

IV. SOME UNDESCRIBED AMERICAN SPERMATOPHYTES.

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Acacia Brandegeana, sp. nov., fruticosa 2–3 m. alta; ramis brunneis flexuosis conspicue verrucosis cum spinis rectis brevibus geminatis subulatis armatis juventate pubescentibus; foliis in axibus secundariis brevissimis ad axillas spinorum congestis pubescentibus, petiolis 2–5 mm. longis cum glandula deltoidea concava terminatis, pinnis 1-jugatis 8–12-foliolatis 1–2 cm. longis, foliolis 3–6 mm. longis oblongis coriaceis opacis venosis obtusis sed mucronulatis basi obliquis; spicis cylindricis laxis breviter pedunculatis quam folia saepe longioribus ca. 2.5 cm. longis; calyce paullo inflato ca. 1 mm. longo, lobis deltoideis margine furfuraceis vel hispidis; petalis obovatis obtusis calycem paullo superantibus; staminibus numerosis ca. 2 mm. longis; legumine falcato brunneo canescenti-pubescenti compresso 4–6 mm. lato 4–11 cm. longo striato inter semina plus minusve contracto; seminibus atris oblongis compressis ca. 7 mm. longis 4 mm. latis.—LOWER CALIFORNIA: a large thorny shrub forming thickets along a wash, Agua Verde Bay, *Johnston 3881* (TYPE, Gray Herb.).—This *Acacia* is widely distributed over the southern half of the peninsula of Lower California and in the past has gone as *A. amentacea* DC. It is most closely related to that species, but differs in its smaller, more numerous, dull, pubescent leaflets, and canescent legumes. It also has a widely separated range. *Acacia amentacea* occurs east of the continental divide in northeastern Mexico, whereas *A. Brandegeana* is endemic to Lower California. In a recent paper, *Proc. Calif. Acad. Sci.* ser. 4, xii. 1031 (1924), I treated the plant as *A. sonorensis* Rose, but the type of that species proves it to be a very close relative of *A. californica* Brandg. The species is named in honor of the late Townshend Stith Brandegee who made numerous collections of it and suspected its distinctness. I find it a pleasure to associate Mr. Brandegee's name with one more plant of that flora for the knowledge of which he did so much.

Mabea Macbridei, sp. nov., arbuscula; ramulis gracilibus subangularibus olivaceis primo puberulentis mox glaberrimis; foliis oblongis vel elliptico-oblongis 12–18 cm. longis 4.5–6 cm. latis glaberrimis margine leviter crenatis supra nitidis subtus glaucis cum venis conspicuissimis ca. 30 liniatis marginem versus minute glandulosis apice obtusis abrupte acuminatis basi rotundatis vel obtusis eglandulosis; petiolis 9–12 mm. longis; paniculis terminalibus ferruginosotomentosis ca. 10 cm. longis 10–12 mm. latis cum bracteis lanceolatis

ornatis, ramulis pistillatis ca. 1 mm. longis unifloris, ramulis staminalibus 1–2 mm. longis umbellatim 2–4-floris ad imam basem inconspicue glandulosis; pedicellis pistillatis ca. 7 mm. longis canescente strigosis; sepalis pistillatis orbicularibus vel acute ovatis canescente pubescentibus ca. 1–1.5 mm. longis eglandulosis; ovario tomentoso inermi; columna stylari 5–7 mm. longa; parte libera stylorum 5–7 mm. longa; pedicellis florum staminalium gracilibus 5–10 mm. longis; calyce staminali ca. 2 mm. lato, lobis ovate deltoideis; staminibus 15–25; antheris fere sessilibus sparse pubescentibus.—PERU: Hacienda Schunke, La Merced, Dept. Junin, 1200 m. alt., *Macbride* 5702 (TYPE, Field Mus. no. 536,733).—Probably most related to the Peruvian *M. maynensis* Müll. Arg. from which it differs in its narrow tomentose panicle, shorter staminate peduncles provided with small basal glands, smaller flowers, and row of submarginal glands on the under leaf-surface. The peculiar submarginal row of glands serves to distinguish the plant from all the South American species except *M. nitida* Benth., a species readily separated by its inflorescence, peduncle-glands, etc.

Acalypha Macbridei, sp. nov., fruticosa laxa ca. 9 dm. alta dioeca; ramulis teretibus ca. 3 mm. crassis minute strigosis in partibus junioribus dense canescente strigosis; foliis firmiter herbaceis glabratissimis penninerviatis late oblanceolatis vel oblongo-lanceolatis 15–23 cm. longis 2.5–5 cm. latis apice attenuato-acuminatis basi obtusis margine inconspicue crenatis supra asperulis subtus subpallidioribus cum venis primariis 15–25 sparse adpresseque villosis prominentibus; petiolis 5–8 mm. longis dense canescente strigosis; stipulis lanceolatis minutis deciduis ca. 2 mm. longis canescentibus; racemis staminalibus ignotis; racemis pistillatis axillaribus filiformibus 8–16 cm. longis disitifloris spiciformibus strigosis breviter pedunculatis quam folia brevioribus; bracteis minutis ovato-lanceolatis 1–3-floris; floribus pistillatis vix 1 mm. longe graciliter pedicellatis, sepalis 5 acuti-ovatis glanduloso-denticulatis; ovario dense papilloso; stylo ca. 2.5 mm. longo e basi oblonga divergenter 15–20-laciniato; capsula ignota.—PERU: Pampayacu, hacienda at mouth of Rio Chinchao, Dept. Huanuco, *Macbride* 5093 (TYPE, Field Mus. no. 536,144; ISOTYPE, Gray Herb.).—In the recent monograph of *Acalypha* by Pax & Hoffmann, Pflanzenr. iv. Fam. 147, pt. 17 (1924), this species fits into the section *Axillaris* of the subgenus *Terminales*, and is apparently nearest *A. subandina* Uline. From that species, however, it differs in its short petioles, and shorter spicate-racemose rather than paniculate inflorescence.

Acalypha fulva, sp. nov., fruticosa ca. 5 dm. alta; ramulis teretibus satis robustis fulvis cum setis simplicibus glandulosis 2–3 mm. longis villosa-hirsutis; stipulis reflexis lanceolato-subulatis 6–8 mm. longis persistentibus subscariosis glabratis apicem versus glandulosis; foliis ovatis acuminatis serratis 12–36 cm. longis 9–18 cm. latis supra viridibus villosis sparse stipitato-glandulosis inconspicue punctatis subtus pallidioribus in costa nervisque divergenter villosa-hirsutis basi palmi-nerviis profunde cordatis cum auriculis latis valde imbricatis; petiolis 5–15 cm. longis fulvis cum setis glandulosis villosa-hirsutis; spiculis axillaribus androgynis 6–15 cm. longis fulvis glanduloso-pubescentibus 1 cm. supra basem cum bracteis pistillatis 1–2 cordatis ovatisve acutis acuminatisve sessilibus 10–12 mm. longis 11–16 mm. latis unifloris multiplicatis 20–30-dentatis ornatis; sepalis pistillatis oblongo-ovatis glanduloso-ciliatis; ovario dense stipitato-glanduloso et pubescenti; stylis 7–9 mm. longis profunde 10–15-laciniatis.—PERU: Muña, Dept. Huanuco, 2100 m. alt., *Macbride 4011* (TYPE, Field Mus. no. 535,075; ISOTYPE, Gray Herb.).—Belonging to the group *Oligogyne* § *Cuspidatae*, but readily separated from the described members of that section by the gland-tipped pubescence, and deeply cordate leaves with closed sinuses. Mr. Macbride notes that the plant is “pungently resinous.”

Sloanea amplifrons, sp. nov., arbor 9 m. alta; ramis crassis angulatis paucis elongatis superne cinnamomeo-tomentellis; foliis alternis amplis subcoriaceis 2–5 dm. longis 1–3 dm. latis ellipticis vel obovatis apice acutis obtusisve basi saepe subcordatis rare rotundis vel obtusis margine sinuato-dentatis subtus pallidioribus et minute puberulentis; petiolo 8–15 cm. longo apice valde incrassato et canaliculato; stipulis persistentibus ascendentibus strictisve irregulariter inciso-dentatis 2–4 cm. longis navicularibus; inflorescentia axillari racemosa 8–15 cm. longa cum bracteis eroso-dentatis 10–15 mm. longis ornata; calyce cyathiformi irregulariter 5–10-dentato extus cinereo-tomentello 4–6 mm. longo 6–10 mm. diametro quarta vel quinta parte dentato 2–3 mm. longe pedicellato; staminibus calycem superantibus; filamentis perbrevibus; antheris tetragonis pilosis obtusis libris; pistillo staminibus $\frac{1}{2}$ –2-plo longiore; ovario 4-loculari densissime villosa in stylum simplicem pilosum continuo; capsula globosa uniloculari monosperma ca. 15 mm. diametro cum setis gracilibus scabris curvatis numerosissimis 20–35 mm. longis ornata; fructu (i. e. capsula cum setis) 4.5–5.5 cm. diametro spongioso.—CAYENNE: without locality, *Martius* (G). SURINAM: without locality, *Hostmann 1025* (G). BRITISH GUIANA: Kartabo Region, *Bailey 37* (G); Koreai Creek, *Linder 158* (TYPE,

Gray Herb.); Anabisi River, Northwest District, *La Cruz* 1364 (NY); Waroowaro Creek, Pomeroom River, *Jenman* 7787 (NY). VENEZUELA: Eleanor Creek, lower Orinoco, *Rusby & Squires* 260 (G, NY).—The plant here described in the main appears to be the *Sloanea dentata* of the Flora Brasiliensis, xii, pt. 3, 178, t. 37 (1886). As Urban, Fedde Repert. xv. 321 (1918), has pointed out, *S. dentata* L. is strictly West Indian being based on a Plukenet specimen probably from Martinique. A study of the matter seems further to indicate that *S. dentata* L. has a synonym in *S. Massoni* Sw., and that the Linnean name should apply to the concept treated as *S. Massoni* in the Flora Brasiliensis. There can be no doubt that the South American plant described here as *S. amplifrons* is distinct from the West Indian *S. dentata* L. Among its group of immediate relatives, those with broad leaves and persistent stipules, it is readily recognized by its fruit and cyathiform calyx. The capsule is covered with exceedingly numerous, long, very slender, antrorsely scabrous and tortuous appendages. These are flexuous near their tips and more or less intertangled to form a spongy mass. The related species all have relatively few, straight, coarser, glabrous capsule-appendages, and parted calyces. According to Professor I. W. Bailey the plant is a myrmecophyte, ants using as dometia the large boat-shaped stipules which are strictly appressed to the stem.

Fouquieria Digueti (Van Tieghem), comb. nov. *Bronnia Digueti* Van Tieghem, Jour. de Bot. xiii. 297 (1899). *B. Thiebauti* Van Tieghem, l. c. *F. peninsularis* Nash, Bull. Torr. Bot. Cl. xxx. 455. (1903); Johnston, Proc. Calif. Acad. ser. 4, xii. 1099 (1924).—There can be no doubt that Van Tieghem's two species are synonymous with each other and with the later *F. peninsularis* of Nash.

Fuchsia perbrevis, sp. nov., glabrata; foliis oppositis ovatis vel elliptico-oblongis 4–10 cm. longis 2.5–3.5 cm. latis apicem et basim versus attenuatis margine evidenter dentatis supra brunneis glaberrimis subtus pallidioribus cum costa et nervis brunnescentibus puberulentis prominentibus; petiolis 2–6 mm. longis; stipulis firmis subpersistentibus triangularibus 1–2 mm. altis; floribus coccineis axillaribus paucis; ovario glaberrimo 10–12 mm. longo angulato oblongo-cylindrico ca. 2 mm. crasso basim versus in pedicellum 1–1.8 cm. longum nutantem crassiusculum attenuato supra vix attenuato; hypanthio 3–4(–5) mm. longo basim versus 2–2.5 mm. crasso apicem versus 3.5–5 mm. crasso intus et extus glaberrimo gradatim ampliato; sepalis ca. 1 cm. longis oblongis vel oblongo-lanceolatis acutis vel attenuatis ascendentibus basim versus 2–3 mm. latis, alternis angus-

tioribus (?); petalis oblongis ca. 1 cm. longis ca. 4 mm. latis paullo asymmetricis apice rotundis; staminibus 8 inaequalibus; antheris ovatis ca. 2 mm. longis; filamentis 1 et 3 mm. longis glabris; stylo 7–8 mm. longo glaberrimo apicem subintegro; bacca capsulari angulata ca. 15 mm. longa ca. 4 mm. crassa.—COLOMBIA: Ultra Abate, *Holton 892* (TYPE, N. Y. Bot. Gard.); Barroblanco, *André 1336* (NY).—A species remarkable because of its very abbreviated broad hypanthium and angular capsular fruit. Both specimens appear to have been obtained to the east of Bogotá. The clean brownish cast of the dried foliage is unique, as is also the very long and angulate ovary. At first glance the latter is readily mistaken for the hypanthium, that being very short and broader than long.

Fuchsia Andrei, sp. nov., fruticans glabrata; ramulis fistulosis apicem versus minute pubescentibus mox glaberrimis nitidis laevigatis 4–8 mm. crassis; foliis oppositis vel ternatis oblongis vel obovato-oblongis 7–16 cm. longis 3–6.5(–9) cm. latis margine integerrimis minute sparseque ciliolatis apice abrupte acuminatis basi obtusis vel acutis supra viridibus glaberrimis subtus pallidioribus in nervis prominentibus sparse inconspicue villosulis; petiolis 1–2.5 cm. longis glabratis; stipulis caducis obliquis deltoideis ca. 1 mm. altis; inflorescentia breviter racemosa parvibracteata; bracteis lanceolatis 3–9 mm. longis quam pedicelli graciles 10–15 mm. longi multo brevioribus; ovario oblongo glabrato ca. 5 mm. longo ca. 2–2.5 mm. crasso; hypanthio 2–3 cm. longo basi subnodoso supra medium apicem versus gradatim ampliato 4–4.5 mm. crasso extus glaberrimo intus infra medium piloso; sepalis oblongo-lanceolatis acutis 6–9 mm. longis ascendentibus; petalis lineari-oblongis ca. 10 mm. longis ca. 3 mm. latis obtusis quam sepala vix longioribus; staminibus 8 inaequalibus glabris gracilibus; stylo infra medium piloso cum stigmate 4-lobato coronato; bacca 5–6 mm. longa.—COLOMBIA: Rio de Huannamaca, 1876, *André K. 820* (TYPE, Field Mus. no. 537,131; ISOTYPE, NY); Tambo de Savanilla, 1877, *André K. 818* (G, NY, FM).—In a very general way suggesting *F. scabriuscula* Benth., an Ecuadorian species, but quite different in its terminally racemose flowers and glabrous foliage. Under a lens the surface of the leaves appears to be minutely and closely pebbled.

Fuchsia atrorubra, sp. nov., fruticans; ramulis subteretibus strigosis; foliis herbaceis ternatis obovatis vel obovato-ellipticis 4–12 cm. longis 2.5–5 cm. latis inconspicue denticulatis apice acutis basim versus in petiolum 6–20 mm. longum attenuatis supra glabratis puberulentisve subtus pallidioribus in venis dense strigosis; stipulis

deltoideis glabris crassis subpersistentibus ca. 1–1.5 mm. altis; floribus in axilla terminali vel subterminali orientibus in racemos foliosos 1–3 cm. longos cernuos aggregatis; pedicellis 5–8 mm. longis densissime canescente strigosis; ovario ellipsoideo 4–5 mm. longo; hypanthio 13–15 mm. longo gracili basi vix nodoso apicem versus gradatim minime dilatato 2–2.5 mm. crasso in sicco purpureo-rubro extus dense striguloso intus dense villosulo; sepalis lineari-lanceolatis 6–8 mm. longis 1–1.5 mm. latis; petalis lanceolato-oblongis acutis 6–7 mm. longis 1.5–2 mm. latis in sicco roseo-purpureis; staminibus 8 inaequalibus inclusis; antheris oblongis; stylo pubescenti; bacca elliptica 13–14 mm. longa 5–6 mm. crassa.—COLOMBIA: along stream, “Santa Elena” above Santuario, Dept. Caldas, 2000–2300 m. alt., *Pennell 10313* (TYPE, Gray Herb.); wet forested cliff, Rio Santa Rita, Salento, Dept. Caldas, 1600–1800 m. alt., *Killip & Hazen 8966* (G); roadside thickets, Salento, Dept. Caldas, 1700–1900 m. alt., *Pennell & Hazen 10144* (G).—A species characterized by its very small, dark, terminal, more or less racemose flowers. *Fuchsia Hartwegi* Benth., *F. sessiliflora* Benth., and *F. verrucosa* Benth. are the only small-flowered members of the genus described from northwest South America. The two former have bright-colored flowers in racemose panicles, and the last has very short petioles and a restricted rough pubescence.

Fuchsia glaberrima, sp. nov., macrophylla frutescens; foliis firmis late oblanceolatis 10–20 cm. longis 4–8 cm. latis integerrimis oppositis acutis basim versus attenuatis saepe purpureo-tinctis subsessilibus vel brevissime (2–5 mm. longe) petiolatis; stipulis persistentibus firmis connatis reflexis, jugis connatis latissime triangularibus 2–2.5 mm. altis 4–5 mm. latis; floribus in racemum parvifoliate bracteatum terminalem aggregatis coccineis ca. 7 mm. longe pedicellatis; ovario fusiformi 8–9 mm. longo 1.5–2 mm. crasso; hypanthio 2.5–3 cm. longo basi nodoso deinde subcontracto apicem versus gradatim ampliato 5–6 mm. crasso extus glaberrimo intus dense pubescenti; sepalis oblongis 9–11 mm. longis ca. 4.5 mm. latis; petalis ca. 9 mm. longis late obovatis quam sepala brevioribus apice rotundatis; staminibus inaequalibus 8 inclusis; filamentis pro genere brevibus; antheris oblongis; stylo dense pubescenti cum stigmate leviter lobato coronato.—ECUADOR: Valley of Pastaza River, between Baños and Cashurco, 8 hours east of Baños, Prov. of Tungurahua, 1300–1800 m. alt., *Hitchcock 21750* (TYPE, Gray Herb.).—Evidently an ally of *F. spectabilis* Hook., agreeing with it in being practically glabrous, and especially in its peculiar stipules. The stipules of the opposite leaves

are confluent to form a single coarse broad persistent reflexed stipular appendage on each side of the stem. *Fuchsia glaberrima* differs from *F. spectabilis* in its smaller flowers borne in a terminal cluster rather than solitary in the axils of the main leaves, in its densely pubescent rather than very sparsely villous inner surface of the hypanthium, and in its entire (not ciliate-margined) leaves.

Fuchsia Hitchcockii, sp. nov., fruticans foliosa pubescens; foliis ternatis firmis ellipticis vel elliptico-obovatis 3–6 cm. longis 1.5–2.2 cm. latis remote denticulatis 5–15 mm. longe petiolatis apice acutis basim versus (rare inaequaliter) attenuatis supra sparsissime puberulentis in sicco atris subtus pallidioribus sparse canescenter villosis; stipulis subulatis deciduis ca. 2 mm. longis inconspicuis; floribus coccineis axillaribus 2–5 cm. longe pedicellatis; ovario obovato-elliptico 3–4 mm. longo breviter villoso; hypanthio 5–6 cm. longo basi nodoso deinde paullo constricto apicem versus gradatim ampliato 5–6 mm. crasso extus sparsissime villoso intus velutino-pubescenti; sepalis lanceolatis longe acuminatis 18–22 mm. longis 4–5 mm. latis; petalis orbiculari-obovatis 10–12 mm. longis apice rotundatis; staminibus 8 inaequalibus quam petala brevioribus longioribusve; antheris oblongis; stylo pubescenti stigmate globoso subintegro exserto coronato.—ECUADOR: between Oña and Cuenca, Prov. of Azuay, 2700–3300 m. alt., *Hitchcock 21603* (TYPE, Gray Herb.).—An interesting species with medium-sized pubescent ternate leaves and very slender elongate axillary flowers. The narrow sepals nearly twice exceed the broadly obovate rounded petals. It is apparently most related to *F. ayacensis* HBK., but differs in its more elongate hypanthium, narrow and longer sepals, pubescent style, and more coarsely pubescent stems and leaves.

Fuchsia Townsendii, sp. nov., fruticosa foliosa canescens; foliis ternatis oblanceolatis 6–12 cm. longis 22–30 mm. latis firmis margine remote denticulatis paullo revolutis apicem versus in acumen curvatum attenuatis basim versus in petiolum 5–20 mm. longum pubescentem gradatim contractis supra viridibus inconspicue sparseque villosulis subtus pallidioribus cum nervis prominentibus infra medium dense breviter canescenti-villosis; stipulis subulatis caducis 1–2 mm. longis; floribus axillaribus paucis coccineis; pedicellis gracilibus ascendentibus pubescentibus 15–25 mm. longis; ovario anguste ellipsoideo ca. 9 mm. longo breviter villoso; hypanthio 5–5.5 cm. longo basi nodoso deinde contracto deinde graciliter tubuloso apicem versus gradatim ampliato 5–6 mm. crasso extus puberulento intus infra medium dense canescenti-pubescenti; sepalis 10–12 mm. longis

ascendentibus lanceolatis acutis basi ca. 4 mm. latis; petalis ovatis 9–10 mm. longis ca. 8 mm. latis apice rotundis vel obtusis quam sepala paullo brevioribus; staminibus 8 inaequalibus glabris pubescentibus; stylo infra medium pubescenti cum stigmate globoso subintegro ornato.—ECUADOR: Sabiango Hill, Nov. 26, 1910, *C. H. T. Townsend* A93 (TYPE, U. S. Nat. Herb. no. 534,349).—Related to *F. Hitchcockii*, from which it differs in its larger more attenuate leaves, shorter softer as well as denser pubescence, and shorter sepals.

Fuchsia apiculata, sp. nov., frutex; ramulis molliter pubescentibus; foliis firmis oblongis vel elliptico-oblongis 2.5–6 cm. longis 12–20 mm. latis remote denticulatis acutis saepe ternatis 1–3 cm. longe petiolatis subtus pallidioribus infra medium costam versus evidenter canescenti-villosis; stipulis subulatis inconspicuis deciduis 1–2 mm. longis; floribus axillaribus saepe 1–2 cm. longe pedicellatis coccineis pendulis; ovario pubescenti elliptico 3–4 mm. longo; hypanthio 20–25 mm. longo basi fusco et nodoso deinde subconstricto apicem versus gradatim ampliato 5–6 mm. crasso extus glabrato intus infra medium dense canescenti-pubescenti; sepalis ovato-oblongis 8–9 mm. longis acutis evidenter apiculatis; petalis ovatis ca. 6–7 mm. longis ca. 5 mm. latis late breviterque unguiculatis apice obtusis; staminibus 8 inaequalibus glaberrimis inclusis; antheris breviter oblongis; stylo infra medium canescente pubescenti aliter glabro stigmate globoso subintegro coronato.—ECUADOR: Between Cuenca and Huigra, Prov. of Azuay, and Cañar, 2700–3000 m. alt., *Hitchcock* 21667 (TYPE, Gray Herb.).—In general habit somewhat suggesting *F. decussata* R. & P. of Peru, but differing in color of pubescence, obovate petals, and densely pubescent inner surface of the hypanthium.

Fuchsia spectabilis Hook., var. ***pubens***, var. nov., in foliis et hypanthiis dense molliter pubescens.—ECUADOR: vicinity of Huigra, *Rose & Rose* 22479 (TYPE, U. S. Nat. Herb. no. 1,022,130).—Differing from the typical form in its minute soft pubescence—an indument so soft and fine that the foliage feels waxy to the touch. I am unable to detect any difference between the description of *F. longiflora* Benth., Pl. Hartweg. 177 (1845), and plants referable to *F. spectabilis* Hook., Bot. Mag. lxxiv. t. 4375 (1848), but am using the latter name since I know positively that it applies to the concept in mind and because it seems unlikely that Hooker, who had Bentham's types available, would have proposed his species had it been quite like the earlier.

Fuchsia hypoleuca, sp. nov., fruticans foliosa pubescens; foliis firmis ternatis late lanceolatis 3–7.5 cm. longis 1–1.7 cm. latis apicem

et basim versus acutis margine saepe paullo revolutis remote denticulatis supra viridibus inconspicue sparseque hispidulis subtus pallidis hispidis cum nervis prominentibus; petiolis 5–10 mm. longis dense pubescentibus; stipulis setaceis caducis erectis 2–3 mm. longis; floribus axillaribus pendulis coccineis vix numerosis; ovario elliptico ca. 4 mm. longo strigoso; hypanthio 18–23 mm. longo basi bulboso deinde contracto apicem versus gradatim ampliato 4(–6) mm. crasso extus puberulento intus infra medium dense villosa; sepalis lanceolatis 8–12 mm. longis ascendentibus basi ca. 2.5 mm. latis; petalis obovatis ca. 7 mm. longis 4–5 mm. latis quam sepala 2–4 mm. brevioribus apice rotundis; staminibus 8 inclusis inaequalibus glabris; stylo basim versus villosa cum stigmate subintegro coronato.—ECUADOR: between Loja and San Lucas, Prov. Loja, 2100–2600 m. alt., *Hitchcock 21440* (TYPE, Gray Herb.): “southern provinces,” *W. Jameson* (US).—Most related to *F. scabriuscula* Benth., from which it differs in its narrow ternate leaves and canescent rather than brownish pubescence. Both of the cited specimens usually have the paleness of the under leaf-surfaces intensified by a fine dense covering of fungus mycelium.

Fuchsia macrophylla, sp. nov., fruticosa laxa ramosa 15 dm. alta; caulibus fistulosis 4–6 mm. crassis griseis partibus junioribus puberulentis ceteris glabris; foliis herbaceis oppositis puberulentis ellipticis vel lato-oblongatis in petiolum 2–4 cm. longum gradatim contractis 10–27 (saepe ca. 16) cm. longis 2.5–7 (saepe ca. 5.5) cm. latis apice grosse acuminatis margine integerrimis paullo undulatis; stipulis filiformibus deciduis ca. 2 mm. longis; floribus coccineis; corymbulis laxis paucifloris foliaceo-bracteatis ex axillis superioribus orientibus; pedicellis gracilibus erectis divaricatisve 1–2 cm. longis; ovario ellipsoideo puberulento ca. 5 mm. longo; hypanthio ca. 23 mm. longo basi nodoso deinde contracto apicem versus gradatim ampliato 4–5 mm. crasso extus puberulento mucronato (mucro viridescenti); petalis oblongatis ca. 9–10 mm. longis apice rotundatis mucronatis sepala paullo superantibus; staminibus 8 inaequalibus quam petala paullo brevioribus; antheris oblongis; stylo villosa stigmate subintegro coronato.—PERU: along streams, Hacienda Schunke, La Merced, Dept. Junin, 1200 m. alt., *Macbride 5616* (TYPE, Field Mus. no. 536,655; ISOTYPE, Gray Herb.).—Well marked by its small flowers and large thin leaves tapering at both ends. To judge from descriptions it seems related to *F. asperifolia* Krause, but differs in being puberulent rather than hirsute, and in having a different inflorescence. Although the flowers of *F. macrophylla* appear to be borne in small leafy pedunculate corymbs produced along the upper parts of the

branches, they are in fact solitary in the axils on leafy branchlets only 2–3 cm. long.

Fuchsia velutina, sp. nov., scandens canescente velutina; foliis oppositis ellipticis firmis 6–11 cm. longis 3–5 cm. latis integerrimis vel inconspicue denticulatis dense minute canescente velutinis apice breviter acuminatis basin versus paullo attenuatis superioribus vix reductis in venis et costa purpureo-tinctis; petiolis 6–15 mm. longis; floribus terminalibus in racemum brevibracteatum brevipedunculatum pauciflorum dispositis; pedicellis 6–10 mm. longis; ovario ellipsoideo ca. 5 mm. longo inconspicue velutino; hypanthio 5–6 cm. longo basi bulboso deinde sensim contracto, 2–3 cm. supra basin gradatim ampliato deinde cylindrico vel ca. 2 cm. supra basin ad summum gradatim ampliato ca. 5 mm. crasso extus puberulento intus sparse pubescenti; sepalis lineari-lanceolatis 13–15 mm. longis acutis; petalis linearibus 14–17 mm. longis ca. 3 mm. latis acutis; staminibus 8 inaequalibus inclusis glabris; stylo pubescenti stigmate globoso sub-integro coronato; bacca ignota.—PERU: Yanano, ca. 1800 m. alt. *Macbride 3715* (TYPE, Field Mus. no. 534,777; ISOTYPE, Gray Herb.).—A species well-marked by its firm canescent-velvety leaves and few-flowered terminal racemes of elongate slender flowers. In habit *F. velutina* suggests *F. miniata* Planch. & Lind., a Colombian species, but differs in its pubescence and consistently opposite leaves.

Fuchsia polyanthella, sp. nov., scandens; ramis ca. 4 mm. crassis partibus junioribus sparse hispidulosis; foliis oppositis 10–15 cm. longis 5–7 cm. latis firmiter membranaceis ellipticis hispidulostrigosis apice breviter acuminatis basin versus in petiolum hispidulum 2–5 cm. longum attenuatis subtus pallidioribus margine integris vel inconspicue denticulatis ciliolatis; stipulis cuneato-lanceolatis glabris 2–4 mm. longis tarde deciduis; floribus coccineis graciliter (ca. 12–15 mm. longe) pedicellatis in racemum ca. 1 cm. longe lanceolato-bracteatum axillarem 1–5 cm. longum 2–5 cm. longe pedunculatum aggregatis; racemis omnibus in paniculam laxam terminalem decidue foliolosam 1–4 dm. longam dispositis; ovario ellipsoideo glaberrimo 5–6 mm. longo; hypanthio ca. 15 mm. longo basi nodoso deinde sub-constricto apicem versus paullo ampliato 3–4 mm. crasso extus glaberrimo intus infra medium villosus; sepalis lanceolatis acutis ascendentibus 10–12 cm. longis; petalis obovato-oblongis ca. 8 mm. longis obtusis quam sepala paullo brevioribus; staminibus 8 inaequalibus quam petala brevioribus; antheris oblongis; stylo glabro stigmate globoso leviter quadrifido coronato; bacca ca. 1 cm. longa.—PERU: Muña, on trail to Tambo de Vaca, Dept. Huanuco, 2400 m. alt., *Macbride 4290*

(TYPE, Field Mus. no. 535,372; ISOTYPE, Gray Herb.).—Characterized by its rather large bicolored strigose leaves and open terminal panicles formed of pedunculate short small-bracted racemes developing from the upper leaf-axils. Although coming from Muña, the source of most of the *Fuchsias* described by Ruiz & Pavon, it is quite different from any of those species. Among the species known from Muña *F. polyanthella* most suggests *F. ovatis* R. & P., but is quite different in its much smaller externally glabrous flowers, quite different inflorescence, and more slender glabrate stems.

Fuchsia abrupta, sp. nov., frutex scandens; ramis divaricatis glabris ca. 5 mm. crassis; foliis subcoriaceis oppositis lanceolatis vel oblanceolatis 8–12 cm. longis 2.5–4 cm. latis integerrimis 4–8 mm. longe petiolatis apice acuminatis basi angustis supra glabris (in sicco) fuscis subtus pallidis conspicue paralleliterque nervatis villosopuberulis, eis inflorescentiarum abrupte multo reductis; stipulis filiformi-subulatis deciduis ca. 3 mm. longis; floribus terminalibus in racemum 1–2 dm. longum bracteatum pendulum dispositis coccineis 2.5–4 cm. longe pedicellatis; ovario elliptico ca. 7 mm. longo glabro; hypanthio 3.5–4.5 cm. longo basi nodoso deinde contracto apicem versus cylindrico vel saepe paullo gradatim ampliato 4–5 mm. crasso extus glabro intus basim versus villosus; sepalis lanceolatis 13–15 mm. longis acutis; petalis oblongis apice obtusis mucronatis sepalis subaequalibus ca. 14–15 mm. longis; staminibus 8 inaequalibus quam petala brevioribus; antheris oblongis; stylo basim versus villosus stigmate globoso leviter quadrifido coronato; bacca cylindrica 13 mm. longa ca. 4 mm. crassa. —PERU: along river, Cushi, Dept. Huanuco, 1500 m. alt., *Macbride 4541* (TYPE, Field Mus. no. 535,618; ISOTYPE, Gray Herb.).—Well marked by its elongate bicolored leaves that are suddenly reduced in the terminal racemose inflorescence.

FUCHSIA BOLIVIANA Carr. Rev. Hort. xlviii. 150 cum tab. (1876).—BOLIVIA: vicinity of Sorata, *Mandon 622* (G); near Yungas, 1200 m. alt., *Rusby 1071* (G, US); Yungas, *Bang 327* (G, US); without locality, *Bang 1806* (G, US), *Bang 2833* (G, US), *Holway 643* (US). PERU: Ollantaytambo, 3000 m. alt., *Cook & Gilbert 290* and *443* (US); San Miguel, Urubamba Valley, 1800 m. alt., *Cook & Gilbert 915* (US); Tambo, Dept. of Ayacucho, 3100–3200 m. alt., *Weberbauer 5555* (FM).—The above named species which was clearly described and beautifully illustrated by Carrière is the one from Bolivia and southern Peru which has usually passed for *F. corymbiflora* R. & P. A study of Ruiz & Pavon's description and plate, Fl. Peruv. iii. 87, t. 325 (1802), makes it clear that *F. boliviana* and *F. corymbiflora* are quite

distinct, the latter having a much broader more inflated hypanthium that is densely pubescent outside and glabrous within, obtuse buds, and a comparatively small inflorescence rather than a large drooping one. The corollas of *F. boliviana* are merely puberulent outside, but within are densely pubescent below the middle, and the hypanthium is only very gradually dilated, being very slender and almost tubular. The buds are apiculate. The stems of the plant are usually abruptly terminated, above a certain point producing only several strongly drooping or pendent corymbose racemes and only a few reduced leaves. In northwestern South America *F. boliviana* is represented by the following variety.

***Fuchsia boliviana*, var. *luxurians*, var. nov., splendens;** hypanthio 5–6 (non 3–4) cm. longo.—JAMAICA: vicinity of St. Helens Gap, St. Andrew, 1475 m. alt., *Maxon & Killip 571* (G). VENEZUELA: Colonia Tovar, *Pittier 9252* (TYPE, Gray Herb.), *Jahn 439* (US). COLOMBIA: "Las Minitas," south of Caldas, *Pennell 10970* (G).—This variety is the plant most common under the name of *F. corymbiflora* R. & P., and that well illustrated in the Botanical Register, xxvi. t. 70 (1840), and the Botanical Magazine, lxi. t. 4000 (1843). It differs from typical *F. boliviana* in its larger (albeit similarly proportioned) flowers and better developed longer racemes. It appears to be only a more luxuriant northern variant of this species.

***Fuchsia Steinbachii*, sp. nov., fruticans apetala;** ramis 2–3 cm. crassis glabris brunnescentibus cortice plus minusve deciduo; foliis herbaceis oppositis ovato-oblongis 4–8 cm. longis 1.5–3.5 cm. latis sparse puberulentis supra (in sicco) fuscis subtus pallidioribus et evidenter nervatis margine integris vel inconspicue denticulatis apice acutis vel acuminatis basim versus in petiolum 8–12 mm. longum contractis; stipulis deciduis inconspicuis subulatis ca. 1 mm. longis; floribus in racemum parvifoliate bracteatum terminalem aggregatis carneis 1.5–3(–4) cm. longe pedicellatis; ovario fusiformi 6–8 mm. longo 2–2.5 mm. crasso glabro; hypanthio 4–5 cm. longo basi nodoso deinde subcontracto apicem versus gradatim ampliato 5–6 mm. diametro extus glaberrimo intus omnino vel saltem infra medium conspicue pubescentibus; sepalis anguste lanceolatis ca. 2 mm. longis ca. 4 mm. latis ascendentibus acuminatis; petalis nullis; staminibus 8 inaequalibus glaberrimis inclusis vel extrusis; antheris oblongis; stylo infra medium canescente pubescenti; stigmate oblongo-globoso; bacca ca. 9 mm. crassa.—BOLIVIA: open woods, Incachaca, Dept. of Cochabamba, 2500 m. alt., *Steinbach 5038* (TYPE, N. Y. Bot. Gard.); without locality, *Kuntze* (NY).—This species belongs to the group of

F. membranacea Hemsl., Jour. Bot. xiv. 70 (1876), and is apparently most related to *F. juntasensis* Kuntze from which it differs in its larger, longer-petiolate leaves, much larger calyx-lobes and strongly unequal stamens.

Fuchsia furfuracea, sp. nov., fruticans; ramulis sparse villosio-hirsutis; foliis oppositis firmis oblongis 7–9 cm. longis 2.5–4 cm. latis evidenter denticulatis dense minute furfuraceis opacis apicem versus in acumen grossum curvatum attenuatis basi saepe obtusis 8–20 mm. longe petiolatis, supra breviter hirsuto-strigosis, subtus strigosis pallidioribus juventate dense villosio-tomentosis; stipulis lanceolatis 2–3 mm. longis acuminatis herbaceis deciduis; floribus coccineis in racemum terminalem parvibracteatum erectum congestis; pedicellis 2–4 cm. longis conspicue pubescentibus; ovario elliptico ca. 8 mm. longo dense villosio; hypanthio 3.5–4.5 cm. longo basi nodoso deinde constricto medium versus ampliato deinde cylindrico et ca. 7 mm. crasso extus plus minusve hispido-villosio intus villosio; sepalis lanceolatis attenuatis 15–20 mm. longis in alabastro apicibus liberis ca. 2 mm. longis; petalis ovatis ca. 9 mm. longis apice obtusis; staminibus 8 inaequalibus glabris; antheris oblongis; stylo retrorso-villosio stigmate leviter lobato coronato.—BOLIVIA: Unduavi, 3000 m. alt., *Rusby 2511* (NY); Yungas, *Bang 674* (TYPE, Gray Herb., ISOTYPE, US, NY).—A well defined species with opaque minutely furfuraceous-pubescent leaves, and large terminal racemose flowers. From *F. peruviana* Carr., the only other petaliferous Bolivian species with definitely terminal inflorescence, it differs in the shape of the buds, their free tips, and the longer-petioled furfuraceous leaves. The plant much suggests the original plate of *F. corymbiflora* R. & P., Fl. Peruv. iii. t. 325 (1802), but differs in its longer pedicels, pubescent inner surface of the hypanthium, and less pubescent more acuminate leaves.

Fuchsia Brittonii, nom. nov. *F. boliviana* Britt. Bull. Torr. Bot. Cl. xvii. 214 (1890); not *F. boliviana* Carr. (1876).—BOLIVIA: vicinity of Ananca, 2900 m. alt., *Mandon 624* (G); Yungas, *Bang 675* (G); PERU: San Miguel, Urubamba Valley, 1800 m. alt., *Cook & Gilbert 1110* (G).

Gilia inyoensis, sp. nov., herba annua humilis a basi laxè ramosa 5–10 cm. alta; caulibus gracilibus dichotomis rubescentibus basim versus villosis aliter glabris sparse sed evidenter stipitato-glandulosis; foliis basalibus evanescentibus laxè rosulatis 8–12 mm. longis ca. 2.5 mm. latis sparse villosis crassis late affixis oblanceolatis acutis et mucronatis; foliis caulinis sparsis alternis recurvatis saepe villosis oblongis vel oblongo-lanceolatis rariter pauci-lobatis 3–8 mm. longis

1-2 mm. latis; floribus axillaribus sparsis superioribus in corymbum pauciflorum aggregatis; pedicellis gracilibus saepe ascendentibus 8-16 mm. longis sparse stipitato-glandulosis; sepalis lanceolatis acutis 2-3 mm. longis evidenter scarioso- et albo-marginatis sparse glandulosis; corolla 5-6 mm. longa 6-10 mm. diametro glabra, tubo brevi 2-2.5 mm. longo paullo ampliato ca. 2 mm. diametro aurantiaco-brunnescentibus, lobis ascendentibus albis (in sicco dilute aurantiaco-tinctis) obovatis obtusis vel plus minusve retusis rariter paullo inconspicueque cuspidatis; filamentis glabris 2 mm. longis albis infra medium tubum affixis; ovario elliptico brunneo; capsula ignota.—CALIFORNIA: in coarse granite sand in the foothills west of Bishop, Inyo County. *Heller 8281* (TYPE, Gray Herb.).—Although it has been confused with *G. campanulata* Gray, which in fact is its immediate relative, *G. inyoensis* is readily separable by its reddish stems, small subentire leaves and very differently proportioned corolla. The proposed species has a broadly funnelformed corolla with a tube shorter than the corolla-lobes and sepals, and not one which is clearly campanulate nor has a well developed tube longer than either corolla-lobes or sepals.

V. STUDIES IN THE BORAGINACEAE.—V.

BY IVAN M. JOHNSTON.

1. CONCERNING THE RANGE AND IDENTITY OF CERTAIN AMERICAN SPECIES.

Lithospermum cinerascens (A. DC.), comb. nov. *Macromeria cinerascens* A. DC. Prodr. x. 69 (1846); Johnston, Contr. Gray Herb. n. s. lxx. 15 (1924).—A collection made by Macbride & Featherstone (no. 1185) at Yanahuauc, Peru, agrees closely with De Candolle's description of *M. cinerascens* and with a photograph of the type kindly supplied me by Dr. H. M. Hall. The plant is clearly a species of *Lithospermum*, probably most related to *L. mediale* Johnston, and in my recent synopsis of the genus, l. c., keys out with the Mexican *L. calycosum* (Macbr.) Johnston.

LITHOSPERMUM DISTICHUM Ortega, Hort. Matr. Dec. i. 8 (1797); Johnston, Contr. Gray Herb. n. s. lxx. 24 (1924). *Myosotis grandiflora* HBK. Nov. Gen. et Sp. iii. 90, t. 199 (1818); A. DC. Prodr. x. 114 (1846); Johnston, l. c. 55.—It seems clear that the troublesome name, *Myosotis grandiflora* HBK., belongs in the synonymy of *L. distichum*. The type of *M. grandiflora* was examined by Gray in 1887, the year



Johnston, I. M. 1925. "Some undescribed American Spermatophytes."
Contributions from the Gray Herbarium of Harvard University (75), 27–40.
<https://doi.org/10.5962/p.336090>.

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