

IV. SOME UNDESCRIBED SPECIES OF MEXICAN PHANEROGAMS.

BY ALICE EASTWOOD.

Aristolochia oaxacana, n. sp., caulibus 1-paucis ex radice tuberosa prostratis tenuiter pilosissimis ramosis 1-2 dm. longis; foliis ovato-cordatis 2-4 cm. longis 2 cm. latis, apice acutis basi cordato-auriculatis ad petiolum brevem inter auriculas cuneate decurrentibus; floribus in axillis solitariis, bracteis obscuris ovatis ad basim pedunculi brevis insertis; calyce albo-purpureo unilabiato 3.5 cm. longo recto, tubo 12 mm. longo paulo constricto ad squamam interiorem infundibuliformem, limbo lineari antice ad tubum decurrenti; columna crasso-stipitata; antheris 5; stigmatibus peltatis quinquelobatis; ovario clavato pilosissimo; capsula turbinata quinquevalvata pilosa, apice dehiscenti. — OAXACA: Clajiaco, Galeotti, no. 214. This belongs to Sect. *Gymnolobus* Dctre. in Ann. Sci. Nat. ser. 4, ii. 30, and is related to *C. cordata*, which, however, has a bilabiate calyx.

Aristolochia cordata, n. sp., caulibus plurimis ex radice longa flava, simplicibus vel ramosis prostratis gracilibus striatis tenuiter albo-pilosissimis; foliis subsecundis ovato-cordatis 2-4 cm. longis et latis, apice obtusis, basi cordatis, palmate quinquenerviis reticulatis, investis sparse supra, densiore subter cum pilis tenuissimis obscure articulatis adpressis simplicibus vel basi bifurcatis; petiolis 5-12 mm. longis pilosissimis; floribus solitariis in axillis, pedunculis laminatis striatis pilosissimis cum bractea ovata apice inserta; calyce bilabiato albo-purpureo exteriori piloso, interiori glabro; labio superiore cucullato 6-10 mm. longo, inferiore deflexo et conduplicato obcordato 1 cm. lato; tubo flavo-lineato 11-12 mm. longo paulo constricto ad squamam interiorem infundibuliformem et sub os; columna sessili; antheris 5; stigmatibus peltatis quinquelobatis; ovario clavato pilosissimo basi ad pedicellum attenuata; capsula oblongo-turbinata quinquevalvata rugulosa, valvulis dorso crenatis-alatis, apice dehiscentibus. — DURANGO: Otinapa, July-August, 1906, E. Palmer, no. 431 (type, in hb. Gray). This belongs to Sect. *Gymnolobus* Dctre. l. c. 30 and is distinguished from the other pentandrous species of the section by the remarkable two-lipped flower.

Aristolochia Nelsonii, n. sp., suffruticosa prostrata; caule prope basim ramoso velutino, ramis diffusis angulatis; foliis ovato-cordatis vel saepius auriculato-trilobatis, apice acuminatis, basi ad petiolum cuneate excurrentibus (auriculis rotundatis), palmate trinerviis et reticulatis, supra investis regulariter adpressis pilis basi minute pustulatis, subter subvelutinis; petiolis canaliculatis 1-2 cm. longis; floribus solitariis in axillis, pedunculis gracilibus 2 cm. longis, apice cum bractea sessili ovato-cordata acuminata 1 cm. longa 5-7 mm. lata; calycis limbo patulo peripherico longe caudato, basi purpureo-marginato, flavo circa os, cauda flava 4-5 cm. longa 2 mm. lata; tubo geniculato 4 mm. diametro; columna superne quinquelobata basi stipitata; antheris 5; ovario clavato albo-pilosissimo pedicellato. — OAXACA: San Geronimo, 61 m. altitude, July 1-5, 1895, *E. W. Nelson*, no. 2769 (type, in hb. Gray). This approaches *A. longicaudata* Watson, but differs in much broader limb, and in the form of the leaves. It belongs to Sect. *Gymnolobus* Detre. l. c. and to the pentandrous group.

Passiflora platyneura, n. sp., caulibus angulatis et striatis hispidis pilis albis uncinatis; cirrhis nullis; foliis infra mediam partem trilobatis 2-4 cm. longis 3-5.5 cm. latis, lobo medio oblongo-ovato lateralibus inaequaliter bilobatis, basi late reniformibus, lobis margine integris vel saepissime irregulariter dentatis, dentibus apice aristatis, nerviis supra filiformibus subter planis; petiolis ca. 1 cm. longis apice biglandulosis glandulis crasse stipitatis; stipulis viridibus oblique ovatis subfalcatis apice aristate attenuatis 3 mm. longis; floribus axillaribus pedunculis 1.5-2 cm. longis; bracteis 2-3 proximis angustissime linearibus attenuatis 2 mm. longis; calycis tubo rotato-campanulato 1.5 cm. lato, lobis lineari-oblongis apice obtusis 1.5 cm. longis 6 mm. latis uninerviis, interiore glabris exterioribus hispidis; petalis tenuibus oblongo-lanceolatis ca. 1 cm. longis 2.5 mm. latis; corona exteriori filamentosa, filamentibus 1.3 cm. longis ad basim liberis; corona interiori membranacea, apice fimbriata, duos annulos inferiores occultanti; gynandrophora 9 mm. longa glabra; fructibus globosis basi cuneatis. — OAXACA: Cuilopan Mountains, altitude 2135 m., 27 July, 1894, *Rev. Lucius C. Smith*, no. 44 (type, in hb. Gray); Sierra de San Felipe, altitude 2287 m., 31 May, 1894, *C. G. Pringle*, no. 5750. This species is probably nearest *P. Pringlei* Robinson & Greenman, differing most noticeably in the shape of the leaf, the position of the stipular glands, and the white instead of dark pubescence. The differences in the flowers seem to be rather of degree than of kind.

7 *Diospyros Palmeri*, n. sp., arborescens; ramulis divaricatis griseis glabris; foliis alternis obovatis 3-5 cm. longis 2 cm. latis, basi cuneatis breviter petiolatis, apice rotundatis vel truncatis, coriaceis superne nitida

subter reticulatis ; calyce fructifero quinquepartito, segmentis inflexis obovatis vel oblongis parallele nerviis praeter basim fusco-puberulentem glabris ; fructibus globosis depressis glabris nitidis 2.5 cm. diametro ; pedunculis solitariis 5 mm. longis fusco-pubescentibus ; seminibus oblongis 12 mm. longis 7 mm. latis, una facie convexa, altera plana. — SAN LUIS POTOSI : San Dieguito, 7-10 June, 1905, *Dr. Edward Palmer*, no. 631 (type, in hb. Gray). Dr. Palmer notes this as a large shrub or small tree 2-4 m. high with considerable top and a profusion of dark green leaves, the fruit thinly scattered, having the appearance of persimmons, light green but with a patch of red and brown at the exposed or lower end. Without the flowers its affinities are doubtful. Compared with the species listed by Hemsley (Biol. Cent.-Am. Bot. ii. 300) it differs as follows: from *D. ciliata* A. DC. in having obovate instead of ovate leaves ; from *D. cuneifolia* Hiern, in being glabrous instead of hispid or pubescent, as well as in having leaves larger, and fruit three times the size ; from *D. Ebenaster* Retz. it differs in the shape and size of leaves, much smaller fruit, and quite entire calyxlobes ; from *D. velutina* Hiern, it differs in the shape of leaves and absence of fulvous velutinous pubescence, and from *D. texana* Scheele it also differs in leaves and pubescence.

Forestiera puberula, n. sp., divaricate ramosa ; ramulis griseis et atro-puberulis, verrucosis cum squamulis marcescentibus alabastro-rum ; foliis fasciculatis lineari-spatulatis apice obtusis basi breve petiolatis 5-10 mm. longis 1-nervatis, margine revolutis, superne puberulis, subter glabris porulosis ; pedunculis cum foliis fasciculatis, 3-5 mm. longis ; fructibus (immaturis) cylindraceis falcatis obtusis 8 mm. longis, 3 mm. diametro. — ZACATECAS : in arroyas, Cedros, June, 1908, *J. E. Kirkwood*, no. 12 (type, in hb. Gray).

Related to *F. angustifolia* Torr., differing chiefly in the puberulent stems and leaves, the latter smaller and strongly revolute. The cylindrical falcate fruit also distinguishes it. The flowers are unknown.

Centaurium pusillum, n. sp., nanum 4-8 cm. altum ramosissimum glabrum ; ramis tenuissimis quadrangulatis ; foliis imis rosulatis, primis spatulatis, ceteris oblanceolatis acutis 1 cm. longis 2 mm. latis, nerviis obscuris ; foliis caulinis lanceolatis acuminatis vel apice acutis basi amplexicaulibus ; floribus longe pedunculatis non-numquam sessilibus tetrameris 7 mm. longis ; pedunculis inter angulos striatis ; calycis laciniis fere liberis lanceolatis acutis carinatis, margine membranaceis 3-4 mm. longis, tubo brevi multo longioribus ; corollae laciniis oblongis vel ellipticis obtusis 4 mm. longis 2 mm. latis contortis et supra capsulam marcescentibus, tubo calycem aequanti, faucibus constrictis ; filamentis in faucibus insertis capillaribus 2 mm. longis ; antheris ovato-cordatis

brevibus stigma superantibus; stylo brevi recto; stigmatibus bilamellato, partibus obovatis 1 mm. longis 0.5 mm. latis; capsulis calycem superantibus oblongo-ellipticis ad basim dehiscentibus cum duabus valvulis divergentibus; placentis paulo intrusis muricatis; seminibus numerosis brunneis suborbiculatis minute papillosis vel irregulariter et interrupte corrugatis. — MICHOCAN: Morelia, on a bare damp mesa, 29 November, 1907, *C. G. Pringle*, no. 10,408 (type, in hb. Gray). This tiny plant seems nearest to *Centaurium tetramerum* (Schiede), n. comb. (*Erythraea tetramera* Schiede ex Schl. in Bot. Zeit. xiii 920), and resembles that species in its 4-merous flowers and dehiscent fruit. It differs, however, in the short corolla-tube not exceeding the calyx, the leaves with scarcely perceptible nerves, the fasciculate flowering stems, the persistent basal leaves, the striate peduncles, and the bilamellate stigma. The color of the flowers is not readily discernible in the dried specimens, but the lower part of the limb of the corolla appears to be yellow and the tips of the lobes tinged with pink.

✓ *Spigelia quaternata*, n. sp., radicibus fasciculatis; caulibus multis ex caudice breve, 3 dm. altis purpureis minute scabridis, parte superiore angulatis; foliis saepissime quaternatis supremis oppositis ovato-oblongis apice acuminatis 4–8 cm. longis 1–3 cm. latis integris superne glabris vel scabridulis subter pallidioribus et glabris, nerviis primariis et secundariis hispido-scabridis; stipulis brevibus triangularibus basi semi-amplexicaulibus folia conjungentibus; tot ramulis quot foliis ad nodos, terminantibus in spicis gracilibus; floribus flavis sessilibus secundis, in alabastro confertis, in fructu 3–6 mm. distantibus; sepalis lineari-lanceolatis acuminatis 4 mm. longis 1 mm. latis cum duabus glandibus interioribus; corollae tubo 8 mm. longo, laciniis oblongis acutis 3 mm. longis, superiore paulo longiore; capsulae basi persistente; seminibus globosis punctatis. — SAN LUIS POTOSI: Rascon, *Dr. Edward Palmer*, 19–22 June, 1905, no. 671 (type, in hb. Gray). This species is most closely related to *S. Humboldtiana* Cham. & Schlecht. and is easily distinguished by its much smaller flowers and its scabrid and more or less hispid pubescence.

Bourreria obovata, n. sp., ramulis senioribus minute albo-punctatis, junioribus canescentibus cum pilis brevibus adpressis; foliis obovatis superne scabridulis cum pilis brevibus adpressis basi minute pustulatis subter pallidioribus non scabridis, apice truncatis obtusis vel retusis, basi ad petiolum brevem attenuatis; pedunculis terminalibus cymosis cum pedicellis brevibus; bracteis foliaceis; calyce fere ad mediam partem 5-dentato, dentibus triangularibus acutis 4 mm. longis, utrinque adpresso-pilosellis; corolla rotata, tubo calycem aequanti, lobis 5–6 rotundatis, 5 mm. longis, basi auriculatis; staminibus 5–6,

insertis ad mediam tubi; antheris exsertis obscure mucronulatis; filamentis glandulosis et pubescentibus; stylo crasso, apice bifido, stigmatibus peltatis. — OAXACA: on hills, altitude 1300 m. at Jayacatlan, *Lucius C. Smith*, July 27, 1895, no. 549 (type, in hb. Gray), also Cuicatlan hills, June 17, 1895, no. 399.

Seymeria deflexa, n. sp., scabrida et glandulosa; foliis deflexis, majoribus oblongo-ovatis obtuse dentato-laciniatis, segmentis inferioribus crenatis apice obtusis, basi decurrentibus ad petiolum; minoribus oblongis integris basi cuneatis, superiore parte dentatis; petiolis brevibus; floribus divaricate-paniculatis, pedicellis capillaribus saepe decurvatis 5 mm. longis; calycis laciniis tubum campanulatum aequantibus, oblongo-ovatis obtusis recurvatis 2 mm. longis, in fructu patentibus; corolla campanulata 8 mm. longa, laciniis inaequalibus suborbiculatis ciliatis reflexis basi auriculatis; filamentis subulatis brevibus crassis pilosis; antheris exsertis flavis nervatis 3 mm. longis 1.3 mm. latis papillois, apice dehiscentibus; stylo antheras superante, in fructu declinato apice tenuiter clavato; ovario punctato-scabrido sub-cydoniformi. — NUEVO LEON: limestone ledges of the Sierra Madre above Monterey, 19 September, 1907, *C. G. Pringle*, no. 10,398 (type, in hb. Gray). This differs from other described species in having deflexed less dissected leaves, and pyramidal paniculate inflorescence. The color of the flowers is not known, but the exserted stamens, as well as the recurved divisions of the calyx and corolla, give the flowers a slight resemblance to some Californian species of *Dodecatheon* belonging to the *D. patula* group. The type specimen consists of the upper part of the stem, therefore the lowest leaves are unknown.

Dicliptera floribunda, n. sp., perennis, erecte et diffuse ramosa, 12–15 dm. alta; ramis sexangulatis sparse pubescentibus, nodis remotis foliatis et floribundis supra axillas geniculatis; foliis integerrimis ovato-lanceolatis acuminatis 1 dm. longis, 5 cm. latis apice mucronatis, basi ad brevem petiolum decurrentibus, scabridule pubescentibus subter penninerviis et investis cum pilis brevibus furcatis; junioribus partibus albo-tomentosis; capitulis glomeratis, pedunculis brevibus vel abeuntibus; bracteis involucri 2, obovatis basi cuneatis chartaceis apice foliaceis saepe purpureo-tinctoreis scabridulis; umbellis inclusis 3-floris; bracteolis lineari-acuminatis calycem superantibus costatis et carinatis apice aristatis basi connatis: calycis segmentis trinerviis chartaceis attenuatis obscure glandulifero-pilosis 6 cm. longis; corolla verisimiliter flammea (coccinea fide Palmeri) leviter investa cum pilis furcatis 3 cm. longa, tubo gradatim ampliato, faucibus 5 mm. diametro, labiis paulo divergentibus, postice integris, antice 3-crenulatis; filamentis paulo pilosis; antheris exsertis, loculis discretis, superiore loculo

erecto, inferiore declinato; stylo glabro latitudine filamenta aequanti; stigmatibus obscure bidentato; ovario ovato-acuminato, inserto in receptaculo cupulato; capsula elliptica basi ad stipam latam contracta, apice minute glandulifera; seminibus suborbiculatis minutissime muriculatis et palmate nervatis. — DURANGO: San Ramon, April–May, 1906, *Dr. Edward Palmer*, no. 73 (type, in hb. Gray). Dr. Palmer notes that this is a loosely branching plant 12–15 dm. high, with many scarlet flowers, growing at the edge of shady woods. It belongs to Sect. *Sphenostegia* Nees in DC. Prodr. xi. 479, and is near *D. sexangularis* Juss. and *D. brachiata* Spreng. The corolla in this is larger, with the lips less spreading.

- 7 **Tetramerium flavum**, n.sp., caule erecto divaricate ramoso 6–12 dm. alto quadrangulato, inter angulos striato, scabridulo investo pilis tenuibus adpressis et pilis articulatis longioribus; ramis oppositis, junioribus glandulosis et dense albo-pubescentibus; foliis penninervatis ovato-acuminatis basi ad petiolum brevem inaequaliter attenuatis longissimis, in specimine viso 12 cm. longis, 5 cm. latis; petiolis 2 cm. longis; spicis axillaribus et terminalibus simplicibus vel compositis (ultima spica longissima); floribus imbricatis, bracteis distichis oblanceolatis aristatis trinerviis 5 mm. longis 1.5 mm. latis, apice recurvatis; involucri bracteolis connatis carinatis obovatis apice aristatis quinquenerviis 12 mm. longis, floram solitariam includentibus; calycis laciniis lineari-setaceis glandulifero-pilosis membranaceis 3 mm. longis; corollae flavae tubo anguste cylindrico 4 mm. longo, laciniis patenti-divaricatis 1 cm. longis, labio superiore erecto spatulato 1 cm. longo, inferiore ternato, segmentis patenti-divaricatis obovatis 1 cm. longis; filamentis faucibus insertis, glabris; antherarum loculis parallelis paulo inaequalibus muticis conjunctis; ovario crasso-stipitato apice hispidulo breve acuminato calycis laciniis superanti; receptaculo crasso clavato; stylo bifido antheras superanti. — DURANGO: San Ramon, April–May, 1906, *Dr. Edward Palmer*, no. 75 (type, in hb. Gray). This is most closely related to *T. aureum* Rose, which, however, has bracts and bracteoles obovate obtuse, leaves truncate or subcordate at base. From all other species it differs in having the cauline bracts narrower and much shorter than the involucre. It is a showy plant, rather woody, growing at base of mountains near the edge of woods. It is a free bloomer with “canary yellow flowers that close at night.”



Eastwood, Alice. 1909. "Some undescribed species of Mexican Phanerogams." *Contributions from the Gray Herbarium of Harvard University* (36), 603–608.
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