

basin repando-7-lobata lobis deltoideis saepe plus minusve trilobatis subremote calloso-mucronata chartaceo-herbacea subtenuia 3-nervia tenuiter reticulata utrinque ad venas et venulas et sparse inter venulas laxe pilosa pilis ut videtur purpureis ca. 12-loculatis patentibus et ciliata ca. 16 cm. longa 21 cm. lata, petiolo immarginato striato ut lamina subdense piloso; media sessilia ovalia vel ovali-obovata sinuatim ca. 4-8-lobata lobis depresso-deltoideis late rotundatis in basin brevem marginatam subabrupte angustata 12-16 cm. longa 8.5-10 cm. lata; superiora oblonga minora 3.5-7 cm. longa subintegra in bracteas minutas inflorescentiae sensim reducta. Panicula laxe divaricato-adscendens ad 2.7 dm. diam. polycephala dense pilosa pilis patentibus multiloculatis ut videtur purpureis; pedicelli 6-17 mm. longi 1-3-bracteolati. Capitula turbinato-hemisphaerica discoidea 21-flora 10.5-12 mm. alta et crassa. Involucri 8.5-9.5 mm. alti bracteae exteriores ca. 4 lineares ad 4 mm. longae, phyllaria 10 viridia scarioso-marginata linearia apice obtusa ciliata ut exteriores in dorso pilosa pilis laxis sordido-purpureis multiloculatis. Corolla ut videtur albida glabra maturitate 8 mm. longa (tubulo basi dilatato 4 mm. longo, dentibus 1.2 mm. longis). Achenia submatura ca. 7-costata glabra 3 mm. longa. Pappi aristae numerosae ca. 35 ciliolatae pilis erectis 5 mm. longae. — GUATEMALA: Volcan de Agua, above Santa Maria de Jesus, 2285 m., 4 March 1916, *Holway* 570 (TYPE in Gray Herb.). — *Cacalia calotricha* is somewhat nearly related to *C. Holwayana* Rob., but differs in nature of inflorescence, size of head, and many details of structure.

IV. DESCRIPTIONS OF NEW SPERMATOPHYTES, CHIEFLY FROM THE COLLECTIONS OF PROF. M. E. PECK IN BRITISH HONDURAS.

BY S. F. BLAKE.

The new species here described, belonging for the most part to sympetalous orders, are based mainly on the extensive collections made by Prof. M. E. Peck in British Honduras from 1905 to 1907. A few other species are described from hitherto undetermined collections made in Mexico, Costa Rica, and Nicaragua by C. F. Baker, Langlassé, Palmer, Pringle, Rose, and Tonduz. A new species of *Danthonia* from Mexico, described at the Gray Herbarium by

Mr. F. Tracy Hubbard, is included at the request of the author, as is a combination under *Setaria* relating to a species from tropical America, recently found needful by Mr. Hubbard.

GRAMINEAE

DANTHONIA filifolia Hubbard, spec. nov. Perennis caespitosa; culmi infra glabri, supra folium supremum puberuli, paullo tenuiores sed rigidi erecti circa 7.5 dm. alti purpurascens; folia plerumque radicalia; vaginae radicales glabrae (ore excepto), 3–6 mm. longae paullo validius nervatae, saepe ad laminam abrupte contractae et ad junctionem pilosae; laminae arcte involuto-filiformes, usque ad 3.6 dm. longae (explanatae circa 1 mm. latae), cum lamina supra ad basin veram pilosa et in parte superiore intra nervos prominulos puberula; folia culmorum 1 vel 2, cum vaginis glabris aliquanto ad orem auriculatis; ligula annulum ciliatum circa 0.2 mm. longum formans, laminis 3–4 cm. longis basin versus circa 2 mm. latis apicem versus valde involutis; panicula compacta infra cum ramis 1–2 adpressis instructa, in parte superiore spicata, ramo infimo usque ad 4.5 cm. longo, rachi puberulo ad axillas infimas breviter piloso; spiculae 10–12 mm. longae 5–8-florae; glumae glabrae purpureae ad marginem et ad apicem acutum scariosae subaequales 10–12 mm. longae flosculis multo longiores; pili calli numerosi circa 3.5 mm. longi; lemma albidum margine longe pilosum aliter glabrum 4.5–5.5 mm. (arista exclusa) longum, cum dentibus 3 mm. longis instructum; arista basin versus pallide brunnea plana et spiraliter torta in parte superiore albida teres recta geniculato-patens 4–6 mm. longa; palea circa 2.5 mm. longa ad marginem et apicem obtusiusculum ciliolata. — MEXICO: Puebla, Honey, June 17 ?, 1908, C. G. Pringle, no. 10,818 (TYPE in Gray Herb.). Noticeably different from other species of *Danthonia* in the long filiform leaves, in the very long glumes as compared with the small florets, and in the very hairy appearance of the florets caused by the long callus-hairs in connection with the long marginal hairs of the lemmas.

SETARIA sphaerocarpa (Salzm.) Hubbard, comb. nov. *Panicum sphaerocarpum* Salzm. ex Steud. Syn. Pl. Glum. i. 51 (1854). It has recently been found necessary to form this new combination in order to give correct labeling to a grass which forms no. 230 of

a considerable collection of the plants of Surinam gathered by Dr. J. A. Samuels in 1916 and recently determined at the Gray Herbarium. The specimen in question was collected in the Forest of Zandery, May 31, 1916.

URTICACEAE

MYRIOCARPA paniculata, sp. nov. Arbor 6–10-metralis dioica. Rami novelli sparsim lepidoto-hispidi fusco-brunnei vetustiores subglabrati, internodiis 0.8–3.6 cm. longis. Folia alterna obovata vel ovali-obovata apice subabrupte acuminata (acumine 6–15 mm. longo) basi cuneata obscurissime repando-denticulata glabra (pilis paucissimis in costa et venis majoribus exceptis) dense cystolithigera (cystolithis lineari-ellipticis circa bases pilorum deciduorum obscure stellatis) 3-nervia et parum venosa 7–15 cm. longa 2.2–5.2 cm. lata, in petiolis nudis 8–16 mm. longis insidentia; stipulae obscurae. Paniculae (♀ solum visae) axillares solitariae usque ad 4.5 cm. longae 4 cm. diam. (pedunculo 7–12 mm. longo incluso), ramis primariis ca. 6–8 patentibus vel divergentibus, secundariis paucis, floribus fasciculatis, fasciculis sparsis. Perianthium ♀ paene ad basin 4-partitum ad 0.4 mm. longum subaequale, segmentis duobus in angulis stipitis ovatis subacutis duobus inter angulas lanceolatis. Achenium (immaturum) complanatum 2.7 mm. longum (stigmatate obliquo villosopapilloso 0.8 mm. longo incluso) in margine hispidum, stipite 1 mm. longo complanato, corpore ovato in stylum 0.7 mm. longum desinente. Ovulum erectum. — NICARAGUA: slender tree, 20–30 feet high, with very openly branched top, occasional in deep forests, Volcan Mombacho, 20 Feb. 1903, *C. F. Baker* 2489 (TYPE in Gray Herb.). — The present species, although a good *Myriocarpa* in all other characters, is unique in the genus by reason of its short truly paniculate inflorescence. The 4-parted perigonium, more distinct here than is general in the genus, seems to fairly merit the name of perianth. In these two features *M. paniculata* differs so strongly from its congeners that it may properly be taken as the type of a distinct group, to be called, in allusion to the strikingly developed although not absolutely characteristic stipe of the achene,

MYRIOCARPA Benth. sect. **Podocnide**. — Inflorescentia vere paniculata. Perianthium definitum 4-partitum. — Species unica

400854-
33400459-
M. paniculata Blake. The other species of the genus will form the sect. **Eumyriocarpa**. — Flores filiformiter cymoso-spicati innumerabiles. Perianthium minus definitum saepius 2-partitum. — Species typica *M. stipitata* Benth.

POLYGONACEAE

MILLSPAUGHIA **leiophylla**, sp. nov. Frutex valde intricateque ramosus. Caulis flexuosus, ramis late patentibus junioribus brunneis senioribus canescentibus demum cortice cano fibrilloso-decorato fuscis. Folia 1-3 in fasciculis obovata apice late rotundata interdum minute mucronulata basi angustata obscure inaequaliterque cordata integerrima chartaceo-subcoriacea supra obscure viridia subtus vix pallidiora utrinque glaberrima et reticulata, nervis lateralibus ca. 5-jugis nervulis anastomosantibus, 1.6-3.3 cm. longa 0.8-1.6 cm. lata, in petiolis glabris 2-3 mm. longis. Racemi solitarii vel bini axillares puberuli 5-5.5 cm. longi, floribus 2-6 in fasciculis; pedicelli demum 5-6 mm. longi tenues. Perianthium frugiferum 6.5-7 mm. longum; valvae exteriores 3 suborbiculari-ovatae obtusae basi late rotundatae vel subcordatae puberulae 3-nerviae et valde reticulatae; interiores 3 lanceolatae acuminatae 1-nerviae reticulatae 5 mm. longae. Achenium lanceolatum 3-gonum lateribus concavis in angulis ciliolatum pallide brunneum 4.5 mm. longum 1.5 mm. latum, stylis 3 ad 1 mm. longis. — BRITISH HONDURAS: a shrub with hard light-brown wood, in swampy saline ground, Manatee Lagoon, 30 Jan. 1905, *M. E. Peck* 320 (TYPE in Gray Herb.). — An interesting addition to a genus hitherto known only from Yucatan. From the two published species *M. leiophylla* is at once distinguished by its glabrous leaves.

LAURACEAE

PERSEA (*Eupersea*) **podadenia**, sp. nov. Frutex vel arbor. Rami vetustiores glabri cortice canescente tecti, juniores fusci minute strigilloso-tomentelli, hornotini valde striati dense strigilloso-tomentelli et glanduloso-adspersi. Folia alterna lanceolata vel anguste lanceolato-elliptica utroque acuta vel subacuminata obscure mucronata integra coriacea supra sicc. sublaete viridia in costa subdense alibi sparsissime appresso-pilosula dense foveolata subtus glaucescentia in costa et venis subdense alibi subsparsae

appresso-pilosa foveolata pennivenia (venis ca. 14-jugis prominulis venulis obscure reticulatis non prominulis) 6–11 cm. longa 2–3 cm. lata, in petiolis nudis dense appresseque pilosis supra canaliculatis 1–2 cm. longis insidentia. Paniculae axillares subpyramidales saepius 4.2–6.5 cm. longae 1.4–2.1 cm. diam. (pedunculo 1.8–3.6 cm. longo incluso) subsericeo-tomentoso-pilosulae; flores per 2–3 in apicibus pedunculorum secundi ordinis aggregati, pedicellis 1 mm. longis vel subnullis. Perianthium 3.5–4 mm. longum extus sericeum, segmentis exterioribus ovatis vel deltoideo-ovatis acutiusculis intus glabris 2 mm. longis, interioribus ovatis obtusis intus subappresso-pilosis duplo longioribus. Stamina I. ser. 2.4 mm. longa, filamentis 1.5 mm. longis adscendenti-pilosis, antheris ellipticis apice truncato-rotundatis, locellis inferioribus eos superiores lateraliter tangentibus; ea II. ser. similia; ea III. ser. 2.6 mm. longa, filamentis dense pilosis 1.3 mm. longis basi 2-glandulosis (glandulis magnis $2/3$ longit. filamentorum aequantibus subcullato-involutis distincte stipitatis, stipite piloso ad 0.4 mm. longo), antheris 1.3 mm. longis ellipticis extus ad medium pilosis lateraliter dehiscentibus. Staminodia IV. ser. 1.2 mm. longa dense pilosa, capite triangulari 0.6 mm. longo in stipitem 0.6 mm. longum cuneato-rotundato. Ovarium glaberrimum $2/3$ longit. styli aequans, stigmatem magno. Bacca sicc. purpurea glauca ellipsoideo-subglobosa 11–12 mm. longa 8–10 mm. diametro, in calyce persistente vix accrescente sessilis. — DURANGO: San Ramón, 21 April–18 May 1906, *Palmer* 119 (TYPE in Gray Herb.). — A species superficially similar to *P. Borbonia* (L.) Spreng., but with different staminodia, floral glands, &c.

PHOEBE (*Euphoebe*) **angustata**, sp. nov. Frutex vel arbor 7–10 m. altus. Rami vetustiores griseo-viridescetes glabrati, hornotini sicc. nigrescentes subsparse appresso-puberuli. Folia anguste lanceolata longe acuminata basi acuta vel breviter acuminata integra subcoriacea supra viridia juventate sparse vel subdense appresso-pilosula maturitate glaberrima subnitida subtus pallidiora sed distincte viridia omnino non glaucescentia juventate appresso-sericea submaturitate in axillis barbata maturitate glaberrima pennivenia prominulo-reticulata (venis 12–16-jugis) 5–13.5 cm. longa 0.8–2.3 cm. lata, in petiolis nudis sparse et obscure appresso-puberulis supra paullum complanatis 8–15 mm. longis insidentia. Paniculae axillares 3–6.8 cm. longae 2–4.2 cm. diam.

(pedunculo 8–12 mm. longo incluso) infra sparse supra subdense appresso-puberulae multiflorae; pedicelli 3–5 mm. longi. Perianthium 2.5 mm. longum 7 mm. latum, segmentis subaequalibus anguste oblongis vel oblongo-ellipticis obtusis extus sparse appresso-puberulis ciliolatis intus appresso-pilosulis, tubo brevissimo. Stamina I. ser. glaberrima 1.5 mm. longa, filamentis tenuibus antheras quadrato-ellipticas aequantibus, locellis inferioribus eos superiores basi (et usque ad medium) tangentibus; ea II. ser. similia; ea III. ser. similia locellis sublateralibus, filamentis ad basin glandulis 2 subsessilibus magnis filamenta paene aequantibus donatis. Staminodia IV. ser. magna 1.2 mm. longa glaberrima, stipite 0.6 mm. longo, capite triangulari-cucullato basi cuneato-rotundato non cordato. Ovarium globosum stylo subdimidio longius. Pedicelli frugiferi sursum incrassati 6 mm. longi apice patelliformiter ampliati; bacca (matura ?) ellipsoidea olivacea laevis sicc. 1.8 cm. longa 1.3 cm. diametro. — TAMAUlipas: vicinity of Victoria, 320 m., 1 Feb. – 9 April 1907, *Palmer* 80 (TYPE in Gray Herb.); limestone hills near Tampico, 1 Mar. 1899, *Pringle* 8006. SAN LUIS POTOSI: near Los Canos, 15–21 Oct. 1902, *Palmer* 249; limestone hills, Las Palmas, 24 July 1891, *Pringle* 3794. — All these specimens, with the exception of the type, have been distributed or determined as *Persea salicifolia* (Nees) Hemsl. which is properly *Phoebe salicifolia* Nees. That species, however, as described by Mez from the type collection (*Ehrenberg* 875), differs in many characters — subtriplinerved broader leaves, glabrous inflorescence and flowers, pilose filaments, &c. The closest affinity of *P. angustata* seems to be with *P. Ehrenbergii* Mez, which has much larger and broader leaves, glabrous flowers, acute perianth-segments, &c. Of the specimens here referred to *P. angustata*, the two collections from Tamaulipas are in flower, those from San Luis Potosi in fruit.

PHOEBE (*Euphoebe*) **mollicella**, sp. nov. Arbor. Rami vetustiores fusco-purpurei brunneo-flavide tomentoso-pilosuli, hornotini densissime tomentoso-pilosuli. Folia alterna lanceolata vel anguste elliptico-lanceolata apice acuminata plus minusve falcata basi acute vel subacute cuneata firme chartacea integra supra obscure viridia juventate dense maturitate sparse pilosula (venis et costis dense pilosulis exceptis) pilis laxis subappressis et venosa subtus multo pallidiora dense molliterque tomentoso-pilosula pilis

laxe subappressis vel adscendentibus pennivenia (venis ca. 6-jugis distincte prominulo-reticulatis) 5–7 cm. longa 1.3–2.3 cm. lata, in petiolis nudis similiter pubescentibus 7–11 mm. longis insidentia. Paniculae axillares subpyramidales foliis breviores 3–4.5 cm. longae 1–1.8 cm. diam. (pedunculo 1.1–2.5 cm. longo incluso) dense subrufescenterque tomentoso-pilosulae pauciflorae (floribus ca. 6–8); pedicelli 3–4 mm. longi. Perianthium 2.5 mm. longum 6.5 mm. latum, extus in tubo brevissimo sparse pubescens in segmentis 6 anguste ellipticis obtusis extus sparsissime pubescens vel subglabrum intus puberulum in apice tubi pilosum. Stamina I. ser. 1.2 mm. longa, filamentis basi sparse pilosis 0.5 mm. longis, antheris quadrato-suborbicularibus truncatis, locellis inferioribus eos superiores basi (et paene ad medium) tangentibus; ea II. ser. similia, filamentis brevioribus; ea III. ser. 1.5 mm. longa, filamentis basi pilosis et 2-glandulosis (glandulis sessilibus $1/2$ longit. filamenti aequantibus vel paullo longioribus), quam antherae paullo longioribus, locellis extrorsis. Staminodia IV. ser. trigono-clavata obscure stipitata, capite in stipitem subobscure brevioris pilosum cuneato-rotundato, apice brunnescente triangulari subcucullato. Ovarium glaberrimum stylo subdimidio longius. — COSTA RICA: tree with rounded top, forests of Copey, 1800 m., Feb. 1898, *Tonduz* 11676: also distr. by J. D. Smith under the no. 7353 (TYPES in Gray Herb.). — Vern. name “Quizarrá amarillo.” Distributed (no. 7353) under the name *P. helicterifolia* Mez. That species (*Phoebe helicterifolia* (Meisn.) Mez), however, as described by Mez from the original, *Linden* 1641, has much larger leaves somewhat shining above, acutish perianth-segments, glabrous very short outer filaments, &c. The present plant is perhaps nearest to *P. mollis* Mez.

OCOTEA (*Mespilodaphne*) **Bakeri**, sp. nov. Arbor 6–10-metralis. Ramuli subangulati juventate dense appresseque subsordido-puberuli aetate glabrati cortice canescente tecti. Folia alterna ovalia apice obtusa vel subrotundata interdum obscure breviterque acutata (sed apice supremo obtuso) basi cuneata integerrima chartaceo-subcoriacea utrinque subobscure reticulato-venulosa (venis lateralibus ca. 9-jugis, venulis interdum prominentibus) supra viridia glaberrima subtus paullo pallidiora et juventate sparsissime strigosa aetate in costa sparsissime strigosa ceterum glabra 6.5–11 cm. longa 2.7–4.3 cm. lata, in petiolis nudis subglabris supra canal-

iculatis 7-8 mm. longis insidentia. Paniculae 13-25-florae axillares subpyramidales foliis breviores 2-6.5 cm. diam. 2-4 cm. longae, in pedunculis 3.5-6 cm. longis subdense puberulis pilis laxe curvatis subpatentibus; pedicelli ultimi dense subsordideque puberuli ca. 4 mm. longi. Flores perfecti ca. 7.5 mm. lati fragrant: perianthium extus subcanescenti-puberulum, tubo campanulato 1.5 mm. alto, segmentis 6 ovalibus obtusis intus dense glandulosis 4 mm. longis 2-2.5 mm. latis. Stamina 9: ea I. ser. papilloso-puberula 1.5 longa brevissime sed distincte stipitata, antheris ellipticis apice rotundatis, loculis per paria superpositis; ea II. ser. consimilia, stipite longiore papilloso-pilosa; ea III. ser. extrorsa sessilia oblonga papilloso-puberula basi biglandulosa, glandulis sessilibus. Pistillum obovoideum 2 mm. longum glabrum; ovarium stylo subduplo longius. — NICARAGUA: occasional in high forests, Volcan Mombacho, 20 Feb. 1903, *C. F. Baker* 2493 (TYPE in Gray Herb.). — Mr. Baker's label bears the following notes: "Small tree, 20-30 ft. high, with rather thick top. New foliage light-green, old dark green, much contrasted. Flowers with strong and pleasant odor. Used by natives as tonic medicine."

ROSACEAE

LICANIA licaniaeflora (Sagot), comb. nov. — *Moquilea licaniaeflora* Sagot, Ann. Sci. Nat. VI. xv. 308 (1883). *Licania bracteosa* Fritsch, Ann. Naturh. Hofmus. Wien iv. 54 (1889). — This combination, avoided by Dr. Fritsch, is required by the International Rules.

LICANIA (Moquilea) retifolia, sp. nov. Arbor 5-8 m. alta. Rami vetustiores cortice griseo-brunneo tecti, hornotini subteretes subrecti purpureo-brunnei glabri. Folia alterna lanceolata vel obovata (in specimine saepius inaequilateralia) apice acuta obtusa truncata vel rotundata basi saepius oblique cuneata obscure repanda coriacea glaberrima supra lucenter viridia subtus plus minusve rufescentia lucentia utrinque conspicuiter prominuloreticulata (venis ca. 10-jugis, venulis eleganter reticulatis) 4.3-10 cm. longa 1.7-2.5 cm. lata, in petiolis supra parum complanatis glabris nudis 5-7 mm. longis insidentia; stipulae scariosae intrapetiolares. Flores numerosi ad apices ramorum hornotinorum subdense paniculati in panicula sessili pyramidales 3-3.5 cm. longa

4–4.8 cm. diam.; axis et ramuli paniculae patenti-puberuli, pedicellis ultimis canescenti-puberulis 1.5 mm. longis vel brevioribus; flores in ramulis secundi ordinis racemosi; bracteae primariae lanceolato-subulatae basi ampliatae laceratae subglabrae ad 2.5 mm. longae, ultimae deltoideae canescenti-puberulae minimae. Calycis tubus turbinato-hemisphaericus canescenter densissimeque patenti-puberulus intus pilosus 2 mm. longus, lobis 5 triangularibus acutiusculis extus et intus canescenti-puberulis ad 1.5 mm. longis erectis vel patentibus. Petala 5 ovalia utrinque dense pilosa cito decidua “viridescenti-albida” 1.5 mm. longa 1 mm. lata. Stamina 15 valde exserta, filamentis (per 2 mm. longit. liberis) basi in annulum completum pilosum connatis. Ovarium glabrum. Stylus 3.5–4.5 mm. longus stamina saepius superans. — MICHOCAN or GUERRERO: granitic soil, Cerro de los Cajones, 1000 m., 14 April 1899, *Langlassé* 992 (TYPE in Gray Herb.)

LICANIA (*Moquilea*) **sparsipilis**, sp. nov. Arbor ramosa. Rami vetustiores cortice cano vel purpureo-brunneo glabro vel sparse pubescente tecti, hornotini fusco-brunnei sulcati subsparse piloso-strigosi pilis appressis vel laxis sordide flavescentibus. Folia alterna ovalia vel oblongo-elliptica vel ovata apice breviter acuminata basi cuneata vel rotundato-cuneata chartaceo-coriacea integra supra sicc. pallida lucentia glaberrima (juventate ad costam sparsissime piloso-strigosa) subtus paullo pallidiora venosa (venis ca. 10-jugis conspicuis) inter venas prominule venuloso-reticulata juventate in costa strigoso-pilosa (pilis flavicantibus) maturitate glabra vel pilis sparsissimis praedita 8–12 cm. longa 3.3–3.9 cm. lata, suprema minora angustiora; petioli supra complanati nudi sparse strigoso-pilosi vel subglabrati 2–4 mm. longi. Paniculae axillares dense flavicanti-pilosae pilis adscendentibus 1–1.2 dm. longae 5–6 cm. diam., pedunculo subnullo; rami primarii alterni ca. 8 recte patentes vel divergentes vel interdum parum recurvati usque ad 3.3 cm. longi dense florigeri, floribus sessilibus, bracteolis ovatis acutis vel breviter acuminatis in dorso pilosis subpersistentibus 0.6–1.3 mm. longis. Calycis tubus hemisphaerico-campanulatus densissime canescenti-puberulus et subdense subappresso-pilosus pilis flavicantibus intus pilosulus 2 mm. altus, lobis 5 deltoideis obtusiusculis utrinque canescenti-puberulis extus pilosis erectis 0.8–1 mm. altis. Petala nulla. Stamina 10 longe exserta 3.5 mm. longa, filamentis basi in annulum completum sparse pilo-

sum brevissime connatis. Ovarium pilosum. Stylus stamina paullo superans basi pilosus. Fructus immaturus tubum calycis implens. — BRITISH HONDURAS: a tree with hard red wood, in forest, Sittee River, 15 April 1907, *M. E. Peck* 858 (TYPE in Gray Herb.)

I have followed Fritsch in including *Moquilea*, to which belong the two new species here described, in *Licania*, as the differences between them seem too weak and inconstant to be of generic value.

PRUNUS apodantha, sp. nov. Frutex 6 dm. altus ut videtur procumbens ramis sursum curvatis. Caulis griseo-brunneus subglabratus, ramis angulatis subdense retrorso-hispidulis pilis paucis longioribus subpatentibus intermixtis. Folia alterna internodia superantia ovalia vel ovali-subovata obtusa vel rotundata mucronulata basi cuneata crenato-serrata (dentibus ca. 12-jugis rotundatis glandulari-mucronulatis nigrescentibus) supra obscure viridia sparsissime hispidula vel glabrata subtus pallidiora ad costam et venas dense inter venas sparse pilosa pilis laxe patentibus vel subincurvis, venis 5–6-jugis prominulis anastomosantibus, 1.6–2.8 cm. longa 0.9–1.5 cm. lata, in petiolis nudis vel anguste marginatis puberulis 2–3 mm. longis insidentia; stipulae subulatae erectae sursum recurvatae puberulae persistentes 2–3 mm. longae. Flores in axillis solitarii vel bini sessiles ad 6 mm. lati; bractae siccae rubescentes ovaes rotundatae ciliatae ad apicem glandulari-puberulae ceterum glabrae ad 1 mm. longae. Calyx turbinato-hemisphaericus basi ima contractus intus breviter pilosus 10-nervis (nervis supra parum anastomosantibus) 3 mm. altus 3.5 mm. diametro, lobis 5 deltoideis apice subtruncatis vel retusis vel obtusis in lateribus dentibus 2–3 glanduliferis praeditis reflexis vel subpatentibus ad 1.2 mm. longis. Petala 5 albida obovata apice rotundata basi cuneata non unguiculata glabra decidua 3.3 mm. longa 1.8 mm. lata. Stamina 15: 10 (antisepala et antipetala) in tubi calycini apice inserta, 5 (antisepala) ca. 0.7 mm. infra apicem tubi inserta; filamenta ad 2 mm. longa glabra. Ovarium (immaturissimum) glaberrimum. — STATE OF MEXICO: hillsides, Rio Hondo, 3 Nov. 1895, *Pringle* 7055 (TYPE in Gray Herb.). — A characteristic species, differing from *P. microphylla* (HBK.) Hemsl., its nearest ally, in its glabrous ovary, larger and broader leaves, and calyx-tube much less hairy inside.

CONNARACEAE

CONNARUS lonchotus, sp. nov. Frutex alte scandens. Caulis glaber obscure brunneus lentiginosus. Folia 3-foliolata; petiolus tenuis glaber 3.8–7.2 cm. longus basi incrassatus; petioluli laterales incrassati ca. 4 mm. longi, terminalis apice incrassatus 0.9–2.9 cm. longus; foliola ovalia integerrima apice abrupte breviterque (1–2 cm.) acuminata apice supremo rotundata firma chartaceo-coriacea glaberrima subconcoloria, venis majoribus 7–12-jugis venulis anastomosantibus vix reticulatis, (7)11–17.5 cm. longa (2.3)4.1–6.3 cm. lata. Paniculae axillares foliis breviores tenues 8–15 cm. longae pilis brevibus subappressis rufescentibus pubescentes; pedicelli brevissimi vel subnulli ut gemmae dense rufescenti-puberuli. Calyx rufescenti-puberulus et glanduloso-punctatus 3 mm. longus segmentis ovalibus obtusis. Petala calycem 1 mm. superantia ciliolata et sparse glanduloso-punctata infra medium connata. Stamina 10 basi connata alternis longioribus. Ovarium solitarium rufescenti-pilosum. — **BRITISH HONDURAS**: a high climber in forests, Moho River, 16 March 1907, *M. E. Peck* 727 (TYPE in Gray Herb.). — Nearest to *C. lentiginosus* Brandege, which has five less acuminate leaflets, larger and more branched panicles, slightly shorter and more ovate sepals, longer and much more punctate petals, shorter stamens, and more shortly pubescent ovary.

LEGUMINOSAE

PITHECOLOBIUM graciliflorum, sp. nov. Frutex vel arbor ramosa inermis. Rami juventate subteretes densissime molliterque rufescenti-pilosuli pilis patentibus et subincurvis aetate glabrati subangulati cortice cano tecti. Folia 2-pinnata; stipulae herbaceae minimae subulatae rufescentes 2 mm. longae; petiolus (ut raches primariae et secundariae) dense rufescenter patentipilosulus supra sulcatus eglandulosus 7–10 mm. longus; rachis 1–2 cm. longus glandulis jugalibus donatus; pinnae 2–3-jugae 3–5 cm. longae, petiolulis 3–7 mm. longis infra medium glandula donatis; foliola 6–8-juga oblongo-ovata vel ovali-ovata obtusa interdum apiculata basi oblique rotundata paullum inaequilateralia subchartaceo-membranacea infra parum venosa supra siccitate obscure viridia glabra subtus pallidiora ad costam et marginem sparse rufescenti-

pilosula 1–2.8 cm. longa 3–16 mm. lata (ad apices pinnarum gradatim majora). Capitula globosa 1.8–2 cm. diametro (staminibus inclusis) axillaria solitaria vel gemina, in pedunculis rufescenti-pilosulis 1.8–2.7 cm. longis; bracteae lineari-setaceae rufescenti-pilosulae ad 5 mm. longae; flores numerosi sessiles. Calyx tubulosus apice paullum dilatatus 5-dentatus superne rufescenti-pilosulus 3.4 mm. longus (dentibus triangularibus obtusis 0.6 mm. longis). Corolla longe tenuiterque tubuloso-infundibuliformis 5-dentata in dentibus rufescenti-pilosa ceterum glabra 10 mm. longa (dentibus 1.8 mm. longis ovatis obtusiusculis). Stamina ca. 34 usque ad apicem corollae in tubum connata maturitate ad 1.8 cm. longa. Ovarium glabrum sed ut videtur papillosum ca. 15-ovulatum. Fructus deest. — BRITISH HONDURAS: open ground, Toledo, 2 June 1907, *M. E. Peck* 921 (TYPE in Gray Herb.).

PITHECOLOBIUM idiopodum, sp. nov. Arbor inermis. Ramus subrectus paullum striatus juventate densissime rufescenti-puberulus aetate subglabratus vel sparse pubescens cortice fusco tectus. Folia bipinnata; stipulae deciduae; petiolus plus minusve puberulus pilis incurvis vel glabratus teres non sulcatus prope apicem glandula unica donatus 3–3.5 cm. longus; rachis subsparsa rufescenter vel sordide pilosula 3–7.8 cm. longa glandulis ca. 3 subjugalibus donata; pinnae 3–4-jugae 7–11 cm. longae, earum rachibus apice 1-glanduliferis; foliola 12–21-juga oblique oblonga apice rotundata obtuse subapiculata basi oblique cuneata in latere uno late subauriculata firma supra obscure viridia ad basin in costa puberula ceterum glabra parum venosa subtus multo pallidiora sparse breviterque strigosa 9–18 mm. longa 2.5–5 mm. lata. Capitula subglobosa vel turbinato-subglobosa ad 3.5 cm. diametro (staminibus inclusis) in pedunculis axillaribus geminis rufescenti-puberulis 7 cm. longis; bracteae rufescenti-pilosulae ad 1.5 mm. longae; pedicelli sparse appressequae rufescenti-pubescentes 5–6 mm. longi. Calyx obconicus sparse appressequae rufescenti-pubescenti breviter 5-dentatus 2.6 mm. longus, dentibus acutis deltoideis 0.4 mm. longis. Corolla obconica siccitate lutescenti-brunnea in dentibus appresse rufescenti-pubescenti 6.5 mm. longa 5-dentata, dentibus lanceolatis subacuminatis 3 mm. longis. Stamina ad 24–27 usque ad apicem tubi corollae in tubum pentagonum connata maturitate usque ad 2.2 cm. longa. Ovarium subsessile appresse pilosum ad 16-ovulatum. Fructus deest. —

BRITISH HONDURAS: a medium-sized tree, on pine ridges near Manatee Lagoon, 12 May 1906, *M. E. Peck* 437 (TYPE in Gray Herb.) — Rather closely related to *P. corymbosum* Benth. but with larger calyx, larger more deeply toothed corolla, and less venose more numerous leaflets.

PITHECOLOBIUM Peckii, sp. nov. Arbor armata. Rami subrecti costati glabri cortice griseo pustulato tecti, spinis stipularibus rectis subulatis 2–3 mm. longis armati. Folia bipinnata; petiolus valde canaliculatus basi sparse puberulus eglandulosus immarginatus 2–2.4 cm. longus; rachis 1.2–2.4 cm. longa, glandulis jugalibus clavato-poculiformibus donata; pinnae 2–3-jugae 5–7.5 cm. longae, earum rachillis basi puberulis; foliola 5–11-juga subsessilia oblique ovalia vel oblonga apice truncata vel rotundata rare retusa mucronulata basi oblique rotundata supra in costa parum puberula et glandulosa infra ad basin in latere antico comata ceterum glabra subcoriacea utroque venoso-reticulata 1.1–2.6 cm. longa 4–7.5 mm. lata. Spicae oblongae axillares 3-nae 2.3–3.5 cm. longae sessiles; rachis puberula; bracteae deltoideae acutae persistentes ad 0.8 mm. longae; flores sessiles ca. 25–33. Calyx subhemisphaericus vel turbinato-subhemisphaericus ad apicem sparse strigillosus lutescenti-viridis brevissime 5-dentatus 1.2 mm. longus. Corolla lutescens infundibuliformis in dentibus strigillosa ceterum glabra 6.5 mm. longa (tubo 3 mm., faucibus ad 2 mm., dentibus 1–1.5 mm. longis). Stamina 31 vel ultra, filamentis longe connatis, tubo demum 1.5 cm. longo. Ovarium stipitatum dense puberulum. Legumen circinatum ca. 1.2 dm. longum sublignosum glabrum intus rubescens ca. 11-spermum, valvis margine contortis (0.6) 1.2–1.7 cm. latis. Semina magna brunneo-nigrescentia 7.5–15 mm. longa 6–12 mm. lata (2–5) mm. crassa glabra, arillo magno ad medium vestita. — BRITISH HONDURAS: in wet ground, without definite locality, 1905–07, *M. E. Peck* 738 (TYPE in Gray Herb.), 829 (Gray Herb.). — Described as a small gnarly tree with hard wood. A member of the sect. *Unguis-cati*, but quite distinct from any species yet described. Full data for these two collections are unfortunately lacking.

MALPIGHIACEAE

THRYALLIS Langlassei, sp. nov. Frutex 3 m. altus. Caulis tenuis teres glaber rufescenti-brunneus; rami erecti olivacei prope

inflorescentiam subsparsae pubescentes pilis fusco-brunneis medio adfixis non verrucosi. Folia opposita lanceolata vel ovata obtusa basi longe cuneata integra parum revoluta supra viridia glabra subtus pallidiora glabra vel in costa sparsissime pilosa (pilis eis caulibus similibus) 4.5–5.5 cm. longa 0.8–1.5 cm. lata, in petiolis nudis glabris vel sparsissime pilosis ad apicem 2-glandulosis 6–9 mm. longis; ea basi inflorescentiae multo minora. Racemi terminales 1–1.3 dm. longi 3.5 cm. diametro sessiles vel breviter pedunculati, floribus 25–38; pedicelli 1.2–1.6 cm. longi ut axis angulatus inflorescentiae pilosus pilis fusco-brunneis medio adfixis patentibus vel appressis non verrucosi; bracteae lanceolatae acuminatae 1–1.5 mm. longae similiter pubescentes. Sepala 5 oblongo-ovalia apice rotundata omnia eglandulosa ciliolata (pilis fusco-brunneis) 2 mm. longa. Corolla 1.7 cm. lata “flava,” petalis 5: 4 subaequalia, lamina ovali-ovata apice rotundata basi truncato-cordata parum undulata 5.5 mm. longa 3.8 mm. lata, ungue 1.5 mm. longo; 1 majus, lamina 6 mm. longa 5 mm. lata, ungue (sicc.) rubescente 3.2 mm. longo. Stamina 10, alterna breviora: filamenta purpurea 2.5 et 4 mm. longa; antherae flavidae 2.7 mm. longae. Styli 3 purpurascentes aequales sursum subulato-filiformes 6 mm. longi. Capsula ut ovarium breviter patenti-pilosa 3-gona ad 3.5 mm. longa et lata. —MICOACAN or GUERRERO: sandy soil, San Andres, 700 m., 22 Mar. 1899, *Langlassé* 955 (TYPE in Gray Herb.). — A species intermediate between *T. dasycarpa* Small and *T. tuberculata* Rose, but quite distinct from either. I have followed Rose and Small in displacing *Galphimia* Cav. by *Thryallis* L., as the original species of Linnaeus belonged to the present genus.

HIPPOCRATEACEAE

HIPPOCRATEA (*Barbatae* Peyr.) **meizantha**, sp. nov. Frutex scandens. Rami vetustiores subteretes recte patentes cortice albido-brunneo tecti, hornotini viridescens glabri. Folia opposita ovalia vel ovali-ovata obtusa vel acutiuscula basi rotundato-cuneata coriacea obscure crenato-serrata glaberrima supra viridia subtus paullo pallidiora vix conspicuiter prominulo-reticulata (venis prominentibus 6-jugis) 5–9.1 cm. longa 2.4–3.9 cm. lata, in petiolis supra sulcatis glaberrimis nudis 5–9 mm. longis insidentia; stipulae subulatae firmae basi sparse laciniatae 1.5 mm. longae. Flores in paniculis axillaribus saepius bifurcatis (ramis divergenti-

bus vel adscendentibus) multifloris dense glanduloso-puberulis 4–5 cm. longis (pedunculo subglabrato 1.5 cm. longo incluso), pedicellis ultimis 1.5–2 mm. longis; bracteae triangulares acuminatae basi parum laciniatae ca. 1.4 mm. longae. Alabastrum pyramidali-hemisphaericum 2.4 mm. longum 2.8 mm. diametro. Sepala 5 (rare 4) depresso-rotundata glanduloso-puberula et ciliolata ad 0.8 mm. longa 1.5 mm. lata. Corolla 7.5–8 mm. diametro: petala 5 (rare 4) ovalia vel elliptica apice rotundata sicc. albida extus densissime glanduloso-puberula intus infra apicem barbatula 3–3.5 mm. longa 2.2–3 mm. lata. Discus pulvinaris elevatus carnosus densissime glandulari-adspersus. Stamina 3 (in flore 4-mero 2), filamentis complanatis extus ad basin dense glandulari-adsperis. Stigma integrum. Carpidia desunt. — MORELOS: barranca near Cuernavaca, 1525 m., 10 May 1898, *Pringle* 7671 (TYPE in Gray Herb.). — A species nearly related to *H. ovata* Lam. (which should probably be called *H. volubilis* L.), but with noticeably larger flowers than those of any of the numerous specimens of that species which have been examined. In this feature it suggests the Brazilian *H. affinis* Cambess., but it differs in several particulars from the description of that plant, of which no material has been seen by the writer.

HIPPOCRATEA (*Micranthae* Peyr.) **subintegra**, sp. nov. Arbor patens ramosa. Rami vetustiores teretes cortice cano glabrato tecti, hornotini purpureo-brunnei verrucosi minute et subsparse patenti-puberuli. Folia opposita obovata apice saepius apiculata basi cuneata coriacea obscure crenata supra pallide viridia glabra prominulo-reticulata subtus concoloria glabra prominulo-reticulata (venis 5-jugis venulis anastomosantibus) 5–7.5 cm. longa 2.1–3.2 cm. lata, in petiolis supra complanatis patenti-puberulis nudis 4–8 mm. longis. Paniculae axillares in ramis hornotinis patenti-puberulae erectae vel divergentes 1.7–2.4 cm. longae (pedunculo 1–1.6 cm. longo incluso) pauciflorae, pedicellis ultimis 1 mm. longis vel subnullis; bracteae ovato-lanceolatae acuminatae 0.5–1 mm. longae. Flores ad 5 mm. lati, alabastrum subhemisphaericum 1.7 mm. longum et latum. Sepala 5 patenti-puberula 0.7 mm. longa depresso-deltaidea obtusa. Petala 5 imbricata suborbiculari-ovalia latissime rotundata obscurissime erosula glabra 3 mm. longa 2.4 mm. lata. Discus cupularis carnosus parum elevatus ad 0.5 mm. altus. Stigma integrum. Carpidia (immatura) 3 plane complanata

oblique obovato-orbicularia obcordata coriacea ad 1.3 cm. longa et lata. — BRITISH HONDURAS: a small spreading tree in pine ridge thickets, near Manatee Lagoon, 8 July 1906, *M. E. Peck* 456 (TYPE in Gray Herb.).

RHAMNACEAE

COLUBRINA lanulosa, sp. nov. Frutex 3 m. altus. Caulis fusco-brunneus glabratus sed parum papillosus (basibus pilorum persistentibus); rami hornotini densissime lanuloso-pilosi pilis pallide rufescentibus intertextis. Folia alterna ovalia vel ovata apice rotundata vel obtusa basi rotundata obscurissime serrulata firma supra obscure viridia densissime molliterque pilosa pilis subappressis modice venosa subtus dense mollissimeque rufescenti-canescenscenterque lanuloso-pilosa venosa (venis ca. 6-jugis) 2.5–4.6 cm. longa 1.4–2.1 cm. lata, in petiolis dense lanuloso-pilosis 3–5 mm. longis. Flores "virides" in paniculis axillaribus 1.3–2.5 cm. longis 1.7–3.2 cm. latis (pedunculo 6–10 mm. longo incluso) ut ramulis pubescentibus densissime multifloris aggregati; pedicelli 1.5 mm. longi vel subnulli. Calycis rotati 5.2 mm. lati extus lanuloso-pilosi intus glabri tubus disco 5-gono impletus, segmenta 5 patentia deltoidea acutiuscula intus 1-alato-nervia. Petala 5 elliptico-obovata subsaccata stamina foventia 1.5 mm. longa (ungue 0.5 mm. longo incluso). Stamina 5 petalis subaequalia, filamentis subulatis glabris. Ovarium aestivatione per discum omnino occultum. — MICHOACAN or GUERRERO: volcanic soil, Tlacotepec, 1600 m., 10 June 1899, *Langlassé* 1053 (TYPE in Gray Herb.). — A species finding its only close ally in *C. megacarpa* Rose, which has somewhat looser fewer-flowered inflorescences, thinner more distinctly toothed leaves, and much less pubescent young branches and under leaf-surfaces.

DILLENIACEAE

SAURAUIA Buscalioniana, sp. nov. Arbor 5–6 m. alta. Ramus validus sordide (novellus rufescens) densissimeque sed non aspere piloso-setosus (setis patenti-incurvis per totam longitudinem spinulosis) et stellato-pilosus. Folia alterna obovata breviter acuminata basi cuneata subsimpliciter serrulata (dentibus setoso-mucronatis) supra sicc. obscure brunneo-viridia subdense incurvo-setosa et -setulosa (pilis basi ampliatis glabris vel sparse

spinulosis) et sparsissime stellato-pubescentia pennivenia (venis ca. 16-jugis venulis obscurissimis) subtus vix pallidiora subdense in axillis densissime stellato-pilosa in costa subsparsae setosa venulis inconspicuis 18–22 cm. longa 5.8–7.8 cm. lata, in petiolis nudis ut ramo rufescenter piloso-setosis ad 2 cm. longis insidentia. Paniculae pyramidales ut ramus piloso-setosae et stellato-pilosae 9–10 cm. longae 5–6 cm. diam. (pedunculo nudo 5–5.8 cm. longo incluso); bracteae subulato-lanceolatae attenuatae 1–4.5 mm. longae; pedicelli 3–6 mm. longi. Calycis 4.5 mm. longi paene ad basin 5-partiti intus in basi tubi conspicuiter barbato-setosi pilis rufescentibus segmenta 5: 2 exteriora ovato-orbicularia rotundata subherbacea regulariter sed sparse piloso-setosa setis basi saepius stellato-pilosis interdum supra spinulosis; tertium simile sed in uno latere subchartaceum ibidem glabrum margine stellato-setulosum; 2 interiora subchartacea margine stellato-setulosa in linea media paene ad apicem piloso-setosa setis basi stellato-pilosis ceterum glabra. Corolla 13 mm. lata: petala 5 albida basi connata et barbato-pilosa obovato-orbicularia apice rotundata vel retusa 6 mm. longa 4.3–6.5 mm. lata. Stamina ca. 31: filamenta basi connata ampliata et pilosa 2.7 mm. longa; antherae albae 1.6 mm. longae. Ovarium glabrum. Styli 5 glabri. — MICHOCAN or GUERRERO: clayey soil, Sierra Madre, 1800 m., 21 April 1899, *Langlassé* 1004 (TYPE in Gray Herb.). — Closely related to *S. Pringlei* Rose, to which the present collection was referred by Dr. Buscalioni (*Malpighia* xxvi. 131 (1913)) in his revision of the genus. From the type collection of that species, *Pringle* 4668, it differs in a number of significant features. The leaves are more densely setose above, particularly on the costa and veins, with long and short setae, and the panicles more densely setose with longer hairs. The sepals are broader and more overlapping at base and more densely covered with setose hairs which are spinulose or at base stellate-setulose, while in *S. Pringlei* the broadly obovate sepals, somewhat disjunct at base, are sparsely stellate-pilose but without true setae. Its affinities with *S. subalpina* J. D. Sm. and *S. latipetala* Hemsl., while clearly marked, are not so close. The species is dedicated to Dr. L. Buscalioni, editor of *Malpighia*, whose revision of *Saurauia* has been in course of publication in that journal for some years, and who, it is greatly to be desired, will present us at the close of his work with a key to all the American species of this exceedingly difficult genus.

no!
They
have
setae
under
the
stellate
hairs.

SAURAUIA PSEUDOCOSTARICENSIS Busc.! *Malpighia* xxvii. 25 (1915). To this species I would refer *Tonduz* 11690, from Copey, Costa Rica, which was included by Dr. Buscalioni first among the specimens upon which his *S. costaricensis* J. D. Sm. var. *dolicotricha* was based (*Malpighia* xxvii. 15). The same number was also referred by him (l.c. 12) to his var. *brachitricha* of the same species. *Saurauia costaricensis*, as originally described by Capt. Smith (*Bot. Gaz.* xxiii. 236 (1897)), was a complex, based upon the following collections: *Cooper* 5714, *Tonduz* 1744 & 7685, *J. D. Smith* 4745 & 4746, and *Pittier & Tonduz* 8589. On one of these collections, *J. D. Smith* 4746, the very distinct *S. ovalifolia* J. D. Sm. *Bot. Gaz.* xlii. 292 (1906) was based; from another, *J. D. Smith* 4745, the equally distinct *S. pseudocostaricensis* Busc. was described. As no type for *S. costaricensis* has ever been designated, the first-cited collection, *J. J. Cooper* 5714, which agrees well with the original description, is here selected as type. From *S. costaricensis* as thus typified the collection under consideration, *Tonduz* 11690, is too different to permit its union as a variety, while it agrees perfectly with the type collection of *S. pseudocostaricensis*, except for the fact that there are a few stellate hairs on the midrib beneath, a feature too insignificant to be considered of any importance, in the absence of other differences.

SAPOTACEAE

BUMELIA Brandegei, nom. nov. — *B. fragrans* Brandege! *Zoe* v. 106 (1901), not *B. fragrans* Ridley! *Journ. Linn. Soc. Bot.* xxvii. 43 (1890). — The existence of an earlier *B. fragrans* Ridley, from Brazil, makes it necessary to provide a new name for the quite different species of the same name from Lower California.

BUMELIA megaphylla, sp. nov. Arbor ramosus. Rami teretes brunnescentes glabrati plus minusve lenticellati. Folia alterna elliptica apice brevissime acutata apice supremo rotundata basi rotundato-cuneata vel cuneata integra parum repanda supra saturate viridia lucentia glaberrima subtus vix pallidiora parum lucentia glaberrima pallido-marginata, costa prominente venis subobscuris ca. 17-jugis venulis obscure reticulatis, 8.7–12.5 cm. longa 3.5–4.7 cm. lata, in petiolis supra sulcatis glabris subtus rufescenter appresso-puberulis 9–13 mm. longis insidentia. Flores per 8–17 in fasciculis axillaribus aggregati, in pedicellis rufescenter

puberulis 6–7 mm. longis. Calycis 3 mm. longi segmenta 5 valde imbricata erecta elliptica apice rotundata appresse rufescenti-pubescentia 2 exteriora breviora et angustius scarioso-marginata. Corolla 5.6 mm. longa: petala 5 basi connata tripartita, lacinia media obovata obtusa saepius integra lateralibus paullo interioribus anguste lanceolatis acuminatis vel attenuatis parum obliquis in latere exteriori serratis. Stamina 5 petala paullulo superantia; staminodia 5 petaloidea obovata subobtusa fimbriato-lacerata longit. petala aequantia latitud. inter petalorum segmenta media et lateralia intermedia. Fructus (immaturus) ellipsoideo-ovoideus apice concavus stylo terminatus 7 mm. longus. Semen (immaturum) exalbuminosum. — BRITISH HONDURAS: a small or medium-sized tree with hard light-colored wood, in forest, Rio Grande, 25 March 1907, *M. E. Peck* 756 (TYPE in Gray Herb.). — A species apparently most nearly related to *B. arborescens* Rose, but with much larger leaves, longer pedicels, larger corolla, and more nearly equal less toothed staminodia and lateral petal-segments.

EBENACEAE

Diospyros sinaloensis, sp. nov. Frutex dioicus pluricaulis 3.3 m. altus 1.5 dm. diametro. Rami vetustiores cani glabri vel rare unifariam pubescentes, hornotini sicc. nigrescentes sparse strigosi. Folia alterna elliptica vel parum obovato-elliptica apice rotundata vel retusa basi rotundata vel truncato-subcordata integra interdum parum repando-crenata vetustiores sicc. pallida infra paullo obscuriora utrinque glabra et prominulo-reticulata (venis majoribus 8–9-jugis, nervis anastomosantibus) chartaceo-subcoriacea 7.7–12 cm. longa 3.3–5.2 cm. lata, in petiolis validis nudissubglabris 3 mm. longis; folia hornotina sicc. nigrescentia infra ad costam sparsissime strigosa. Flores ♂ per 2–4 in axillis paniculati nutantes, in pedicellis curvatis hispidulis 3–4 mm. longis. Calyx 4.5 mm. longus, lobis ovatis obtusis mucronulatis ciliolatis sparse puberulis plus minusve venosis. Corolla urceolata (alabastro rostrato-conico) extus canescenter appresso-puberula; tubus ad 8 mm. longus, in medio 4 mm. in apice 3 mm. diametro; limbus patens ad 8 mm. latus, lobis 5 obovato-suborbicularibus rotundatis 3.5 mm. longis 3 mm. latis. Stamina 20: 10 inferiora breviora, filamentis ad 0.3 mm. longis, antheris ovato-lanceolatis acuminatis 3 mm. longis; 10 superiora longiora, filamentis ad 1 mm. longis,

antheris lanceolatis acuminatis 3.2 mm. longis. Ovarii rudimentum puberulum. Fl. ♀ non vidi. — SINALOA: shrub 3.3 m. high, with seven stems, and trunk 1.5 dm. in diameter, Altata, 15 June 1897, *Rose* 1339 (TYPE COLL.: U. S. Nat. Herb. no. 300162, Gray Herb.).

APOCYNACEAE

BELANDRA, genus nov. *Echitidearum*. Calyx majusculus 5-partitus, segmentis subacuminatis quoque basi squama deltoidea denticulata donato. Corolla hypocraterimorpha, tubo limbum superante isodiametrico esquamato; lobi 5 oblongi dextrorsum obtegentes sinistrorsum torti. Stamina infra apicem tubi affixa apicem tubi attingentia sed non exserta, filamentis brevissimis; antherae sagittatae acuminatae circa stigma conniventes et ei adhaerentes, loculis basi in appendiculas rigidas productis. Discus ampulliformis ad apicem angustatus apice denticulatus ovarium superans et omnino occultans. Ovarii carpella 2 distincta multiovulata; stigma crassum pulvinare 5-angulatum basi cingulo brevissimo patente 5-lobato donatum. Fructus ignotus. — Herba (?) scandens minute hispidula. Folia opposita penninervia eleganter reticulata. Flores siccitate pallidi (flavi vel albid?) in racemo simplici multifloro axi spiraliter torto per paria dispositi.

The genus *Belandra* (βέλος, arrow, and ἀνήρ, for stamen), finds its nearest relative in *Echites* P. Br., but differs in the excessively developed disk. From *Odontadenia* Benth., which has a similar disk, *Belandra* is sharply distinguished by its strictly salver-form corolla and simple spiralled raceme.

BELANDRA concolor, sp. nov. Planta sine dubitatione scandens verisim. volubilis. Caulis herbaceus tenuis subteres pallide viridis minute hispidulus pilis basi valde incrassatis retrorsis. Folia opposita ovalia vel oblongo-ovalia abrupte breviterque (3–6 mm.) acutata basi rotundata vel obscure cordata integerrima sicc. utrinque lutescenti-viridia concoloria glaberrima supra laevia subtus granuloso-papillosa, nervis lateralibus 6–8-jugis et venulis supra impressis subtus valde prominentibus reticulatis, 8.6–12.6 cm. longa 3.2–4.7 cm. lata, in petiolis minute tuberculato-hispidulis immarginatis 5–7 mm. longis basi connatis. Racemus (an normaliter ?) collateralis multiflorus ad 7 cm. longus, pedunculo 2.5 cm. longo, axi spiraliter torto; bracteae minutae vix bene visae;

pedicelli 8–13 mm. longi tenues sparse minuteque hispiduli. Calycis 7 mm. longi segmenta aequalia oblongo-ovata ad 2.7 mm. lata, quoque basi squama deltoidea apice ca. 4-denticulata ad 1 mm. longa donato. Corollae tubus 1.5 cm. longus 3 mm. diametro ad insertionem staminum vix ampliatus; limbi lobi 5 aequales obliqui oblongi parum crispatis apice rotundati 1.3 cm. longi 7 mm. lati. Discus ad 3 mm. longus ovarium omnino occultans. Stamina in annulo retrorse comoso angusto ca. 1.2 cm. supra basin corollae inserta; antherae 5 mm. longae, appendiculis basilaribus acutis subcurvatis 0.8 mm. longis; filamenta hirtella ad 0.8 mm. longa. Fructus deest. — BRITISH HONDURAS: low bank of Rio Grande, 25 March 1907, *M. E. Peck* 953 (TYPE in Gray Herb.). — The single raceme of the type specimen is, perhaps abnormally, inserted laterally between the bases of the paired leaves. Prof. Peck's field notes unfortunately fail to indicate the color of the corolla, but in the dried flower it is pale, and in life probably whitish or yellowish.

ECHITES cuspidifera, sp. nov. Planta volubilis 3–7-metralis. Caulis tenuis teres fusco-brunneus minute hispidulo-puberulus pilis patenti-retrorsis aetate subglabratus. Folia opposita elliptica vel obovato-ovalia apice vel breviter acuta vel rotundata vel truncata cuspidifera (cuspidate 0.8–2 mm. longa) basi cordata (sinu 1.5–3.5 mm. alto angustissimo) supra viridia ad costam et marginem rare in facie minute hispidula infra glancescenti-canescencia ad nervos sparse hispidula, nervis lateralibus 6–7-jugis nervulis anastomosantibus, 3.2–5.1 cm. longa 1.7–2.9 cm. lata, in petiolis minute granuloso-hispidulis 3–4 mm. longis. Racemi axillares simplices 5–34-flori 1–4.8 cm. longi, pedunculo 5–10 mm. longo et axi minutissime granuloso-hispidulis; pedicelli 7–8 mm. longi apice incrassati maturitate patentes vel paulum recurvati. Calycis segmenta 5 deltoideo-ovata acuminata subcuspidata paene ad basin sejuncta ad 1.8 mm. longa, quoque basi squama deltoidea ca. 4-dentata praedito. Corollae hypocraterimorphae tubus 2.6 cm. longus e basi 2 mm. diametro sensim ampliatus, 9 mm. supra basin 4 mm. diametro, deinde angustatus 1.5 cm. supra basin 1.6 mm. diametro, deinde ampliatus 4 mm. diametro, apice paulo angustior 3.5 mm. diametro; limbi lobi 5 patentes aequales oblongi crispato-erosi apice rotundati ca. 10 mm. longi 4.5 mm. lati. Discus cupularis breviter 5-lobatus ad 0.8 mm. altus ovario

paullo brevior. Stamina 1.7 cm. supra basin corollae in annulo retrorse comoso inserta, filamentis breviter comosis. Folliculi moniliformes 1.3–2.1 dm. longi glabri. Semina 5.5 mm. longa, coma rufescente 1.5 cm. longa donata. — BRITISH HONDURAS: a vine climbing 3–7 m. over shrubs, pine ridge near Manatee Lagoon, 11 June 1905, *M. E. Peck* 35 (TYPE in Gray Herb.).

FORSTERONIA viridescens, sp. nov. Frutex alte scandens. Ramus subvalidus teres brunneus glaber lenticellatus. Folia elliptica vel ovalia vel parum obovato-elliptica breviter acuminata (apice supremo obtusiusculo mucronulato) basi cuneata vel cuneato-rotundata integra vix revoluta chartaceo-coriacea glaberrima supra obscure viridia subtus vix pallidiora fusco-viridia pennivenia, venis 6–8-jugis subconspicuis venulis obscure reticulatis, 1–1.4 dm. longa 3.3–4.6 cm. lata, in petiolis nudis glaberrimis supra sulcatis 2–4 mm. longis insidentia. Flores ad apices rami et ramulorum axillarum dense cymoso-paniculati (paniculis 1.5–2.8 cm. latis), pedunculis ad 1.2 cm. longis cum axi paniculae sordido-rufescenter glandulari-puberulis; bracteae triangulari-ovatae acuminatae plus minusve glandulari-puberulae 0.8–1.7 mm. longae; pedicelli ultimi 1.5 mm. longi vel breviores. Calycis 1.2 mm. longi intus eglandulosi segmenta 5 triangulari-ovata acutiuscula utrinque plus minusve glandulari-puberula. Corollae “viridescenti-albidae” 3.5 mm. longae per $2/5$ longit. sympetalae segmenta 5 oblongo-ovalia obtusa utrinque rufescenter glandulari-puberula in alabastro valde convoluta dextrorsim obtegentia, tubo intus supra insertionem staminum barbato-annulato pilis albidis valde clavatis. Stamina 5 prope basin tubi inserta apicem tubi paullum superantia circa stigma conniventia lineari-oblonga (corpore 1 mm. longo), appendicibus hyalinis lanceolato-subulatis attenuatis 0.7 mm. longis praedita; filamenta ad 0.25 mm. longa. Stigma crasso-cylindricum circa medium parum constrictum, rostro valde bifido 0.8 mm. longo donatum. Glandulae disci 5 subquadratae subtruncatae ad medium connatae ovario puberulo duplo breviores. — BRITISH HONDURAS: a climber reaching the tops of large forest trees, with greenish-white flowers, in forest near Manatee Lagoon, 7 July 1906, *M. E. Peck* 450 (TYPE in Gray Herb.). — A species apparently most closely allied to *F. brasiliensis* A. DC., which is described as with corolla glabrous outside and calyx-segments glandular-appendaged within.

MANDEVILLA denticulata, sp. nov. Planta volubilis. Caulis aspere granuloso-hispidulus pilis nonnullis longioribus interspersis ad 1.5 mm. diametro, internodiis 1 dm. longis et ultra. Folia opposita oblongo-ovalia apice subabrupte breviterque attenuata basi cordata (sinu ad 3.5 mm. alto 2.5 mm. lato) integerrima supra viridia hispida pilis albidis basi paullum incrassatis subtus multo pallidiora sed haud glaucescentia subdense hispida et granulosa, nervis lateralibus ca. 12-jugis venulis anastomosantibus, 7.5–9.5 cm. longa 3–3.7 cm. lata, in petiolis ca. 1.3 cm. longis. Racemi axillares ut videtur ca. 10-flori ca. 2.5 cm. longi; pedunculus validus supra incrassatus sordide incurvo-pubescens 1.5–2.3 cm. longus; bracteae ovatae acuminatae hispidio-pilosulae 1.5 cm. longae vel minores ut videtur rubescentes; pedicelli maturitate crassi 6 mm. longi. Calycis segmenta 5 subaequalia paene ad basin sejuncta lineari-lanceolata attenuata extus dense subsordide pilosula 9–10.5 mm. longa, quoque basi squama deltoidea apice 5–6-denticulata discum subaequante praedito. Corolla anguste infundibuliformis extus supra basin subglabram dense appresse albescenti-pilosa lactea in faucibus rubro-venosa; tubus ad 1.5 cm. longus 2.5 mm. diametro, in fauces infundibuliformes 2.5 cm. longas apice ad 9 mm. diametro sensim ampliatus; limbi lobi aequales oblique flabellato-cuneati in latere 1-dentata apice late rotundati ad 1.3 cm. longi 1.1 cm. lati. Discus annularis obscure 5-lobatus ovario brevior. Stamina 2.4 cm. supra basin corollae in annulo retrorse comoso inserta, filamentis brevissimis comosis. Folliculi obscure torulosi dense molliterque sordido-pilosi 13.5 cm. longi 4–4.5 mm. diametro. — **BRITISH HONDURAS**: climbing over thickets in saline soil, New Haven, 8 March 1907, *M. E. Peck* 696 (TYPE in Gray Herb.). — Related to *M. hispida* (R. & S.) Hemsl., but with a different pubescence.

TABERNAEMONTANA chrysocarpa, sp. nov. Arbusculus undique glaberrimus. Caulis juventate viridis plus minusve compressus aetate pallidus teres sicc. striatus bifurcate ramosus, internodiis superioribus 1–3 cm. longis. Folia opposita obovata apice subabrupte breviterque (5–8 mm.) acutata apice supremo obtusa basi longe acuminata integerrima subconcoloria subcoriacea nervis lateralibus 10–13-jugis supra impressis subtus prominentibus venulis supra impressis subtus obscuris, sicc. paullum revoluta 8–12.7 cm. longa 3–4.3 cm. lata, in petiolis vix marginatis basi

connatis 1–1.7 cm. longis. Paniculae terminales et laterales multiflorae saepius bifidae, ramis sparse ramosis, 1–1.5 dm. longae, in pedunculis ca. 2.5 cm. longis; bracteae subscariosae rotundatae ad 0.7 mm. longae; pedicelli 9–10 mm. longi. Calycis 1.7 mm. longi segmenta 5 ovata obtusa paene ad basin distincta, quoque basi glandulis 5–6 linearibus donato. Corollae (albidae ?) hypocraterimorphae tubus 7.5 mm. longus basi ad 1.7 mm. diametro deinde paullum angustatus ad insertionem staminum paullum ampliatus deinde ad limbum isodiametricus; limbi lobi 5 aequales oblique cuneati apice rotundati parum crispatis 6 mm. longi 3.5 mm. lati. Discus obscurus. Stamina 5 inclusa glabra. Fructus ut dicitur flavus juventute 1.7 cm. latus. — BRITISH HONDURAS: a small tree with yellow fruit, in deep forests near Manatee Lagoon, 10 Aug. 1905, *M. E. Peck* 118 (TYPE in Gray Herb.).

ASCLEPIADACEAE

PATTALIAS Wats. Proc. Am. Acad. xxiv. 60 (1889). — This genus was based by Dr. Watson on his *Pattalias Palmeri*, described from a Sonoran collection of Palmer's (no. 424 of 1887), with which he associated a second species, *P. angustifolius* (Torr.) Wats., another Sonoran species originally published as a *Metastelma* and later transferred to *Melinia* by Dr. Gray. In the Pflanzenfamilien (iv. pt. 2, 246, 255) Schumann has placed *Pattalias* next *Mellichampia* and marked it in his key (p. 246) as of uncertain position. His description is so exact a translation of Watson's original (except that Watson's "petiolate" for the leaves of *P. angustifolius* is mistranslated "sitzende") that it seems probable that he was unable to examine material and drew his description entirely from the printed diagnosis of the genus. More recently Bartlett (Proc. Am. Acad. xlv. 631 (1909)) has based a new genus, *Basistelma*, on *Pattalias angustifolius* (Torr.) Wats. and *Melinia mexicana* Brandege, leaving *Pattalias Palmeri* the sole representative of this genus.

After careful dissections and comparisons of *Pattalias Palmeri* and related species, and various species of *Cynanchum* (including *Vincetoxicum* of Bentham & Hooker's Genera), I have been unable to find any characters to justify the maintenance of *Pattalias* as a distinct genus. In Schumann's key to the *Cynanchinae* (p. 246) *Cynanchum* (which with him includes *Vincetoxicum* Moench, kept

distinct by Bentham & Hooker) is mentioned only in the group with "Coronazipfel glocken- oder krugförmig, mit kurzen Zipfeln," while *Pattalias* is placed in the group with "Corona tiefer geteilt; Zipfel zuweilen nur am Grunde ringförmig verbunden." But in the text, the first section of *Cynanchum* (§ *Vincetoxicum* (Moench) K. Sch.) is described as with "Corona sehr tief geteilt oder in fast ganz freie, selten völlig getrennte Zipfel gelöst." In this regard, then, there is no difference between *Pattalias* and *Cynanchum*. Furthermore, *Pattalias* agrees in all essential features — 5-parted eglandular calyx, shape and twisting of corolla-lobes, and insertion of corona upon the column — with *Cynanchum* § *Vincetoxicum* of Schumann. The stigma-rostrum from which Dr. Watson's name was derived is in *P. Palmeri* merely depressed-conic, in the excluded *P. angustifolius* (= *Basistelma angustifolium* (Torr.) Bartlett) slenderly columnar and subterete. It was described (in *P. Palmeri*) as entire by Watson, and as distinctly bifid by Bartlett. To me it appears very faintly and obscurely bifid. In the related species described below as *Cynanchum peninsulare* it is longer than in *P. Palmeri*, more acutely conic, and distinctly bifid, but neither species can be sharply separated by this feature from *Cynanchum*, which is described by Bentham & Hooker as with stigma "medio vertice convexiusculum v. breviter conicum" (*Cynanchum*) or "apiculo crasso conico breviter 2-fido instructum (rarius rostratum ?)" (*Vincetoxicum*), and by Schumann as with "Narbenkopf gewöhnlich gebuckelt, selten plump keulenförmig oder cylindrisch über die Stb. hinaus verlängert und dann 2lappig."

In the absence of any distinguishing features of habit or structure, it becomes necessary to sink the genus *Pattalias* in *Cynanchum*. The only described species becomes

CYNANCHUM Palmeri (Wats.), comb. nov. — *Pattalias Palmeri* Wats. ! Proc. Am. Acad. xxiv. 60 (1889). — The species has never been found since it was collected by Palmer in 1887.

CYNANCHUM peninsulare, sp. nov. Planta scandens ? verisim. pluricaulis. Caulis canescenti-viridis tenuis subteres ad nodos sparse pubescens ceterum subglaber ramosus. Folia opposita linearia mucronata margine sparse appresse pubescentia basi vix angustata sessilia subplana 3–8.3 cm. longa 1–1.8 mm. lata. Flores in axillis foliorum 2–7 subumbellati; pedunculus pubescens ad 1 mm. longus; pedicelli ad 2 mm. longi. Calyx ad basin 5-partitus

1.3–1.5 mm. longus, segmentis anguste lanceolatis acuminatis sub-appresse pubescentibus. Corolla viridis 5-partita glabra vel subglabra; tubus calycem aequans; lobi erecti lineari-lanceolati obtusiusculi paullum torti 8 mm. longi. Coronae segmenta 5 oblongo-elliptica integra late rotundata erecta basi (per 0.3 mm. longitudinis) conjuncta ca. 2 mm. longa 1.3 mm. lata, basi conjuncta gynostegio adnata. Antherarum appendiculae ad rostrum stigmatis appressae. Stigmatis rostrum conico-lanceolatum acutum apice minute bifidum coronam vix superans. Folliculi fusi-formes basi breviter apice longissime attenuati glabri glaucescentes 9.8 cm. longi. Semina subovata apice angustata 5.5 mm. longa; coma lucide alba 15 mm. longa. — LOWER CALIFORNIA: west coast of Cape Region, Nov. 1902, *Brandege* (TYPE in Gray Herb.). — Related to *C. Palmeri* (see above), with which the material in the Gray Herbarium was identified by Dr. Greenman, but with much larger flowers and various other differences.

VINCETOXICUM cteniophorum, sp. nov. Herba scandens. Caulis modice validus fusco-brunneus ad nodos sparse appresso-pilosus ceterum glaber. Folia opposita oblongo-ovata breviter acuminata basi vix angustata cordata (sinu 1–2 cm. alto 3.5–7 mm. lato) membranacea subconcoloria glaberrima, nervis lateralibus 3–5-jugis, 5–9 cm. longa 2.3–4.1 cm. lata, in petiolis immarginatis glabris 1.8–4.6 cm. longis. Pedunculi axillares 2–3 cm. longi glabri; axis florifer subaequilongus multiflorus floribus irregulariter racemosis; pedicelli glabri 1–2.5 cm. longi. Calycis segmenta 5 ovata acuminata sparse et minute ciliolata ceterum glabra 3 mm. longa 1.4 mm. lata. Corolla rotata 3.5–3.8 cm. lata paene ad basin 5-lobata, lobis angustissime lanceolatis paene e basi attenuatis tortis extus glabris sicc. in latere dextro viridescentibus in latere sinistro pallide flavicantibus et lineatis in medio linea pilosociliata pilis erectis 4 mm. longa praeditis. Corona duplex: exterior brevis dense ciliata; interior brevis carnosae glabra patens 5-lobata lobis semicircularibus. Fructus deest. — BRITISH HONDURAS: a low climber in thicket, Toledo, 5 April 1907, *M. E. Peck* 821 (TYPE in Gray Herb.).

VINCETOXICUM dasystephanum, sp. nov. Planta scandens. Caulis tenuis teres hispidus et hispidulus pilis subretrorsis basi paullum tuberculatis. Folia opposita oblongo-ovalia apice breviter acuminata basi obtusa vel rotundata integerrima supra viridia

subtus paullo pallidiora utrinque subdense hispidopilosa pilis rufescentibus adscendentibus basi tuberculatis, nervis lateralibus majoribus 5-7-jugis, 3.3-5 cm. longa 1.2-2 cm. lata, in petiolis immarginatis rufescenter hispidopilosis pilis subpatentibus 6.5-8.5 mm. longis. Pedunculi incurvo-hispiduli pilis paucis longioribus intermixtis 7-10 mm. longi; flores 6-9 subumbellati; pedicelli ca. 1.5 cm. longi. Calycis segmenta 5 ovata obtusa hispidula 2 mm. longa. Corolla sicc. viridis rotata paene ad basin 5-lobata 12 mm. diametro, lobis ovali-ovatis apice obtusis extus hispidulis intus glabris ca. 9-nerviis 5 mm. longis 2.8 mm. latis. Corona duplex: exterior annularis erecta obscure 5-lobata apice dense piloso-ciliata ad 1.5 mm. alta (pilis exclusis); interior brevior glabra carnosa medio exterioris adnata pauci-crenulata. Fructus deest. — BRITISH HONDURAS: a rather high climber in forests and thickets, near Manatee Lagoon, 30 Jan. 1905, *M. E. Peck* 323 (TYPE in Gray Herb.). — This species like the last belongs in the old genus *Gonolobus*, for which the name *Vincetoxicum* of Walter is now used by all American botanists.

SOLANACEAE

MERINTHOPODIUM internexum. sp. nov. Frutex sine dubitatione epiphyticus, caule valde ruguloso juventate sparse hispidulostrigilloso. Folia obovata apice abrupte acutissime breviterque (ad 1 cm.) acuminata basi acuta integerrima subconcoloria subchartacea glaberrima, nervis lateralibus ca. 7-jugis, (8.5) 10.8-15.2 cm. longa 3.3-6.8 cm. lata, petiolis 1-1.5 cm. longis. Pedunculus ca. 18 cm. longus valde rugulosus; flores pauci ad apicem axis dense cicatricosi 18 cm. longi hispiduli, in pedicellis glandularigranulosis 3-3.7 cm. longis apice incrassatis. Sepala 5 lanceolata longissime attenuata granularia 2.6-2.9 cm. longa. Corolla e basi tubulosa campanulata ca. 5 cm. longa extus granulari-puberula; tubus 1.8 cm. longus apice ca. 7.5 mm. diametro in fauces campanulatas ca. 2.8 cm. longas (sicc.) 2.8 cm. latas abrupte ampliatus; limbi lobi triangulares ad 1 cm. longi ut videtur patentes vel reflexi. Antherae 11 mm. longae exsertae. Stylus exsertus stamina aequans. — GUATEMALA: Cobilquitz, Dept. Alta Verapaz, 350 m., July 1903, *von Tuerckheim* 8435 (TYPE in Gray Herb.). — Distributed as *M. neuranthum*, but quite distinct in its very attenuate sepals and campanulate corolla, in respect to which

characters it is intermediate between *M. neuranthum* (Hemsl.) J. D. Sm. and *M. campanulatum* J. D. Sm. I am indebted to Capt. Smith for the loan of the unique type of *M. campanulatum* for purposes of comparison.

MERINTHOPODIUM leptesthemum, sp. nov. Frutex in palmis epiphyticus. Caulis glaber pallide brunneus rugulosus. Folia alterna obovata vel ovali-obovata breviter acuminata basi longe acuminata integerrima chartaceo-coriacea glaberrima obscure viridia subtus paullo pallidiora, nervis lateralibus 6-7-jugis supra impressis subtus prominentibus venulis nullis, 12.5-20.5 cm. longa 3.5-6 cm. lata, in petiolis 1-1.7 cm. longis supra canaliculatis. Pedunculi 7-9 cm. longi; flores pauci ad apicem axis perennis 5-15 cm. longi dense cicatricosi in pedicellis 3-3.5 cm. longis ad apicem incrassatis et granuloso-puberulis. Sepala 5 oblongo-ovata acuta paene ad basin libera (interdum per 2 et 3 connata) 1-nervia venulis anastomosantibus granulosa 1.3-2 cm. longa 0.8 cm. lata. Corolla tubulosa supra paullum ampliata textura tenuis 4.8 cm. longa extus granularis multinervosa, lobis 5 porrectis ovato-triangularibus obtusiusculis 1.3 cm. longis. Filamenta tenuissima 3.7 cm. longa ad basin corollae brevissime adnata fere ad medium patenti-pilosula; antherae 8 mm. longae. Stylus 3.8 cm. longus; stigma saltem senectute conicus 1 mm. longus. Capsula ellipsoidea obtusa 1.3 cm. longa polysperma. Semina compressa 2 mm. longa, albumine exiguo donata. — **BRITISH HONDURAS:** an epiphytic shrub on palms, Toledo, 12 Sept. 1906, *M. E. Peck* 508 (TYPE in Gray Herb.). — From *M. neuranthum* (Hemsl.) J. D. Sm., its nearest relative, *M. leptesthemum* differs primarily in the thin texture and different nervation of the corolla. In *M. leptesthemum* there are on each side of the main nerve of the lobes, between this and the strong nerve on the margin of the sinus, three weaker but distinct nerves; and in the sinus itself two similar weak veins between the two strong marginal ones. In *M. neuranthum*, on the other hand, the much thicker corolla bears only one or two weak nerves laterally on each side of each main nerve, between the latter and the nerves bordering the sinus, the latter being two-nerved much as in *M. leptesthemum*.

In describing these two new species I have with some little hesitation followed Capt. John Donnell Smith in his separation of *Merinthopodium* from *Markea*. The distinctions between the

two genera appear somewhat vague. *Merinthopodium*, as originally based by Capt. Smith (Bot. Gaz. xxiii. 11, t. 1 (1897)) on *Markea neurantha* Hemsl., was distinguished by the peculiar inflorescence of few umbellate-racemose flowers terminating a very scarred and evidently perennial rachis or leafless flowering branch, the tubular-campanulate corolla, and the seeds described as exalbuminous. The last feature is, however, apparently based on a misconception, for in fig. 9 of Faxon's plate above cited the embryo is represented as surrounded by what is apparently a thin layer of albumen, and in *M. leptesthemum*, certainly a very close ally of *M. neuranthum*, the seeds are clearly albuminous. In this respect, then, *Merinthopodium* does not differ from the original species of *Markea* (*M. coccinea*) as figured by Vauthier (Dict. Class. Hist. Nat. xvii. t. [9]) and by Miers (Ill. ii. t. 45). In Vauthier's plate the flowers are represented as scattered in a sparsely branched panicle, in Miers' as racemose along an axis which, except for its scattered and not crowded scars, is very similar to that of *Merinthopodium*. *Merinthopodium*, if it is to be distinguished as a genus, must accordingly rest on its peculiar inflorescence and tubular-campanulate or more openly campanulate (not salver-form) corolla. In these features, however, a plant from Costa Rica (Cooper (distr. J. D. Smith) 5887) described by Capt. Smith as *Markea leucantha* (Bot. Gaz. xxxi. 116 (1901)) is a good *Merinthopodium* and should be called **MERINTHOPODIUM leucanthum** (J. D. Sm.), comb. nov.

There is no material of the true genus *Markea* in the Gray Herbarium, and I have been forced to depend for the characters of the genus on Miers' and Vauthier's plates and on the description in the Genera Plantarum. A final determination of the relationships of the two genera must be deferred until authentic specimens of the two can be compared.

SOLANUM (§ *Morella*) **Peckii**, sp. nov. Herbacea valde ramosa. Caulis tenuis obtuse subangulatus supra lineatim puberulus ceterum glaber, internodiis 5.5–6.5 cm. longis. Folia bina valde inaequalia collateralia tenuia ovalia vel ovato-lanceolata ad apicem et basin acuminata obtusiuscula viridia sicc. plus minusve nigrescentia supra granularia subtus non pallidiora ad venas et venulas plus minusve hispidulo-puberula ceterum glabra subintegra, nervis validioribus ca. 4-jugis venulis anastomosantibus, majora 9–9.5 cm. longa 3.5–4.5 cm. lata, in petiolis 1.3–2 cm. longis vix

marginatis subglabris, minora 3–4 cm. longa. Umbellae inter petiolos binos sessiles 9–12-florae; pedicelli glabri maturitate recti sursum paullulum incrassati 1 cm. longi. Calyx sub-8-angulatus obscurissime 4-dentatus sparsissime ciliolatus 1 mm. longus. Corolla alba rotata 4-partita, tubo 1.5 mm. longo ad 2.3 mm. diametro, segmentis lanceolatis acuminatis apice acutiusculis 1-nerviis extus granuloso-puberulis 4 mm. longis. Stamina 4 aequalia; antherae ovatae 2.6–2.9 mm. longae; filamenta ad 1.3 mm. longa infra glabra supra incrassata dense pilosa. Stylus ad 5 mm. longus. Bacca globosa polysperma 4–4.5 mm. diametro. — BRITISH HONDURAS: cultivated ground in clearing, Monkey River, 26 Dec. 1906, *M. E. Peck* 585 (TYPE in Gray Herb.). — Apparently quite distinct in its 4-parted flowers and sessile umbels inserted between the petioles of the paired leaves, not extra-axillary as in so many of this group.

LENTIBULARIACEAE

UTRICULARIA aureola, sp. nov. Herba erecta glabra biflora 5.5–7.5 cm. alta, radiculis parvis albidis fibrosis ut videtur ampullis destitutis, foliis nullis. Scapus tenuissimus rectus squamis 2–4 minutis lancolatis vel ovatis acuminatis integerrimis basi adfixis praeditus. Bracteae ternatae integrae; media ovata subacuta 0.7 mm. longa; laterales angustiores paullo breviores; pedicelli ad 1 mm. longi erecti. Flores duo 0.3–1 cm. distantes aurei parviusculi. Sepala integra: superius ovatum acutiusculum 2.3 longum; inferius angustius 2 mm. longum. Labium corollae superius ellipticum planum adscendens 4 mm. longum 2.6 mm. latum; inferius integrum horizontale late orbiculare marginibus recte descendentibus 4.3 mm. longum 3 mm. altum, palato non prominente; calcar recte pendens regulariter subulatum acutum rectum 4 mm. longum. — BRITISH HONDURAS: wet sand, beach of Manatee Lagoon, 6 Dec. 1905, *M. E. Peck* 235 (TYPE in Gray Herb.). — This pretty little addition to the section *Oligocista* has no close relative among Mexican Bladderworts, nor do I find any South American species with which it can be identified. Its affinities, as shown by the ternate bractlets and general habit, are with the *U. juncea* group, the so-called genus *Stomoisia* Raf., which is included by Kamienski (in Engl. & Prantl, *Pflanzenfam.* iv. pt. 3b, 120 (1893)) in the section *Oligocista* A. DC.

UTRICULARIA JUNCEA Vahl. This species, not hitherto reported from Central America, was collected by Prof. Peck in mud near Manatee Lagoon, 10 Oct. 1905 (no. 165). Only a single specimen bearing a single flower was secured.

UTRICULARIA JUNCEA Vahl forma **minima**, forma nov. Planta 1-flora 3–7.5 cm. alta; corolla paullo minor (calcare 5–6 mm. longo); ceterum ut in forma typica. — BRITISH HONDURAS: Toledo, 12 Sept. 1906, *M. E. Peck* 502a (TYPE in Gray Herb.). — From all other examples of *U. juncea* examined the present plant is distinguished by its tiny size; the flowers, however, identical in every observed character with those of the typical form, are only very slightly smaller than in the latter. Unfortunately it is impossible to give full data for this collection, as the reference in Prof. Peck's notes under the number 502 relates to a species of *Ficus*.

UTRICULARIA macerrima, sp. nov. Herba ad 5 dm. longa glabra, radiculis paucis fibrosis ut videtur ampullis destitutis, foliis nullis. Caulis 2–3-florus tenuissimus ut videtur laxis simplex vel infra medium ramo longo donatus, squamis ca. 8 lanceolatis acuminatis plus minusve serrulatis basi adfixis ad 1 mm. longis praeditus. Bracteae ternatae: media lanceolato-ovata acuminata lacerato-denticulata (dentibus ca. 3–4-jugis inferioribus longis curvatis superioribus brevioribus) ad 1.5 mm. longa; laterales lineari-subulatae parce dentato-laceratae ad 0.8 mm. longae; pedicelli adscendentes tenues nudi 4.5 mm. longi. Flores 2–3 verisim. flavi. Sepalum superius orbiculari-ovatum obtusum distincte obtusissimeque crenatum ca. 13-nerve 2.5 mm. longum 3 mm. latum; inferius simile ca. 9-nerve 2 mm. longum 2.5 mm. latum. Labium corollae superius ovali-oblongum integrum apice rotundatum 3.5 mm. longum 1.8 mm. latum; inferius (imperfectum) ut videtur eo *U. juncea* simile (integrum marginibus recte descendentibus palato non prominente) ad 4 mm. longum 4.5 mm. altum; calcar recte pendens anguste subulatum acutum 6 mm. longum. — BRITISH HONDURAS: in open swampy ground near Manatee Lagoon, 25 Nov. 1905, *M. E. Peck* 222 (TYPE in Gray Herb.). — Likewise a member of the *U. juncea* group, but very distinct among North American species in its lacerate bracteas and distinct pedicels, and apparently not identical with any of the numerous species described from South America, very few of which are in the Gray

Herbarium. The species is represented by two stems and a single imperfect flower, from which when boiled out the above description was drawn up. Prof. Peck's notes do not specify the color of the flowers, but they were probably yellow.

UTRICULARIA Peckii, sp. nov. Herba erecta 1–1.2 dm. alta glabra, radiculis interdum ampullis paucis parvis praeditis, foliis nullis. Caulis tenuis purpurascens paullulum flexuosus simplex vel infra ramo erecto donatus 6–8-florus supra paullum marginatus, squamis ca. 8 ovatis integris apice rotundatis basi lata adfixis ad 0.6 mm. longis praeditus. Bractae ternatae integrae: media ovata apice rotundata 1 mm. longa; laterales multo angustiores paullo breviores; pedicelli erecti supra paullum incrassati 1.3–1.4 mm. longi. Sepalum superius apice late rotundatum integrum ad 1.5 mm. longum; inferius subtruncatum integrum ad 1.2 mm. longum. Corolla ut videtur flavida 4 mm. longa adscendens: labium superius ellipticum apice rotundato-truncatum 3 mm. longum porrectum marginibus ut videtur paullum reflexis; labium inferius 4 mm. longum ad 1.3 mm. altum integrum, juventate carinatiforme concavum, maturitate ut videtur ut apud *U. juncea* medio horizontale marginibus descendentibus valde crenato-crispatis (sed integris); calcar gibboso-triangulare late rotundatum recte pendens sepalo brevius ad 1 mm. longum. Capsula ellipsoidea ad 1.2 mm. longum in sepalis inclusa stylo rostrata, in pedicello erecto. — **BRITISH HONDURAS**: in mud near Manatee Lagoon, 8 Mar. 1906, *M. E. Peck* 371 (TYPE in Gray Herb.). — A most distinct species of the *U. juncea* alliance, more strongly suggestive of *U. subulata* in general appearance but with shorter pedicels and only slightly flexuose stem.

BIGNONIACEAE

ADENOCALYMNA ciliolatum, sp. nov. Frutex scandens. Caulis tenuis teres canus glaber sparsim lepidotus. Folia opposita conjugata verisim. cirrho (in specim. ad manum semper manco) clausa: phylla stipulas simulantia coriacea anguste ovata obtusa margine puberula ca. 2 mm. longa; petiolus subteres supra paullulum complanatus ad apicem sparse puberulus 7–18 mm. longus; foliola late ovata breviter acutata apice supremo obtuso basi truncato-rotundata integra subtenuia chartacea angustissime pallido-marginata utrinque glaberrima et impresso-lepidota 4.5–8

cm. longa 2.3–5.7 cm. lata, in petiolulis 8–21 mm. longis insidentia. Flores in pedunculis 2–3-floris axillaribus et terminalibus folia saepe superantibus gesti; pedicelli erecti ad apicem glandulari-lepidoti 7–12 mm. longi. Calyx campanulatus subcoriaceus subtruncatus obscurissime 5-denticulatus ad apicem conspicuiter lepidotus apice ciliolatus ceterum glaber 5 mm. longus. Corolla ut videtur flava submembranacea ad apicem faucium et in limbo sordido-puberula intus ad insertionem staminum pilosa ceterum glabra 5–5.5 cm. longa; tubus ca. 7 mm. longus; fauces tubulosae sursum parum ampliatae ad 3 cm. longae; limbi lobi 5 subaequales oblongo-ovales integri apice obtusi vel rotundati 1–1.3 cm. longi. Stamina fertilia 4, staminodio ad 5 mm. longo adjuncto, filamentis 1.5 et 2.1 cm. longis. Discus elevatus hemisphaericus in ovarium transiens. Ovarium subteres densissime lepidotum 2-loculare, seminibus in quoque loculo 2-seriatis. Fructus deest. — NICARAGUA: a vine running over bushes and low trees, La Paz, 31 Jan. 1903, C. F. Baker 2424 (TYPE in Gray Herb.). — Although the specimen is without fruit and its generic position is therefore not absolutely certain, its alliance with the species of *Adenocalymna* in all comparable characters is so close that I have little hesitation in referring it to that genus. *A. macrocarpum* J. D. Sm., of Guatemala, is a near ally of *A. ciliolatum*, but differs sufficiently in the shape and texture of the leaves and in other features. In the belief that permanence of nomenclature can only be secured by adherence to the original form of a published name, even when etymologically incorrect, I have followed the original spelling of the generic name rather than the corrected form used by various writers, and particularly by Schumann.

ANEMOPAEGMA (*Climacopaegma*) **balizeanum**, sp. nov. Frutex scandens, ramis florentibus teretibus valde striatis tenuibus albidis subsparsae hispidulo-puberulis pilis incurvis aetate subglabris ad nodos modice complanatis et ampliatis ad 2 mm. diametro. Folia conjugata cirrho terminali simplici filiformi terminata; petioli subteretes supra paullum complanati subdense hispidulo-puberuli pilis incurvis 1.5–2.7 cm. longi; petioluli incurvo-puberuli 5–8 mm. longi; foliola ovalia vel ovato-oblonga breviter acutata apice supremo obtusa mucronulata basi rotundato-cuneata basi ima saepius breviter truncata integra firme subcoriacea utrinque laete viridia impresso-lepidota infra ad basin costae pilis paucis brevissi-

mis incurvis donata ceterum glabra 5.5–11.2 cm. longa 1.9–5.1 cm. lata, nervis lateralibus validioribus 5–6-jugis anastomosantibus; phylla stipulas simulantia orbicularia vel elliptica 9–9.5 mm. longa 6.5–8.5 mm. lata. Racemi ca. 3-flori axillares, rhache uti pedicellis incurvo-puberula ad 9 mm. longa. Calyx campanulatus basi latus apice truncatus obscure sinuatus vix lobatus coriaceus plus minusve glanduloso-adspersus et sparse ciliolatus 8 mm. longus basi 4 mm. apice 6 mm. diam. Corolla submatura verisim. aurantiaca subcoriacea 5.7 cm. longa extus glabra, intus in tubulo breviter pilosa; tubus 1.5 cm. longus supra basin paullum ampliatu deinde contractus in fauces ad basin paullum saccato-inflatus ad 3.2 cm. longas ca. 8–10 mm. diametro ampliatu; limbi lobi 5 subaequales suborbiculares ad 1 cm. diametro ciliolati (vix maturi). Stamina perfecta 4 didynama inclusa; loculi glabri late divergentes; filamenta basi ima pubescentia ca. 1.7 et 2.4 cm. longa; staminodium ad 2.5 mm. longum. Ovarium subquadrangulum paullum cum septo parallele compressum paullum obtuse marginatum 2-loculare; semina in quoque loculo 2-seriata ad margines septi adfixa. Discus pulvinaris paullum crenulatus parum elevatus ad 1.8 mm. altus. — BRITISH HONDURAS: low bank of Rio Grande, 25 March 1907, *M. E. Peck* 957 (TYPE in Gray Herb.).

So far as I am aware, the only previous record of a member of this genus in Central America is that by J. D. Smith (Pl. Guat. iv. 117 (1895)) of *A. Vargasianum* DC. from Honduras (*Thieme* (distr. J. D. Smith) 5392). This number, represented in the Gray Herbarium by flowering material only, seems correctly assigned generically. If DeCandolle's description of the calyx and corolla in his species as glabriusculous is correct, however, it can hardly be identical with *A. Vargasianum*.

ARRABIDAEA mollicoma, sp. nov. Frutex scandens. Caulis teres subvalidus multistriatulus densissime molliterque subrufescenti-pilosulus pilis longioribus et brevioribus apice saepius glanduliferis subpatentibus, demum subglabratus canescens. Folia opposita conjugata cirrho terminali clausa: phylla stipulas simulantia aciculari-subulata ca. 6 mm. longa; petiolus et petioluli ut caulis densissime pilosuli, his ca. 1 cm. illo 3–4 cm. longis; foliola ovata subabrupte breviterque acutata basi truncato-rotundata vel -subcordata integra subcoriacea venuloso-reticulata (venis

lateralibus ca. 6-jugis) subtus paullulo pallidiora supra dense subtus densissime molliter subrufescenterque patenti-pilosula (pilis rare glanduliferis) et glanduloso-adspersa 4–5 cm. longa 2.3–3.3 cm. lata; cirrhus ut caulis pilosulus adhaerans ad 1.5 dm. longus. Paniculae ramulos terminantes geminae angustae subracemiformes 1.7–3 dm. longae ca. 5–6 cm. latae floribundae ut caulis pilosulae. Calyx campanulatus obscure 5-denticulatus densissime puberulus pilis patentibus paucilocularibus vix glanduliferis et parum glanduloso-adspersus 6 mm. longus. Corolla subcampanulato-infundibuliformis 5–5.4 cm. longa extus undique et intus in limbo et ad apicem faucium dense pilosula paillum lepidota intus ad insertionem staminum pilosa pilis apice glandulari-capitatis; tubus 6–8 mm. longus; fauces ca. 3 cm. longae; lobi limbi 5 suborbiculares obscure repandi apice emarginati ca. 1.5 cm. longi et lati. Stamina fertilia 4, staminodio ad 2 mm. longo adjuncto, filamentis 1.3 et 1.6 cm. longis. Discus pulvinaris sulcatus ca. 0.7 mm. altus. Ovarium dense patenti-puberulum septo parallele compressum 2-loculare, seminibus in quoque loculo 2-seriatis. Fructus planus lineari-ligulatus rufescenti-brunneus dense patenti-pilosulus pilis non glanduliferis et sparsim glanduloso-adspersus 2.3 dm. longus 1.5 cm. latus. Semina late alata 3 cm. lata. — NICARAGUA: woody vine, running over low trees and border growths, La Paz, 31 Jan. 1903, C. F. Baker 2268 (TYPE in Gray Herb.). — A member of the sect. *Macrocarpaea* subser. *Discolores*, apparently most nearly related to *A. cinerea* Bur.

BIGNONIA dasyonyx, sp. nov. Frutex alte scandens. Caulis obtuse subquadrangulatus cortice cano-brunneo tectus dense patenterque puberulus, ramis floriferis ad 3 mm. diametro. Folia conjugata cirrho trifido dense puberulo pilis patentibus paucis longioribus adjunctis, axi 1 cm. longo, segmentis lateralibus compressis firmis unguiculato-incurvis cuspidatis ad 1 cm. longis (cirrho ut videtur interdum deficiente) terminata; pedunculus dense patenti-puberulus 1.7–2 cm. longus; foliola ovata basi minute cordata apice subacuminata mucronata firme subcoriacea vix crassa supra laete viridia subdense molliterque hispidulo-pilosula pilis basi subtuberculatis, infra paullo pallidiora dense molliterque hispidulo-pilosula pilis patentibus basi non incrassatis et sparse glanduloso-punctata 5.5–6.5 cm. longa 3–3.3 cm. lata; folia juventate dense molliterque canescenti-pubescentia; phylla

stipulas simulantia cucullato-ovata firma subcoriacea sicca puberula 3 mm. longa. Flores solitarii vel bini e axillis cum foliis orientes; pedicelli puberuli ad 1 cm. longi; corolla flava sicc. nigrescens 5.5 cm. longa extus glabra intus in faucibus subdense glandulosa; tubus basi ampliatus abrupte constrictus ad 5 mm. longus in fauces conico-infundibuliformes ad 3.2 cm. longas oblique desinens; limbi lobi inaequales cuneato-flabellati apice late rotundati crispato-crenulati margine sparse ciliati superiores (2) ad 1.3 cm. longi et lati, inferiores (3) ad 1.6 cm. longi. Calycis glabri ad 1.2 cm. longi campanulati basi ad 6 mm. apice ad 12 mm. lati lobi 5 obtusi ad 3.5 mm. longi late depresso-deltaidei valde crispati. Stamina 5, postico sterili 8 mm. longo; altera didynama, loculis glabris 2.4 mm. longis, filamentis basi stipitato-glandulosis ca. 12 et 17 mm. longis. Pistillum 3.2 cm. longum inclusum; discus annularis crassus obscure 5-lobatus ad 1.3 mm. altus; ovarium dense patenti-puberulum 4.5 mm. longum; stylus 2.5 cm. longus, stigmatis lamina 3 mm. longa. — BRITISH HONDURAS: a yellow-flowered rather high climber in forest, Toledo, 27 May 1907, *M. E. Peck* 919 (TYPE in Gray Herb.). — A true congener of *B. unguis-cati* L., to which, with *B. exoleta* Vell., the genus *Bignonia* is restricted by Schumann. It agrees with *B. exoleta*, as described by Bureau & Schumann, in its crispate calyx but differs in the pubescence, entire leaflets, and solitary or twin flowers. From *B. unguis-cati*, a more variable plant than has generally been realized, it differs essentially in the crisped calyx margin and leaves permanently pubescent beneath. The West Indian and South American material of *B. unguis-cati* examined is mostly glabrous, the Mexican and Central American finely puberulous on petioles, etc., at least when young, and good characters for varietal separation will doubtless be found when the species is carefully studied. Certain specimens, such as *H. H. Smith* 1134 from Colombia, simulate *B. dasyonyx* in pubescence, but have the entire calyx of *B. unguis-cati*. The former may prove to be only a variety of the latter species, but no real evidence of this is afforded by the material at hand.

LUNDIA dicheilocalyx, sp. nov. Frutex alte scandens. Caulis subteres ad nodos ampliatus et complanatus obscure purpurascens molliter densissimeque griseo-puberulus pilis minimis. Folia conjugata, cirrho tenui firmo apice verisim. simplice ad 11 cm. longo

terminata; petioli 3 cm. longi, petiolulis 1.5–2.3 cm. longis, ut caule puberulis; foliola 2 ovata paullum inaequilateralia abrupte breviterque acuminata basi oblique leviterque cordata integerrima supra sicc. purpurascens sparse glanduloso-lepidota sparsissime pubescentia vel subglabra subtus paullo pallidiora ad costam et nervos (ca. 4-jugos) puberula ceterum glabra margine minute denseque ciliolata 6.5–8 cm. longa 3.8–5.5 cm. lata; phylla stipulas simulantia ut videtur nulla. Paniculae axillares et terminales multi(30–50)-florae ut caulis puberulae 13–15 cm. longae; pedicelli ultimi 3.5–6 mm. longi. Calyx etiam juventate valde bilabiat 6.5 mm. longus puberulus et ciliolatus, labiis subaequalibus 2–2.5 mm. longis obtusis apice minute emarginatis vel subintegris. Corolla purpurascens (?) recta 4.5 cm. longa extus dense breviterque pilosa pilis subglandulosis; tubus tenuis intus valde glandulosus 1 cm. longus ad basin 1 mm. ad apicem 3 mm. diametro, in fauces rectas intus glabras cylindrico-infundibuliformes ad 2.5 cm. longas 1 cm. latas ampliat; limbi lobi subaequales cuneato-suborbiculares 1–1.3 cm. longi ad 1.3 cm. lati extus et intus breviter pilosi. Stamina 5, postico abortivo apice piloso ad 1 mm. longo; altera didynama, loculis divergentibus barbatissimis ad 3 mm. longis, filamentis glabris 10 et 15 mm. longis. Pistillum 2.5 cm. longum; discus vix ullus; ovarium extus puberulum 2-loculare, loculis polyspermis, placentis in quoque loculo 2 in dissepimento submarginalibus. — BRITISH HONDURAS: a high climber in forests, Toledo, 9 Sept. 1906, *M. E. Peck* 495 (TYPE in Gray Herb.). — Of special interest as the first member of the genus discovered outside of South America. *Lundia dicheilocalyx* belongs to the sect. *Eulundia* K. Sch. and most approaches *L. obliqua* Sonder (ex char.), but is very different from any described species of the genus.

TABEBUIA nicaraguensis, sp. nov. Arbor 10–13-metralis cortice cano fisso tectus, ramulis canis glabratis. Folia opposita digitatim 5-foliolata: petiolus et petioluli teretes supra canaliculati patenti-puberuli, his 1–4.4 cm. illo 11 cm. longis; foliola ovalia vel ovali-obovata subabrupte tenuiterque acuminata (acumine 1–2 cm. longo 2 mm. lato) basi cuneata vel cuneato-rotundata integra supra obscure viridia in costa et venis majoribus patenti-puberula ceterum sparse pubescentia vel subglabrata prominulo-reticulata subtus paullo pallidiora undique breviter pilosa in costa et venis (9–14-jugis) et earum in axillis densius puberula inter pilos lepidota

8.8–17.5 cm. longa 4.2–6.3 cm. lata. Flores in panicula brevi sessili ca. 20-flora terminali dense rufescenterque farinoso-tomentula aggregati, pedicellis ultimis ca. 2 mm. longis. Calyx campanulatus subtruncatus vel obscure 5-dentatus ut panicula pubescens 7 mm. longus. Corolla extus et intus sordide puberula 7 cm. longa; tubus 7 mm. longus; fauces tubuloso-infundibuliformes ad 4 cm. longae; limbi lobi 5 ovaes vel obovato-ovales margine plus minusve crenato-plicati ad 2.2 cm. longi. Stamina fertilia 4, staminodio 6 mm. longo adjuncto, filamentis 1.5 et 2.2 cm. longis. Discus subduplex obscure 5-lobatus. Ovarium glabrum septo parallelo compressum 2-loculare, placentis 2 in quoque loculo. Fructus deest. — NICARAGUA: Hacienda Campuscus, 30 Jan. 1903, *C. F. Baker* 2258 (TYPE in Gray Herb.). — Described by the collector as a tree 30–40 feet high, with widely spreading irregular top and gray broken bark, growing in open woods. The species is closely related to *T. Palmeri* Rose of Mexico, but in that species, represented in the Gray Herbarium by several collections, the leaves, while pilosulous beneath along the costa and the chief lateral veins and in their axils, are otherwise without hairs, while the whole under surface is densely lepidote.

ACANTHACEAE

BRAVAISIA proxima, sp. nov. Frutex vel arbusculus ramosus. Rami juventate olivaceo-virides acute quadrangulares glabri densissime cystolithigeri aetate cortice canescente donati subteretes. Folia elliptico-obovata vel obovata apice acuta subabrupte breviterque acuminata basi longe acuminata integra paullulum sinuata glabra utrinque cystolithigera infra vix pallidiora 5.5–12 cm. longa 2.4–3.8 cm. lata, in petiolis tenuibus 4–9 mm. longis, ea inflorescentiae multo minora suprema ad bracteas reducta. Flores in panicula trichotoma multiflora ramum terminante glabra ad 2 dm. lata dispositi. Bracteolae laterales 2 ovatae vel oblongo-ovatae ut sepala dense cystolithigerae margine ciliolatae ceterum glabrae abrupte vel subabrupte mucronatae, lamina 4–4.5 mm. longa 1.6–1.8 mm. lata, mucrone 1–2.2 mm. longo. Sepala 5 oblonga lineata plus minusve minute puberula margine pallido angusto ciliata 8 mm. longa 2.3 mm. lata, apice obtusa mucrone 0.8 mm. longo donata. Corolla pallide lavendulacea supra medium subdense breviterque pilosa pilis subincurvis 3.5–3.7 cm. longa; tubus

tenuis 6 mm. longus in fauces anguste campanulatas 1.7 cm. longas abrupte ampliatus; limbi lobi 5 subaequales cuneato-suborbiculares ad 1.1 cm. longi 1.3 cm. lati. Stamina 4: filamenta basi disjuncta et apice pilosa 7 et 13.5 mm. longa; antherarum loculi aequales oppositi 3 mm. longi margine subsparse pilosi basi mucrone ad 0.8 mm. longo muniti. Stylus 2.5 cm. longus; stigma liguliforme ad 0.8 mm. longum. — BRITISH HONDURAS: shrub or small tree with showy pale lavender flowers, in forest, upper Moho River, 16 March 1907, *M. E. Peck* 730 (TYPE in Gray Herb.). — From *B. grandiflora* J. D. Smith (Bot. Gaz. xxxiii. 255 (1902)), the only other species with mucronate calyx-lobes, the present plant differs in a number of small but significant features. The flowers are smaller, and the sepals merely minutely puberulous, entirely lacking the long hairs found along the midline of at least the inner sepals in *B. grandiflora*. The filaments are shorter, less hairy at base and apex than in *B. grandiflora* and entirely separate at base, while in *B. grandiflora* the members of each lateral pair are much more hairy at base and united by a narrow membrane forming a little pocket. Furthermore the anther-cells of *B. proxima* are distinctly smaller and less hairy, and the anther-appendages shorter.

DIANTHERA Peckii, sp. nov. "Basi fruticulosa 0.6–1.3 m. alta," supra herbacea. Caulis subteres ad nodos paullum incrassatus cystolithiger bifariam hispido-pilosus pilis laxis. Folia lanceolata longissime attenuata plus minusve falcata basi longe attenuata crenato-sinuata vel subintegra utrinque viridia supra ad costam appresse hispida ceterum glabra cystolithigera 9.5–13.5 cm. longa 2.3–2.6 cm. lata, in petiolis hispido-piloso-ciliatis 8–15 mm. longis. Spicae solitariae vel binae terminales vel subterminales 9.5–11.3 cm. longae bifariam pubescentes, in pedunculo 2–2.4 cm. longo; internodia 5.5–7.5 mm. longa; flores solitarii oppositi sessiles. Bracteolae laterales 2 lineari-subulatae subpungentes ad basin anguste ovatae et apicem sparse ciliolatae 3 mm. longae. Calycis segmenta 4 basi ima unita aequalia lineari-subulata subpungentia sparse incurvo-hispidula ad 5 mm. longa. Corolla extus glabra 10–12.5 mm. longa; tubus 6 mm. longus anguste infundibuliformi-campanulatus, intus facie superiore praecipue ad basin et filamenta adnata secundum pilosulus; labium superius porrectum apice paullum cucullatum emarginatum ad 7 mm. longum ad 2.3 mm. latum; inferius longius ad 5 mm. latum decurvatum palato con-

spicuo per tertiam partem longitudinis 3-lobum, lobis lateralibus ovalibus medio latiore brevioribus. Stamina 2: loculi subaequales (1–1.2 mm. longi) sed valde dissiti plus minusve obliqui mutici, superiore in latere uno barbato inferiore glabro; filamenta glabra ad apicem tubi adfixa 4.3 mm. longa. — BRITISH HONDURAS: "shrubby at base, 2–4 feet high," high banks of the upper Moho River, 16 March 1907, *M. E. Peck* 722 (TYPE in Gray Herb.). — Prof. Peck's notes do not indicate the color of the flowers.

DICLYPTERA magniflora, sp. nov. Verisim. frutex. Caulis subteres viridi-nigrescens cystolithiger bifariam hirtus pilis brevibus recurvatis. Folia elliptica vel elliptico-obovata utroque (apice interdum subabrupte) acuminata crenato-sinuata margine sparse ciliolata subtus ad basin costae sparse pubescentia ceterum glabra cystolithigera infra paullo pallidiora 12–17.5 cm. longa 4.3–7.1 cm. lata, in petiolis hispido-ciliatis 8–14 mm. longis. Spica terminalis densa ad 9 cm. longa 4.5 cm. crassa parum composita, in pedunculo 9 mm. longo; bracteae 0.6–1.2 cm. longae infra ad venas hirto-pilosae. Bracteolae laterales 2 herbaceae oblongo-ovatae infra non angustatae calycem vix aequantes 5.5 mm. longae, florem singulam includentes; pedicelli ad 1.8 mm. longi. Calycis segmenta 5 basi unita lanceolato-ovata acuminata hispido-pilosa aequalia 5.7 mm. longa ad 1.3 mm. lata. Corolla extus pilosa 6.4 cm. longa; tubus ad 7 mm. longus 1.5 mm. diametro in fauces subcylindricas ad 3.5 cm. longas sensim ampliatus; labia subaequalia ad 2.1 cm. longa lanceolata integra subacuta paullum ringentia superius 2-nervium inferius 3-nervium. Stamina 2 e faucibus exserta: loculi antherarum valde dissiti altero erecto altero obliquo mutici inaequales 1.4–1.8 mm. longi; filamenta basi sparse pilosula 2 cm. longa. Stylus corollam paullo superans. Ovarium 4-ovulatum. — BRITISH HONDURAS: 1905–07, *M. E. Peck* 622a (TYPE in Gray Herb.). — Very distinct in the large corollas and the small bracteoles barely equalling the calyx, although in all other characters the plant seems to agree perfectly with other species of the genus. The data for this collection have unfortunately become confused. The plant is probably from Toledo.

ERANTHEMUM adenocarpum, sp. nov. Herbaceum perenne erectum simplex vel pauciramosum 3.5 dm. altum, radice tenui furcato-ramosa. Caulis tenuis obscure viridis dense cystolithiger subteres

bifariam hispido-pilosus pilis patentibus persistentibus, aetate infra cortice albido suberoso donatus. Folia lanceolata vel inferiora ovalia utroque acuminata vel inferiora abrupte breviterque acuta plus minusve falcata integra plus minusve sinuata paullum coriacea utrinque glabra concoloria cystolithigera media 4.8–6.7 cm. longa 8.5–19 mm. lata, inferiora 3.3–5.5 cm. longa 1.6–2.7 cm. lata; petioli 3 mm. longi glabri, basibus connatis hispido-pilosis pilis subrufescentibus. Spicae simplices vel basi ramosae terminales et e axillis supremis 5–9 cm. longae minute patenterque hispidulae nudaе, nodis 5–16 mm. distantibus; flores solitarii oppositi. Bracteolae laterales 2 subulatae ad 12 mm. longae; pedicelli ad 1.5 mm. longi. Calycis segmenta 5 basi ima unita anguste subulata attenuata subaequalia hispidula plus minusve stipitato-glandulosa ad 2.3 mm. longa. Corolla lavendulacea subsparsely patenti-puberula ad 2.7 cm. longa; tubus tenuis ad 1.3 cm. longus 0.6 mm. diametro in fauces ad 7 mm. longas 1.5 mm. diametro subsensim ampliatus; limbi lobi 5 elliptici apice rotundati, 2 superiores 9 mm. longi 5.5 mm. lati, 3 inferiores 8 mm. longi 4 mm. lati. Stamina 2 ad basin faucium affixa longe inclusa; loculi antherarum fere aequales mutici oppositi glabri 1.5 mm. longi; filamenta glabra ad 1 mm. longa; staminodia 2 paullo alterius inserta 1 mm. longa glabra e staminibus omnino libera. Stylus 18 mm. longus vix exsertus; stigma minute inaequaliterque bifidum. Capsula 1.4 cm. longa clavata stipitato-glandulosa compressa tetrasperma. Semina laevia. — BRITISH HONDURAS: in damp low forest, Toledo, 10 April 1907, *M. E. Peck* 830 (TYPE in Gray Herb.). — Seemingly more closely related to some Philippine species, for example *E. minutiflorum* Elmer, than to any of the Mexican or South American species.

ERANTHEMUM tetrasepalum, sp. nov. Planta 1–1.6 m. alta ut videtur herbacea. Caulis ramosus dense cystolithiger subteres bifariam hispido-pilosus pilis recurvatis, ramulis paullum ancipitibus. Folia ovata vel ovali-ovata acuminata plus minusve falcata basi late rotundata vel rotundato-cuneata margine crenato-sinuata utrinque glabra cystolithigera infra paullo pallidiora 7.5–10.5 cm. longa 3.3–4.7 cm. lata, in petiolis 5–6 mm. longis margine incurvo-pubescentibus. Spicae simplices vel ternatae terminales et exaxillis supremis 8.7–12.5 cm. longae, rache breviter bifariamque hispidopilosa, pedunculo 0.9–2.1 cm. longo, nodis 5–7 mm. distantibus;

flores solitarii oppositi. Bracteolae laterales 2 lineari-subulatae attenuatae subpungentes ad 2.5 mm. longae; pedicelli vix ulli. Calycis segmenta 4 basi ima unita lineari-subulata attenuata subpungentia paullum hispidula subaequalia ad 5 mm. longa 0.7 mm. lata. Corolla ad 2.4 cm. longa sparse patenti-pilosa; tubus tenuis ad 1 cm. longus 0.6 mm. diametro in fauces cylindricas 6 mm. longas 1.6 mm. latas subsensim ampliatus; limbi lobi 5 oblongi apice rotundati, 2 superiores 8 mm. longi 3 mm. lati, 3 inferiores 7 mm. longi 3 mm. lati. Stamina 2 glabra ad basin faucium adfixa valde inclusa; loculi subaequales oppositi mutici 1.4 mm. longi; filamenta ad 0.7 mm. longa. Staminodia 2 linearia ad 0.8 mm. longa, basi ima ad filamenta staminum brevissime adnata. Capsula tetrasperma basi sterili 2.5–3.5 mm. longa stipitata acuta glabra paullum compressa 8.5–10 mm. longa. Semina papilloso-rugosa 1.6 mm. longa. — BRITISH HONDURAS: in deep shade in forest, Moho River, 16 Oct. 1906, *M. E. Peck* 552 (TYPE in Gray Herb.). — Unique, apparently, in its 4-parted calyx, but in all other features in close agreement with other species of this genus.

The generic name *Gerardia* L. (Sp. ii. 610 (1753); Gen. ed. 5, 266, no. 665 (1754)) has recently been referred by Dr. F. W. Pennell (Bull. Torr. Club xl. 119 (1913)) to the Acanthaceous genus *Stenandrium* Nees (in Lindl. Introd. Nat. Sys. Bot. ed. 2, 444 (1836); in DC. Prod. xi. 281 (1847)). An independent investigation of the matter has convinced me of the justice of this treatment, which, in its bearing on the nomenclature of the North American forms that have been passing as *Gerardia*, will soon be discussed by the writer in *Rhodora*. The Mexican, Central American, and West Indian members of the genus *Stenandrium* to be transferred to *Gerardia* are as follows:

GERARDIA acuminata (Urb.), comb. nov. — *Stenandrium acuminatum* Urb. Symb. Ant. vii. 382 (1912).

✓ *GERARDIA barbata* (Torr. & Gray), comb. nov. — *Stenandrium barbatum* Torr. & Gray, Pacif. Rail. Rep. ii. 168, t. 4 (1855).

GERARDIA chamaeranthemoidea (Oerst.), comb. nov. — *Stenandrium chamaeranthemoideum* Oerst. Vidensk. Meddel. 1854. 139 (1854).

GERARDIA consobrina, nom. nov. — *Stenandrium Wrightii* Lindau in Urb. Symb. Ant. ii. 208 (1900). Not *G. Wrightii* Gray in Torr. Bot. Mex. Bound. 118 (1858).

GERARDIA **dulcis** (Cav.), comb. nov. — *Ruellia dulcis* Cav. Ic. vi. 62, t. 585, f. 2 (1801). *Stenandrium dulce* (Cav.) Nees in DC. Prod. xi. 282 (1847).

✓ GERARDIA **DULCIS** (Cav.) Blake var. **floridana** (Gray), comb. nov. — *Stenandrium dulce* (Cav.) Nees var. *floridanum* Gray, Syn. Fl. ii. pt. 1, 327 (1878). *S. floridanum* (Gray) Small, Fl. S. E. U. S. ed. 1. 1085, 1338 (1903).

GERARDIA **TUBEROSA** L. Sp. ii. 610 (1753). — *Ruellia* ? *rupestris* Sw. Prod. 93 (1788); Fl. Ind. Occ. ii. 1071 (1800). *Stenandrium rupestre* (Sw.) Nees in DC. Prod. xi. 283 (1847). *S. tuberosum* (L.) Urb. Symb. Ant. iv. 576 (1911).

GERARDIA **verticillata** (Brandegge), comb. nov. — *Stenandrium verticillatum* Brandegge, Zoe v. 237 (1906).

GERARDIA **pilosula**, sp. nov. Planta scaposa 4.5–5.7 cm. alta e rhizomate brevissimo horizontale, radiculis crasso-filiformibus, scapis 1–2 erectis. Folia (vix bene evoluta) pauca ovalia obtusa basi cuneata crassiuscula punctata glabra vel subglabra ad 1.2 cm. longa 4 mm. lata, in petiolos ad marginem pilosulos folia subaequantur angustata, petiolorum basibus persistentibus. Scapus infra spicam glaber nudus 1.5–4 cm. altus; spica densa vel basi interrupta ovoidea 1–2.5 cm. alta 0.8–2.5 cm. diametro (corollis exclusis), rache cum bracteis bracteolis calycibusque dense submolliterque patenti-pilosulis. Bractee lanceolatae vel oblongo-lanceolatae obtusiusculae nervosae ca. 1 cm. longae 2.5–3 mm. latae; bracteolae lineares vel lineari-lanceolatae obtusiusculae nervosae nervis ca. 3 validioribus 8 mm. longae 1.3 mm. latae. Sepala 5 aequalia lineari-lanceolata obtusiuscula capsulam aequantia 11 mm. longa 1.2 mm. lata. Corolla tubaeformis ad 1.8 cm. longa ut videtur lilacina, tubo et faucibus intus antice flavis; tubus proprius 5 mm. longus, fauces parum ampliatae 7 mm. longae, lobi limbi 5 subaequales (antico paullo majore excepto) ovali-obovata late rotundati ad 5 mm. longi 3.5–4.3 mm. lati. Stamina 4 ad apicem tubi inserta: filamenta 1–1.5 mm. longa patenti-pilosa; antherae omnes 1-loculares patenti-pilosae plus minusve cohaerentes oblique oblongae 1.5 mm. longae. Stylus 6.5 mm. longus. Capsula oblique ellipsoideo-ovoidea obtusa ad 10 mm. longa 3.8 mm. crassa, seminibus 2 in quoque loculo glochidiatis. — CHIHUAHUA: vicinity of Madera, 2250 m., 27 May–3 June 1908, Palmer 317 (TYPE in Gray Herb.). — Readily distin-

guished from all its Mexican congeners by the fine dense spreading pubescence.

JACOBINIA scarlatina, sp. nov. Frutex tenuis vagans. Caulis saturate brunneus ramosus striatus paullulum quadrangulatus ad nodos paullum incrassatus bifariam hirtus pilis brevibus recurvis. Folia inaequaliter ovata acuminata apice supremo obtusa basi cuneata vel rotundato-cuneata obscure viridia infra vix pallidiora margine hirto-ciliata pilis incurvis supra in costa incurvo-hirta subtus glabra vel in costa pilis paucissimis donata cystolithigera 7.5–11.8 cm. longa 3.5–5.5 cm. lata, in petiolis dense hirto-ciliatis pilis incurvis 6–10 mm. longis. Paniculae terminales et ex axillis superioribus trichotomae vel duplo trichotomae ut caulis pubescentes folia subaequantes vel paullo superantes; flores in ramulis ultimis 1.5–4.5 cm. longis secundi ad nodos approximatos solitarii; bracteae ovatae acutae ad 1.3 mm. longae; bracteolae laterales 2 minores; pedicelli ad 0.5 mm. longi. Calycis tubus subglobosus ad 0.8 mm. longus; segmenta 5 aequalia lanceolato-ovata acuminata margine obscure stipitato-glandulosa 1.8–2.2 mm. longa. Corolla bilabiata coccinea ca. 3.6 cm. longa extus glabra intus ad basin dense pubescens pilis appressis retrorsis; tubus basi ima paullum ampliatus deinde constrictus supra sensim ampliatus anguste cylindrico-infundibuliformis ad 2.4 cm. longus; labium superius lanceolatum integrum apice paullum cucullatum porrectum 1.2 cm. longum basi ad 7 mm. latum; inferius aequale liguliforme ad 4 mm. latum apice 3-lobum (lobis aequalibus ovalibus rotundatis 1.5 mm. longis). Stamina 2 corollam subaequantia: antherarum loculi subaequales glabri oppositi regulares mutici 2.5 mm. longi; filamenta glabra 12 mm. longa. Staminodium nullum. Stylus 4 cm. longus. — **BRITISH HONDURAS**: a slender straggling shrub with scarlet flowers, in forests near Manatee Lagoon, 12 May 1906, *M. E. Peck* 430 (TYPE in Gray Herb.). — Closely related to the three following species, whose synonymy and characters have become somewhat confused.

JACOBINIA NEGLECTA (Oerst.) Gray, Syn. Fl. i. pt. 2, 395 (1878); l. c. ed. 2, 457 (1886). — *Sericographis neglecta* Oerst. ! Vidensk. Meddel. 1854. 151, t.5, f.12–14 (1854). — Leaves lanceolate, falcate-acuminate, incurved-hirtous on costa and sparsely on lateral nerves above, more sparsely so beneath, glabrous between the veins, 6–9.5 cm. long, 1.7–2.1 cm. wide. Branches equally and rather densely

incurved-hirtous. — VERA CRUZ: Calipa and Papantla, 1841, Liebmann (COTYPE COLL. in Gray Herb.).

JACOBINIA SPICIGERA (Schlecht.) Bailey, Stand. Cyc. Hort. iii. 1715 (1915). — *Justicia spicigera* Schlecht. ! Linnaea vii. 395 (1832). — Leaves lanceolate, acute, above incurved-hirtous along costa and lateral nerves and with sparse longer hairs between them, beneath softly and at least in youth uniformly short-pilose with incurved hairs, even in age distinctly pubescent between the veins, 6–8.5 cm. long, 1.8–2.3 cm. wide. Branches densely softly pilose with incurved hairs. — VERA CRUZ: Jalapa, Schiede (TYPE COLL. in Gray Herb.).

JACOBINIA atramentaria (Benth.), comb. nov. — *Justicia* (*Beloperone*? v. *Gendarussa*?) *atramentaria* Benth. Pl. Hartw. 69 (1840). *Sericographis moctli* Nees in Nees & Schauer, Linnaea xx. 715 (1847). *Justicia moctli* Moc. & Sess. ex Nees l. c. as syn. *Drejera Willdenowiana* Nees in DC. Prod. xi. 334 (1847), fide Hemsl. *Sericographis mohintli* Nees in DC. l. c. 361 (1847). *Justicia mohintli* Moc. & Sess. ex Nees l. c. as syn. *Jacobinia mohintli* (Nees) Hemsl. Biol. Centr.-Am. Bot. ii. 521 (1882). — Leaves ovate, obtusish to acuminate, above incurved-hirtous only along costa or also sparsely along lateral nerves or rarely even between them, beneath incurved-pubescent along costa or sometimes also sparsely so along lateral nerves, 3–14 cm. long, 1.6–6 cm. wide. Branches equally and rather densely incurved-pubescent. — SAN LUIS POTOSI: 1876, Shaffner 112. TEPIC: 1892, Palmer 1987. GUANAJUATO: 1880, Dugès. VERA CRUZ: Botteri, Purpus 2393, Bourgeau 2239. OAXACA: Conzatti 2 & 102, L. C. Smith 354. GUATEMALA: J. D. Smith 1883 & 2700.

JACOBINIA umbrosa (Benth.), comb. nov. — *Justicia aurea* Schlecht. Linnaea vii. 393 (1832). *Justicia* (*Beloperone*?) *umbrosa* Benth. Pl. Hartw. 79 (1841). *Cyrtanthera aurea* (Schlecht.) Nees in DC. Prod. xi. 329 (1847). *C. umbrosa* (Benth.) Nees l. c. *C. catalpaefolia* Hook. Bot. Mag. lxxv.t. 4444 (1849). *Cyclanthera catalpaefolia* Nees ex Hook. l. c. as syn. *Cyrtanthera densiflora* Oerst. Vidensk. Meddel. 1854. 147 (1854). *Jacobinia aurea* (Schlecht.) Hemsl. Diag. Pl. Nov. ii. 35 (1879); Biol. Centr.-Am. Bot. ii. 520, t. 68 (1882). — A change of name in this species is required because of the prior *Jacobinia aurea* Hiern, Vidensk. Meddel. 1877–78. 85(1877–78), from Brazil.

ODONTONEMA paniculiferum, sp. nov. Frutex laxis tenuis. Caulis brunneus subteres ad nodos paullum incrassatus et anceps obscure cystolithiger glaber, internodiis superioribus ca. 5 cm. longis. Folia elliptica apice acuta breviter (ad 8 mm.) acuminata basi cuneata integra vix sinuata obscure cystolithigera subtus ad costam sparsissime strigosa ceterum glabra, nervis lateralibus ca. 8-9-jugis validis, 12-14.3 cm. longa 4.3-4.9 cm. lata, in petiolis glabris 5-6 mm. longis. Panicula terminalis trichotome divisa ad 2.3 dm. longa 1.4 dm. lata multiflora subglabra vel sparse minutissimeque puberula, bracteis (saltem mediis et superioribus) minimis ad 1.5 mm. longis subulatis, internodiis 0.8-2.4 cm. longis; flores oppositi solitarii vel rare fasciculati in pedicellis plus minusve patentibus glabris 5-7 mm. longis. Bracteolae laterales 2 minutae lanceolato-subulatae ad 0.6 mm. longae. Calycis tubus subglobosus glaber ad 0.6 mm. longus; segmenta 5 lineari-subulata aequalia attenuata sparse ciliolata ad 2 mm. longa. Corolla plus minusve puberula 1.9 cm. longa obscure bilabiata; tubus ad basin ampliatus deinde constrictus in fauces infundibuliformes sensim ampliatus; labium superius 4 mm. longum usque ad basin bilobatum lobis deltoideo-ovalibus obtusis ciliolatis; inferius aequale ad basin 3-lobum lobis inter se aequalibus eis labii superioris similibus paullo angustioribus ciliolatis. Stamina 2; antherarum loculi aequales 2 mm. longi oppositi glabri basi mutici, connectivo apice adunco; filamenta glabra 4 mm. longa. Staminodia 2 oblique obovata subobtusa subsessilia 0.5 mm. longa e filamentis staminum omnino libera. Stylus integer. Ovarium 4-ovulatum. Capsula sensim clavata glabra 2.1 cm. longa 2.5 mm. lata saepius 2-sperma. Semina dense reticulato-scrbiculata. — **BRITISH HONDURAS**: a slender drooping shrub in deep shade, forest near Manatee Lagoon, 8 Jan. 1906, *M. E. Peck* 278 (TYPE in Gray Herb.). — From **ODONTONEMA geminatum** (J. D. Sm.), comb. nov. (*Thyrsacanthus geminatus* J. D. Sm. ! Bot. Gaz. xiii. 75 (1888)), of Guatemala, this new species differs *inter alia* in its glabrous or subglabrous pedicels and panicle, smaller corolla, and especially in its androecium. In *O. geminatum* the staminodia are linear and attached laterally to the decurrent bases of the filaments of the perfect stamens. The upper lip of the corolla in *O. geminatum* is merely notched, while in *O. paniculiferum* it is divided to the base, but the two seem strictly congeneric. With other published species of *Odontonema* (*Thyrsacanthus*), *O. paniculiferum* requires no special comparison.

RUELLIA (§ *Dipteracanthus*) **obtusata**, sp. nov. Caulis infra suffruticosus teres cano-albidus striatus cystolithiger praecipue ad nodos pilosus et pilosulus pilis patentibus basi paullum incrassatis aetate subglabratus 6 dm. longus et ultra. Folia opposita remota (paribus 4.5–12.5 cm. distantibus) ovalia vel oblongo-ovalia apice obtusa vel rotundata basi acute cuneata integra (margine paullum sinuata) concoloria utrinque subdense (infra juventate dense canescenterque) pilosa pilis late patentibus vel paullum incurvis et supra conspicuiter lineolata 4.5–6 cm. longa 1.8–2.5 cm. lata, in petiolis tenuibus hispido-pilosis et puberulis 5–8 mm. longis. Flores in axillis foliorum solitarii; bracteae ca. 4 foliis similes minores ad 1.5 cm. longae; pedicelli ad 1 mm. longi. Calycis segmenta 5 basi ima unita hispido-pilosa (pilis late patentibus) et albo-punctatis; posticum lanceolatum acutum 12 mm. longum 3 mm. latum; cetera lineari-subulata attenuata apice supremo obtusa ad 9 mm. longa 0.7 mm. lata. Corollae extus praecipue supra medium pilosae tubus ad 2 cm. longus infra tenuis supra medium subabrupte ampliatus; limbi lobi 5 subaequales suborbiculares margine sinuati ad 9 mm. longi 8 mm. lati. Stamina 4: filamenta per paria lateralia basi connata glabra, partibus liberis 4.5 et 6.5 mm. longis; antherarum loculi aequales oppositi mutici 2.5 mm. longi. Stylus ad 2 cm. longus; stigmatis lamina 2 mm. longa. Capsula clavata brevissime (ad 0.7 mm.) rostrata glabra 14 mm. longa ad 3.5 mm. lata ca. 10-sperma. — BRITISH HONDURAS: in damp open cultivated ground, Toledo, 21 April 1907, *M. E. Peck* 871 (TYPE in Gray Herb.).

RUBIACEAE

HAMELIA purpurascens, sp. nov. Frutex subscandens 3–13 m. altus. Caulis teres dense sordido-pilosus pilis laxis patentibus crispatis multiloculatis. Folia 3-verticillata ovalia vel ovali-ovata utroque acuta vel subacuminata integra supra viridia pilis sparsissimis adpersa subtus ut caulis ubique sordide pilosula pilis ad venas longioribus, nervis lateralibus ca. 11-jugis, caulina 8–11 cm. longa 2.8–4.2 cm. lata, ramealia minora; stipulae subulato-filiformes ad 5 mm. longae. Paniculae caulem et ramos terminantes 3–4-fidae, pedunculo ut caule pubescente 1.5–2.5 cm. longo, ramis ca. 7-floris 1.5–4 cm. longis, floribus sessilibus. Calycis lobi liberi 5 maturitate lanceolati acutiusculi sub-3-nervii ciliati et pilosi 5

mm. longi 1.5 mm. lati. Corolla saturate rubra 2.2–2.4 cm. longa extus dense sordido-pilosa, basi 2.3 mm. diametro, 8 mm. supra basin 1.3 mm. diametro, deinde tubuloso-clavatus ad apicem 3 mm. diametro; limbi lobi deltoidei ad 1.2 mm. longi. Antherae exsertae 9 mm. longae; filamenta glabra basi dilatata 5 mm. longa. Stylus 2 cm. longus. Fructus rubro-purpurascens dense sordide pilosus 5-loculus polyspermus ad 8 mm. longus 3 mm. crassus. — BRITISH HONDURAS: a partly climbing shrub 10–40 feet high, with dark red flowers and reddish-purple fruit, on pine ridge near Manatee Lagoon, 6 Aug. 1905, *M. E. Peck* 104 (TYPE in Gray Herb.). — From its nearest relative, *H. Rovirosae* Wernham, the present plant differs strongly in its very dense sordid pubescence, longer more slender fruit, and various other characters.



Blake, S. F. 1917. "Descriptions of new Spermatophytes, chiefly from the collections of Prof. M. E. Peck in British Honduras." *Contributions from the Gray Herbarium of Harvard University* (52), 59–106. <https://doi.org/10.5962/p.336010>

.

View This Item Online: <https://www.biodiversitylibrary.org/item/123407>

DOI: <https://doi.org/10.5962/p.336010>

Permalink: <https://www.biodiversitylibrary.org/partpdf/336010>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.