the sand for a great distance. Under such
 conditions the internodes of the stems become great elongate. The leaves vary greatly
 in shape, being sometimes linear or nearly so, but more often lanceolate or oblong.

Sarcostemma elegans Dcne. in DC. Prodr. 8: 541. 1844. Philibertia elegans
Hemsl. Biol. Centr. Amer. Bot. 2: 318. 1881. Funastrum elegans Schlechter, ^{Fe Dec} Repert.
Sp. Nov. 13: 284. 1914. ⁷⁰⁰ Moist or dry thickets, ^{Escuintla;} 225 meters or lower; Petén; Retalhuleu.
Southern Mexico; British Honduras. A small or rather large, herbaceous vine, the
stems slender, pubescent or glabrate; leaves on long slender petioles, membranaceous,
broadly ovate-cordate, 4-7 cm. long, rounded or very obtuse at the apex and usually
short-cuspidate, deeply cordate at the base with a narrow or open sinus, densely and
finely velutinous-pubescent on both surfaces; ^m umbels many-flowered, the slender pedun-
cles about equaling the leaves, the pedicels very slender, 12-28 mm. long, densely
and finely pubescent; corolla white or greenish white, about 1 cm. broad, ^{outside,} glabrous,
globose in bud, densely and finely pubescent within, the lobes ovate, narrowed to an
obtuse apex, spreading or reflexed; hoods of the corona 2 mm. high, rounded at the
apex, cucullate, about equaling the gynostegium; follicles about 12 cm. long and 1.5
cm. thick, narrowly long-attenuate, puberulent or glabrate; seeds bearing tufts of
silky white hairs as much as 3 cm. long.

Sarcostemma odoratum ~~Kuntz~~ (Hemsl.) ^{Holm, Ann. Mo. Bot. Gard. 37: 520. 1950.} ~~Woodson, comb. nov.~~
Funastrum odoratum Schlechter, Repert. Sp. Nov. 13: 286. 1914. Philibertia odorata Hemsl. Biol. Centr. Amer. Bot. 2: 319. 1881. Cuchamperillo. Moist
or dry thickets, sometimes in roadside hedges, ^{ENDEMIC} 1,500-2,200 meters; Guatemala;
Sacatepéquez (type from Dueñas, Salvin); Huehuetenango. ^{Costa Rica.} A small or
large, herbaceous vine, the slender stems densely pilose with short spreading hairs;
leaves membranaceous, on long slender petioles, orbicular-cordate or ovate-cordate,
3.5-7 cm. long, 2-5.5 cm. wide, rounded or very obtuse at the apex and cuspidate,
deeply cordate at the base, densely and softly pilose on both surfaces, sometimes
white-tomentose beneath; umbels many-flowered, about equaling the leaves, on long
slender peduncles, the slender pedicels 1-1.5 cm. long, densely tomentose; flowers
greenish white, 10-15 mm. broad, ~~the~~ ⁿ the calyx lobes narrow, acute, 6 mm.
long or less; corolla subrotate, deeply 5-lobate, pilose outside, the lobes ovate-
oblong, obtuse, densely puberulent within; outer corolla annular, undulate; hoods of

the corona 2 mm. long, inflated-cucullate, slightly longer than the gynostegium; follicles 7-9 cm. long, about 1.5 cm. thick, densely pilose, narrowly long-acuminate.

bilibum Hook. & Arn.
~~*Sarcostemma refractum* (Donn. Smith) Standl. & Steyermark, comb. nov.~~
~~*Funastrum refractum* Schlechter, Repert. Sp. Nov. 13: 287. 1914.~~
~~*Philibertia refracta* Donn. Smith, Bot. Gaz. 18: 207. 1893. Known only from the~~
~~1,950 meters,~~
~~type, Santiago, Sacatepéquez, Rosalío Gómez, 787. Plants pubescent, the stems branched;~~
~~leaves ~~xxxxxxxxxxxx~~ on petioles a third as long as the blades, ovate-lanceo-~~
~~late, 5-5.5 cm. long, 2-2.5 cm. wide, narrowed to the acute apex, cordate at the~~
~~base, lustrous beneath except on the veins; peduncles as long as the leaves, the um-~~
~~bels 18-22-flowered, the pedicels filiform, half as long as the peduncles, hirsute;~~
~~calyx lobes narrow, acute, pubescent; corolla rotate, reflexed, fuscous, glabrous~~
~~outside, the lobes ciliate, ovate-oblong; hoods of the corona yellow, membranaceous,~~
~~inflated-ovoid, slightly longer than the gynostegium; ovaries glabrate. We have seen~~
~~no material of this species. Probably referable here is a plant reported by Hemsley~~
~~from Volcán de Fuego as *Philibertia cynanchoides* (Dcne.) Gray.~~
~~(Ask Wood on if he knows anything about the species. It may be a synonym of one~~
~~of the Mexican ones.)~~

Sarcostemma refractum (Down. Sm.) R. Wms
Field Mus. Bot. 31: . 1968 *Philibertia refracta*
Down. - Sm. Bot. Gaz. 18: 207. 1893.

Wooded slopes in the mountains,
1800-2300 m. Huehuetenango; Quiché;
Sacatepéquez. Southern Mexico.

(Herbaceous, slender) vines. Stems somewhat
pilose, to 2 mm in diameter; leaves
oblong-lanceolate to oblong-ovate, ^{shallowly cordate with} acute or
acuminate ^{at the apex}, sparsely pilose or ciliate
to completely glabrous, blade 2.5-5 cm. long
and 1-2.5 cm. broad; inflorescence
umbell^{iform} many-flowered, peduncle 3-7 cm. long,
pedicels filiform, 1.5-2.5 cm. long; crisped
pubescent; calyx divided to the base, pilose pubescent
outside and ciliate, glabrous within, linear-lanceolate,
acute, about 4 mm. long and 1 mm. broad;
corolla rotate or the lobes reflexed, ~~to~~ ^{about} 5-7 mm. long, divided to near the base,

local styles diverging.

refractum

glabrous outside, puberulent within especially at
to at the base of the lobes, tube short, about
1-1.5 mm. long, lobes ~~4-5 mm~~ or narrowly
ovate to ovate, obtuse, ~~obtusely~~ ciliate ^{on one margin}, ~~reflexed~~,
4-5 mm. long and 3-~~4~~ mm. broad;
corolla ring undulate-lobate, about 0.5 mm.
high, adnate to the base of the vesicles;
vesicles about 2.5-3 mm. long; fruits
unknown.

This species was included in S. bilobum
by Holm in his monograph of the genus.
However the distinctively shaped leaves, difference
in corolla although not outstanding, and the
highland distribution indicate that it should be
treated as a separate species.

envisvarieg

Some of the species of Stadelia ~~boissiana~~ are cultivated in Guatemalan gardens. They are natives of South Africa, low, succulent plants with more or less 4-angulate, leafless stems, and often very large, luridly colored, usually very fetid flowers.