

NEW OR NOTEWORTHY PLANTS FROM TEMPERATE
SOUTH AMERICA

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Mirabilis campestris (Griseb.), comb. nov.

Oxybaphus campestris Grisebach, Abhandl. K. Ges. Wiss. Göttingen **19**: 87 (1874); Heimerl, Ann. Conserv. Jard. Bot. Genève **17**: 222 (1913).
Oxybaphus ovatus and *Mirabilis ovata* of authors.

This is the plant that has passed as *Calyxhymenia ovata* R. & P., Fl. Peru. **1**: 45, *t.* 75 (1798). This latter is based upon material from west-central Peru and hence from far to the north of the area in northern Chile and western and northwestern Argentina in which *M. campestris* has been collected. The Peruvian plant does not have the leaves strongly reduced up the stem and does not have the dichotomously branched inflorescence with elongate internodes and much reduced bracts which characterize the plant of Chile and Argentina. It most suggests some of the hairy forms of *M. expansa* (R. & P.) Standley.

Anemone cicutifolia, sp. nov.

Herba e rhizomate tuberoso 2–5 cm. longo 3–9 mm. crasso oriens; foliis basalibus biternatis triangularibus; pinnulis secundariis profunde irregulariterque 2–3-lobatis, lobulis elongatis ascendentibus sparse ascendenterque lobulato-dentatis, supra sparse adpresse hispidulis, subtus pallidioribus secus nervos strigosis alibi saepe subglabris, margine minute ciliolatis; sinibus apertis cuneatis; petiolis foliorum inferiorum quam lamina saepe 2–3-plo longioribus; caulibus 1–2-floris 8–30 cm. longis quam foliis inferioribus saepe duplo longioribus; foliis involucri 3 pinnatifidis 2–4 cm. longis, lobis saepe 2-jugatis distantibus linearibus inferioribus non rariter lobulatis ceteris simplicibus; pedicellis 8–15 cm. longis; tepalis 9–15 mm. longis ca. 2 mm. latis oblongo-linearibus saepe 10 nervis longitudinalibus 3–5 notatis, apice rotundis, extus strigosis, intus glabris albis; staminibus 30–40; filamentis usque 3–4 mm. longis glabris; antheris oblongis ca. 0.8 mm. longis; achaeniis dense villosis valde compressis ca. 2 mm. longis et latis sessilibus; stylis obliquis ca. 0.4 mm. longis; receptaculo ca. 1 cm. longo.

ARGENTINA. Tucumán: Cerro del Campo, dept. Burroyaco, 2000 m., Dec. 15, 1928, *Venturi* 7716 (TYPE, Gray Herb.); Est. Las

Pavas, 2900–3000 m., *Venturi* 4586, 4629 (G); Tafi del Valle, 2500 m., *Venturi* 2933, 2933½ (G); Cumbre del Siambon, 1700 m., *Venturi* 2817 (G). *S a l t a* : Alemania, 1300 m., *Venturi* 9846 (G).

BOLIVIA. near Sorata, 2600–2800 m., *Mandon* 868 (G); Bolivian Plateau, *Bang* 1041, 1923 (G).

A member of the collective species, *A. decapetala* Ard. (cf. Ulbrich, Bot. Jahrb. **37**: 259. 1906), the representative of this group in the mountains of northwestern Argentina and on the Bolivian Plateau. The species has a range detached from the other members of the group and has a characteristic aspect permitting its ready recognition. Its closest relative is probably *A. triternata* Vahl, a vernal species of low altitudes in Uruguay and eastern Argentina. From this eastern plant *A. cicutifolia* may be distinguished by its elongate stems, biternate rather than triternate basal leaves with elongate narrowly oblong rather than ovate ultimate leaf-segments, its essentially pinnate rather than digitately dissected involucre leaves, and its oblong-linear rather than lance-oblong tepals which are rounded rather than acutish at the apex.

***Margyricarpus paucijugatus*, sp. nov.**

Frutex metralis debiliter armatus; ramis elongatis rectis juventate cortice pallido donatis; foliorum rhachibus in ramulorum majorum conspicuis persistentibus 0.5–1 vel rariter usque 2 cm. longis cuneatis vel subulatis, juventate apice 1–3-foliolatis margine villosis, maturitate denudatis compressis graciliter subulatis vel acutis haud vel debiliter spinescentibus fasciculos axillares foliorum saepe suffulcientibus; foliolis 1–3 glaberrimis costatis sed enervatis margine valde revolutis apice apiculatis basi obtusis vel rotundis, terminalibus 4–7 mm. longis 1–2 (–2.6) mm. latis, lateralibus paullo minoribus; sepalis 2.2 mm. longis 1 mm. latis acutis; fructibus 4–6 mm. longis axillaribus solitariis evidenter alatis haud baccatis, alis consimilibus saepe 3 crenatis usque lobulatis 1–1.5 mm. latis stramineis vel parce purpureo-tinctis, valliculis rugulosis vel inconspicue tuberculatis.

ARGENTINA. *T u c u m a n* : Est. Las Pavas, dept. Chicligasta, 3300 m., Dec. 7, 1923, *Venturi* 4664 (G). *C a t a m a r c a* : Cerro de Yutoyaco, dept. Andalgalá, 3500 m., Feb. 10, 1916, *Joergensen* 1143 (TYPE, Gray Herb.).

A bush with long erect branches, few leaflets, and weakly spinescent or innocuous leaf-rachises. These characters, and the lack of secondary wings between the primary ones of the fruit, distinguish *M. paucijugatus* from *M. costatus* Britton, a low shrubby plant which ranges from Catamarca and Tucuman northward to southern Peru.

Margyricarpus inermis, sp. nov.

Frutex prostratus vel caespitosus ramosissimus; ramulis numerosis 1–5 cm. longis glaberrimis 1–2 mm. crassis, internodiis 1–5 mm. longis; foliorum rhachibus ramulorum majorum 5–8 mm. longis infra medium late marginatis et laxe vaginatis, juventate margine villosis 3–5-foliatis, maturitate cuneatis deciduis haud spinescentibus vix conspicuis; foliolis saepe 3 terminalibus rariter imparipinnatis et bijugatis, subtus sparse villosis, margine valde revolutis, apice apiculatis basi obtusis vel cordulatis, terminalibus 3–4 mm. longis, lateralibus minoribus; sepalis 4 ovato-oblongis ca. 1.8 mm. longis et 1 mm. latis; fructibus 4–5 mm. longis axillaribus solitariis alatis haud baccatis, alis 4 integerrimis vel crenatodentatis ca. 1 mm. latis; valliculis laevis vel non rariter alas secundarias parvas gerentibus.

ARGENTINA. *C a t a m a r c a*: Sierra Anconquija, 4600 m., Feb. 24, 1925, *Venturi 6633* (TYPE, U. S. Nat. Herb.); Sierra Anconquija, 4400 m., *Venturi 6360* (US). *S a l t a*: Nevado del Castillo, 4500 m., Jan. 1929, *Venturi 8540* (US).

A well marked species because of its caespitose habit, paucifoliolate leaves, non-spinescent leaf-rachises and its 4–5-winged fruit. It is probably related to *M. paucijugatus* from which it is readily separated by habit or growth, 4-winged fruit and its inconspicuous leaf-rachises.

Margyricarpus alatus Gillies ex Hook. & Arnott, Bot. Miscel. **3**: 305 (March 1833).

Tetraglochin strictum Poeppig, Frag. Syn. Pl. Chile 26 (Oct. 1833).

Tetraglochin alatum (Gillies) Kuntze, Rev. Gen. **3**²: 81 (1898).

It has been the common practice to use Poeppig's specific name for this, the most common member of its genus in central Chile and west-central Argentina. It should be noted, however, that the name published by Hooker & Arnott has at least six months priority.

Margyricarpus caespitosus (Phil.), comb. nov.

Tetraglochin caespitosum Philippi, Anal. Univ. Chile **23**: 452, 463 (1863); Linnaea **33**: 63 (1864).

Margyricarpus microphyllus sensu Niederlein in Lorentz & Niederlein, Bot. Exped. Rio Negro 215, t. 6 (1881); not *T. microphyllus* Phil.!

M. Niederleinii Spegazzini, Rev. Agron. La Plata **3**: 513 (1897).

M. Clarazii Ball, Jour. Linn. Soc. Bot. **21**: 217 (1884).

The name given by Philippi to this very well marked species of Patagonia is the oldest and should be accepted.

Lathyrus lomanus, sp. nov.

Herba laxa e radice perenni gracili 3–5 mm. crassa profunda oriens

juventate sparse pilosa mox glabrescens; caulibus 1–2 m. longis 4-costatis usque 3–4 mm. crassis, internodiis 2–7 cm. longis; foliis unijugatis; stipulis conspicuis 1–4 cm. longis 8–24 mm. latis ovato-sagittatis asymmetricis margine paucidentatis apice acutis apiculatis sinibus clausis; petiolo 8–30 mm. longo stipulis subaequilongis vel brevioribus costato; cirrho quam petiolo 2–3-plo longiore saepe trifido rariter simplicibus; foliolis lanceolatis vel ellipticis stipulis latioribus 4–6 cm. longis 12–30 mm. latis utrinque acutis vel obtusis sub lente minute inconspicueque albo-punctulatis apice apiculatis, basi 1 mm. longe petiolulatis, subtus (in sicco) plus minusve purpurescentibus saepe villulosis, supra viridioribus saepe glabrescentibus; racemis 3–10-floris 1–2 dm. longis; pedicello florifero 2–5 cm. longo, fructifero 5–8 mm. longo; floribus 2 cm. longis; calyce 1 cm. longo sparse piloso, tubo cupulato 4 mm. profundo, lobo infero ca. 6 mm. longo subulato, lobis superioribus ca. 4 mm. longis cuneatis; corolla purpurea, vexillo glaberrimo 18–20 mm. longo apice rotundo, lamina alarum 12 mm. longa 5–6 mm. lata ca. 5 mm. longe unguiculata, carina alis conspicue brevioribus; ovario dense adpresseque villosulo apicem versus glabro, stylo persistente 5 mm. longo supra medium compresso-clavato stigmatibus 2 distinctis notato; legumine villosulo 5 cm. longo 5–6.5 mm. lato intus nitido et semina versus saepe dense villosulo alibi glabro; seminibus nigris 3 mm. longis 2 mm. latis 1–1.5 mm. crassis.

CHILE: Aguada del Panul, dept. Taltal, trailing over rocks in the small steep quebrada above the water-hole, fl. purple, Dec. 4, 1925, *Johnston 5430* (TYPE, Gray Herb.).

Probably most closely related to *L. dumetorum* Phil., but very different in its purple flowers, very sparse, pale rather than fulvous indument, more deeply lobed calyx, broader thinner purplish-stained leaflets, etc.

Adesmia Pirionii, sp. nov.

Frutex inermis ramosissimus glanduliferus sordide villulosus; ramulis gracilibus elongatis usque 2.5 mm. crassis, juventate pilis erectis 0.6–1 mm. longis gracilibus saepe abundantibus plus minusve velutinis, cortice glandulis sessilibus minutis donato; foliis villosis et glanduliferis numerosis alternis 3–10 mm. distantibus imparipinnatis; stipulis lanceolatis 1.5–4 mm. longis 0.6–1.4 mm. latis acutis deciduis; rhachi folii 3–8 mm. longa ca. 0.3 mm. crassa supra sulcata; foliolis 3–5-jugatis rhachi longioribus oblanceolatis 8–19 mm. longis 2–4 mm. latis 1–2.5 mm. distantibus supra medium latioribus deinde basim versus gradatim attenuatis crassiusculis in sicco rugulosis perinconspicue costatis vix nervatis utrinque consimilibus glanduliferis et pilosis, basi cuneatis sessilibus, apice acutis vel abrupte breviterque acuminatis, margine revolutis; floribus secus ramulos

e axilla folii normalis orientibus solitariis 1–2 mm. longe pedicellatis; calyce 8–10 mm. longo villosa glandulifero, lobis subulatis quam tubo cupulato 2–2.5 mm. longo et crasso ca. 3-plo longioribus; vexillo corollae 10–12 mm. longo, lamina obovata 7–8 mm. lata extus glandulifera sparse pilosa 1–2 mm. longe unguiculata; carina ca. 10 mm. longa 3–3.5 mm. alta; alis carinae subaequilongis vel (0–1 mm. longe) brevioribus; ovario velutino; stylo breviter villosa; legumine biarticulato in calyce incluso; segmentis leguminis ca. 2 mm. longis 2.5 mm. latis et ca. 1 mm. crassis, latere convexis rugulosis et papillatis minute inconspicueque pubescentibus vix vel haud glanduliferis.

CHILE. Cerro de Lliu-Lliu, 800 m., a dominant shrub on one of the hills, Nov. 1929, *Father Felix Jaffuel* 228 (TYPE, Gray Herb.); Lliu-Lliu, Jan. 1920, *Father Felix Jaffuel & Father Anastasio Pirion* (G); Cerro Tres Puntas near Limache, Oct. 26, 1930, *A. Garaventa* 1654 (G).

This shrub appears to be an endemic in the coastal mountains, prov. Aconcagua, south of the city of Limache. It is a relative of *A. Loudonia* H. & A. differing from that species in having an indument of spreading sordid hairs, rather than being silky strigose, and in having numerous glands borne on the stems, leaves, calyx and vexillum. Its fruit is smaller than in *A. Loudonia* and, rather than surpassing the calyx-lobes, reaches barely up to their middle.

The species is named in honor of my esteemed friend, Father Anastasio Pirion, to whom I am indebted for very many specimens from various parts of Chile and particularly from the Valle de Marga Marga. This *Adesmia* comes from the slopes at the head of the valley of Marga Marga and it is eminently fitting that it should commemorate the name of Father Pirion and associate it more firmly with the region which he has made so well known to naturalists through his studies and collecting.

***Erodium chilense*, sp. nov.**

Herba annua vel biennis; radice verticali subulata radículas tenues laterales paucas gerente; caulibus pluribus laxa decumbentibus 5–15 cm. longis pauciramosis foliosis plus minusve stipitato-glandulosis cum pilis albis patentibus mollibus evidenter villosis; laminis foliorum imam ad basim palmate 5-nervatis (nervis pinnate ramosis) sparse stipitato-glandulosis adpresse villosis; petiolis conspicue patenter villosis inconspicue glanduliferis; stipulis membranaceis acutis conspicuis pallidis 5–8 mm. longis 2–3 mm. latis; foliis basalibus mox deciduis quam caulinis minoribus et minus angulatis elongatisve cordato-ovatis plus minusve trilobatis 1.7–2.3 cm. longis 1.5–1.8 cm. latis, apice rotundis, basi cordatis, margine crenato-dentatis; petiolis laminis 1.5–2-plo longiori-

bus; foliis caulinis plus minusve 5-lobatis, basi subcordatis, margine irregulariter inciso-dentatis, supremis sessilibus basi subtruncatis; margine irregulariter inciso-dentatis, supremis sessilibus basi subtruncatis; pedunculo 1–3.5 cm. longo villosus inconspicue stipitato-glandulifero petiolis conspicue longiore 3–5-floro; bracteis involucri ca. 4 late ovatis ca. 1 mm. longis obtusiusculis membranaceis villosis; pedicellis ad anthesin 5–8 mm. longis stipitato-glandulosis villosis, fructiferis paullo longioribus et saepe recurvatis; sepalis oblongis vel lanceolato-oblongis ca. 5 mm. longis 1.5 mm. latis 5-nervatis apice mucronatis extus villosis intus glabris; petalis aequalibus lilaceis sepalos vix superantibus, lamina oblongo-ovata 3 mm. longa 2 mm. lata apice rotunda basi triangulari in unguem 1 mm. longum producta; ovario strigoso; fructu 3–4 cm. longo; rostro achaenii 2.4–3.4 cm. longo villosus.

CHILE: Tocopilla, 1930–32, *Jaffuel* 1056, 2540 (G); Valle de Marga Marga, 1916–1930, *Jaffuel* 916, *Pirion & Jaffuel* 3115, 3156 (G); Valparaíso, 1895, *Buchtien* (G, mixed with *E. Botrys*); Tiltill, 1928, *Looser* 739 (TYPE, Gray Herb.); Cerro de La Leona, Rancagua, 1828, *Bertero* 251 (G).

This is an endemic Chilean species resembling *E. malacoides* (L.) Willd. From that European species it is distinguished by having the apical prolongation of the carpels strigose rather than glabrous, the pedicels and sepals distinctly villous rather than glandular, the leaves lacking resinous granules, and the stems less elongate. In texture, shape and size of leaves, and in the size and shape of floral parts the two species are very similar. The difference in habit of growth and in the indument is clear and well marked. The native Chilean plant can be readily separated from material of *E. malacoides* not only from the Mediterranean but also from Peru, Argentina, Uruguay and Brazil where it has been introduced. From *E. geoides* St. Hil. of Argentina, the other native *Erodium* of South America, the Chilean species can be quickly distinguished by its much smaller flowers and fruit.

***Porlieria chilensis*, sp. nov.**

Frutex 1–3 m. altus; ramulis numerosis rigidis validis divaricatis haud gracilibus; foliis oppositis imparipinnatis 1.2–2 cm. longis; foliolis crassiusculis 5–7 (saepe 6)-jugatis 1–2 mm. distantibus oblongis vel elliptico-oblongis, apice obtusis vel rotundis basi oblique rotundis, subtus villosulis mox subglabrescentibus, supra subglabris, utrinque cum nervis 1–2 longitudinalibus plus minusve ramosis prominulis rugulosis; rhachibus 4–10 mm. longis villosulis mox glabrescentibus; stipulis 1.5–3 mm. longis ascendentibus subulatis fragilibus inconspicuis; floribus axillaribus

solitariis in alabastro distincte tomentulosus; pedicello 4–8 mm. longo; sepalis orbiculatis 3–5 mm. latis extus villosulis; petalis 4.5 mm. longis 4 mm. latis 5 apice truncatis vel late obtusis sub apicem latioribus deinde basim versus valde angustatis et subunguiculatis; staminibus 10 glaberrimis; filamentis 5–5.5 mm. longis medium versus appendiculas oblongas obovatas gerentibus; appendiculis 1–1.5 mm. longis ca. 0.8 mm. latis inciso-lobatis, lobis linearibus ca. 0.3–0.5 mm. longis; antheris oblongis; ovario evidenter sed sparse villoso ca. 0.9 mm. longe stipitato ca. 2.5 mm. longe et lato apice stylo ca. 1 mm. longe donato; fructibus marginem versus inconspicue strigoso-villosis vel subglabris 5-lobatis brunneis; lobis 5–8 mm. longis et latis; seminibus lateraliter compressis ca. 8 mm. longis 5 mm. latis et 2.5 mm. crassis.

CHILE: Frai Jorge, prov. Coquimbo, 1925, *Werdermann 919* (TYPE Gray Herb.); Renca near Santiago, 1922, *G. Montero 64* (G); central Chile, *Cuming 274* (G); Chile, *Gay* (G).

This is the plant of central Chile, known as "Guayacan," which has passed as *P. hygrometra* R. & P. Synop. Veg. Fl. Peru. 94 (1798). When Ruiz & Pavon described *P. hygrometra* they mentioned plants from Huanuco, Peru and from Coquimbo, Chile. It is obvious from their discussion, however, that they had a greater familiarity with the Peruvian plants. Furthermore it is the northern one which they illustrated in their plate, no. 343, which was destined for the fourth and unpublished volume of their great flora. The Peruvian plant, accordingly, has properly been accepted as the typical form of *P. hygrometra*. This plant differs from *P. chilensis* in having more elongate, more numerous leaflets that are thinner and smoother and are glabrous except for a ciliolate margin. It has distinctly more slender branches, a completely glabrous ovary, and much less tomentulose buds. I can not distinguish the typical plant of central Peru from the forms of *Porlieria* found in Bolivia and northwestern Argentina and now current under the names, *P. Lorentzii* Engler and *P. arida* Rusby. These latter names I believe are synonyms of *P. hygrometra* R. & P.

***Schinus polygamus* (Cav.), comb. nov.**

Amyris polygama Cav. Icon. 3: 20, t. 239 (1795).

Schinus dependens Ortega, Decas 8: 102 (1798).

Since the species described and illustrated by Cavanilles is older than *S. dependens* Ortega and clear in its application there is no good reason why it should not be taken up for the common Chilean shrub of this genus. Otto Kuntze, Rev. Gen. 3²: 45 (1898), has taken up *Schinus Huigan* Molina, Saggio 169 (1783), as a still older name for this common Chilean plant but such a procedure seems contrary to good botanical

practice. While Molina appears to have had *Schinus polygamus* in mind when he proposed the name *Schinus Huigan*, his knowledge of its characters were so very indefinite and his account of it so thoroughly confused and contradictory that the name had best be discarded. If the name is not discarded there are better reasons taxonomically for placing it in the synonymy of the Peruvian, *Schinus Molle* L., than there is for applying it to the present Chilean shrub.

The Latin diagnosis given by Molina, p. 169 and 355, is as follows, — “*Schinus Huigan* fol. pinnatis: foliolis serratis petiolatis, impari brevissimo.” This certainly does not describe the Chilean *S. polygamus* which has simple oblanceolate, usually entire leaves, but does describe the Peruvian, *S. Molle*. In his discussion of the species, p. 169, Molina states that there are two sorts of “Molle” in Chile, the common *Schinus Molle* from the coastal region, and *Schinus Huigan*, the “Huigan” with “foglioline picciuolate” which grows generally in all parts of Chile. He adds that both species provide berries from which a beverage is made. I have quoted, in the original Italian, the only morphological terms used by Molina in his discussion of the species. These have commonly been translated, “folium parvum petiolatum,” but they are also capable of translation as “foliolum petiolulatum” which is probably correct, since they would then agree with the Latin diagnosis which reads, “fol. pinnatis, foliolis serratis petiolatis.”

In the much revised second edition of the Saggio, p. 154–5 (1810), Molina repeats the original Latin diagnosis of his *Schinus Huigan*. His discussion is completely new. He gives a copy from the description of *Amyris polygama* Cav. which he calls “Huigual,” and then adds that this plant should not be confused with the “Huigan” (*Schinus Huigan*), another Chilean tree which is the same species as *Schinus Molle* or only a variety of it, and which also supplies berries used in making a beverage. He concludes with the remark that these two Chilean trees have nearly the same appearance and can be readily confused.

In his commentary on the species of Molina, Philippi, Anal. Univ. Chile 22: 717 (1863), has suggested that Molina was attempting to distinguish the widely distributed *S. polygamus* from the plant of the coast ranges, *S. latifolius* (Gillies) Engler. This is probably correct. Molina’s knowledge of the plants was obviously very vague and probably second-hand. The common name, “Molle,” which is applied to all species of *Schinus*, confused him greatly. In the first edition he considered the coastal plant “*Schinus Molle*.” In the second edition he considered his *Schinus Huigan* as the same or perhaps only a variety of that Peruvian species. In both editions Molina gave a Latin diagnosis of

S. Huigan which can apply only to the Peruvian, *Schinus Molle*. Molina was not a naturalist but a scholastic who obviously had only a casual acquaintance with plants and was inclined toward searching for information about them in books rather than by a study of them in the fields, hills and mountains. His account of *Schinus Huigan* is evidently a conglomeration of some vague personal acquaintance with *S. polygamus*, mixed with some hearsay and some misunderstood information derived from literary sources. The "Molle" of Peru, *Schinus Molle* L., had been described by many travelers and I believe that Molina, confusing the "Molle" of Chile with the plant of Peru (in his time cultivated rarely if at all in Chile), derived his description of *S. Huigan* from some illustration or account of the Peruvian plant. If the name *S. Huigan* is not to be rejected as hopelessly confused, it must be treated, taxonomically, as a synonym of *Schinus Molle* L.

***Schinus velutinus* (Turcz.), comb. nov.**

Duvaua velutina Turcz. Bull. Soc. Nat. Moscou 31¹: 467 (1858).

Litrea Molle Gay, Fl. Chile 2: 45 (1846). Not *S. Molle* L.

Schinus chilensis Marchand, R  v. Anacard. 164 (1869).

Duvaua molle Bertero ex Marchand, l. c., in synonymy.

Schinus latifolius var. *tomentosus* Fenzl ex Engler in Martius, Fl. Brasil. 12²: 389 (1876).

This is the shrub of central Chile having conspicuously hairy, usually velvety, leaves and stems. It is very different in appearance from the glabrous, and even glaucescent, *S. latifolius* (Gillies) Engler of the same region and certainly worthy of specific separation.

***Schinus piliferus*, sp. nov.**

Frutex vel arbor 3–8 m. altus; ramulis inermibus vel non rariter spinescentibus subvelutinis pilis abundantibus gracilibus 0.5–1 mm. longis erectis vestitis; foliis 3–5.5 cm. longis 5–14 mm. latis saepe oblanceolatis supra medium latioribus rariter oblongo-obovatis vel oblongo-ellipticis et medium versus latioribus, margine integerrimis vel rariter supra medium sparse irregulariterque crenatis vel lobulato-dentatis, subtus pallidioribus cum nervis 5–10-jugatis saepe inconspicuis et costa infra medium pilifera (facie folii alibi glabra) rugosis, supra saepe enervatis costa infra medium non rariter pilifera notatis, apice obtusis vel rotundis rariter subacutis, basi saepe acutis, petiolo 1–2 rariter 3 mm. longo; inflorescentia 1–4 cm. longa foliis subaequilongis vel duplo brevioribus saepe evidenter pilulosa; pedicellis gracilibus 2–4 mm. longis alabastro globoso saepe duplo vel triplo longioribus; lobis calycis 4–5 ca. 0.5 mm. longis ovatis minute inconspicueque ciliolatis; petalis ellipticis 1.5–2 mm. longis; fructu ignoto.

ARGENTINA. T u c u m a n : Chañar Pozo, 300 m., *Venturi* 485 (G); Siambon, 1500 m., *Venturi* 10261 (G); Rio Lules, 400 m., *Venturi* 2291 (G). S a l t a : Alemania, dept. Guachipas, slopes, 1300 m., tree 4 m. tall, Nov. 27, 1929, *Venturi* 9830 (TYPE, Gray Herb.); Campo Duran, *Parodi* 9171 (G); Sierra de la Candelaria, 800 m., *Venturi* 9573 (G). Santiago del Estero: El Charco, 300 m., *Venturi* 10113 (G). J u j u y : Rio San Francisco, 600 m., *Venturi* 9735 (G).

This is the Argentine plant most closely related to *S. polygamus* of Chile. It differs from that plant in its paler, pubescent, evidently veined leaves and in its larger hairy inflorescences. In *S. piliferus* the midrib of the leaves are commonly pilose, especially on the under surface above the base. This character and its elongate usually distinctly short-hairy inflorescences distinguish the plant from all other species of the genus. The plant suggests *S. longifolius* (Lindl.) Speg. of eastern Argentina, but that is a glabrous shrub and has glomerate glabrous flowers. Among the species of western Argentina it may be readily distinguished from ***Schinus fasciculatus*** (Griseb.), comb. nov. (*Duvaua fasciculata* Griseb.) That is a distinctly much more spinescent shrub with short congested inflorescences and smaller leaves which are copiously hirtellous on both faces.

***Schinus gracilipes*, sp. nov.**

Arbor 2–10 m. altus; ramulis gracilibus inermibus glabris vel inconspicue puberulentis; foliis ellipticis vel ovatis vel ovato-oblongis infra medium vel basim versus latioribus 3–10 cm. longis 1.5–4 cm. latis, basi obtusis vel non rariter late acutis vel subrotundis, apice obtusis, margine supra basim sinuatis, subtus pallidis glaberrimis vel perinconspicue puberulentis, nervis evidentibus saepe ca. 9–10-jugatis angulo 80°–90° a primario abeuntibus rugosis, supra viridibus saepe praesertim in costa puberulentis; petiolis gracilibus conspicuis 5–12 mm. longis supra canaliculatis; inflorescentia dimidium folium vix aequante puberulenta, bracteis ovatis ciliolatis vix 1 mm. longis, pedicellis tenuibus 3–5 mm. longis quam alabastro globoso 3–4-plo longioribus; lobis calycis 4 ovatis obtusis ciliolatis receptaculo duplo longioribus; petalis 4 ovatis virescentibus 1.5 mm. longis quam lobis calycis duplo longioribus; drupis globosis 6 mm. diametro, exocarpio lilacino nitido, meriocarpio valde resinoso.

ARGENTINA. T u c u m a n : El Cadillal, 600 m., *Venturi* 5386 (G); Tapia, 750 m., Aug. 29, 1925, *Venturi* 3887 (TYPE, Gray Herb.); Cerro de Taficillo, 1600 m., *Venturi* 9996 (G); Tafi del Valle, 2500 m., *Venturi* 2944 (G). C a t a m a r c a : El Sancho, 2500 m., Sept. 11,

1915, *Joergensen* 991 (G). S a l t a : Sierra de la Candelaria, 1700 m., *Venturi* 9571 (G).

This is the Argentine tree treated by Grisebach, Engler and others as *S. latifolius* (Gillies) Engler. That Chilean plant, however, is more glabrescent and has toothed leaves and very conspicuously shorter pedicels and much larger flowers. The Chilean and Argentine species are clearly distinct.

***Schinus bumelioides*, sp. nov.**

Frutex vel arbor 1–10 m. altus; ramulis rigidis divaricatis spinescentibus cortice pallido glabro donatis; foliis glabris ellipticis vel oblongis 2–4 cm. longis 9–18 mm. latis medium versus vel paullo infra medium latioribus, apice obtusis vel rotundis, basi saepe rotundis vel obtusis sed rariter plus minusve acutis, margine integerrimis, subtus pallidis, nervis 6–8-jugatis inconspicue notatis, supra viridibus; petiolis 5–8 mm. longis rigidis gracilibus; inflorescentia glomerata petiolum paullo superante subglabra, bracteis ca. 0.5 mm. longis; pedicellis 2–3 mm. longis quam alabastro globoso 1–2-plo longioribus; lobis calycis 5 ovatis ca. 0.5 mm. longis inconspicue ciliolatis; petalis 5 obovatis ca. 2 mm. longis; fructu ignoto.

ARGENTINA. T u c u m a n : Tapia, 700 m., Aug. 18, 1929, *Venturi* 9422 (TYPE, Gray Herb.); Rio Sali, 450 m., *Venturi* 882 (G); Barranca Colorada 500–550 m., *Venturi* 3530, 3800 and 5281 (G). C a t a m a r c a : Andalgala, Sept. 9, 1915, *Joergensen* 990 in pt. (G); dept. El Alto, 1250 m., *Venturi* 7063 (G). S a l t a : Agua Caliente, 1000 m., *Venturi* 5494 (G); Los Baños, 900 m., *Venturi* 9330 (G). J u j u y : Sierra de Calilegua, dept. Ledesma, 700 m., *Venturi* 5311 (G).

This is a relative of *S. sinuatus* (Griseb.) Engler, *S. spinosus* Engler, and *S. ferox* Hassler. Its entire-margined, elliptic or oblong leaves, slender petioles, and glabrous surfaces distinguish it from these relatives. *Schinus praecox* (Griseb.) Speg. is a very different plant with small spatulate leaves, 1–2 cm. long and 3–6 mm. broad.

***Schinus microphyllus*, sp. nov.**

Frutex ca. 2 m. altus; ramulis divaricatis rigidis spinescentibus pilis minutis erectis abundantibus vestitis; foliis ellipticis vel obovatis 8–18 mm. longis 6–10 mm. latis, medium versus vel paullo supra medium latioribus puberulentis, margine integris vel sparse sinuato-dentatis, apice obtusis, basi obtusis vel acutis, subtus pallidioribus, nervis utrinque 1–3 prominulis; petiolis 1–3 mm. longis puberulentis supra canaliculatis; inflorescentia folio saepe aequilonga vel duplo longiore, rhachi 1–2 cm. longa pilis minutis erectis abundantibus vestita; pedicellis ca. 5 mm.

longis gracilibus alabastro globoso 3–4-plo longioribus; petalis 5 sub-orbicularibus virescentibus 2 mm. longis quam lobis calycis ovatis rotundis 3–4-plo longioribus; staminibus ca. 1 mm. longis; fructu ignoto.

PERU: above Argama, on trail to Andahuaylas, dept. Apurimac, roadsides and gulches, shrub 2 m. tall, fl. greenish, 3800 m., Nov. 5, 1935, *West 3747* (TYPE, Gray Herb.); Dept. Apurimac, 2500–2600 m., *Weberbauer 5839* (G).

A spinescent shrub most closely related to *S. andinus* of the Bolivian Plateau. It differs from that more southern species in its decidedly pungent branchlets, its distinctly pubescent (almost velvety) stems, its dull puberulent rather than lustrous upper leaf-surfaces, and its much more slender, longer, hairy inflorescences.

Schinus andinus (Engler), comb. nov.

Schinus dependens var. *andinus* Engler, in DC. Monog. Phanerog. 4: 341 (1883).

BOLIVIA: Calderillo, 3300 m., *Fiebrig 2477* (G); Songo, *Bang 895* (G); near La Paz, 3000 m., *Bang 160* (G); near Sorata, 2650–2800 m., *Mandon 768* (G).

PERU: Tambo, dept. Ayacucho, 3100–3200 m., *Weberbauer 5552* (G).

This plant of the plateau is related to *S. microphylla* Johnston and to *S. longifolia* (Lindl.) Speg. From the latter, which ranges at low altitudes from eastern Bolivia to eastern Argentina and southern Brazil, it differs conspicuously in the smaller, proportionately much broader, leaves that have a sinuate margin and much fewer (1–3) pairs of obscure veins.

Cristaria adenophora, sp. nov.

Herba annua e radice crassa lignosa tortuosa oriens pallide viridis; caulibus pluribus ascendentibus usque 2 dm. vel ultra longioribus 2.5–5 mm. crassis laxè ramosis pilis simplicibus glanduliferis vestitis, internodiis paucis 2–5 cm. longis; foliis paucis; petiolo gracili laminae foliorum superiorum subaequilongo, inferiorum quam lamina subduplolongiori subtereti striato pilis simplicibus glanduliferis conspicue vestito; lamina ambitu ovatis vel late ovatis foliorum supra medium caulis gestorum maxima 2–3 cm. longa latitudine (1.8–3 cm. lata) longitudinem subaequante vel ea paullo breviori pilis stellatis (supra abundantibus velutinis; subtus sparsioribus) vestita et pilis simplicibus glanduliferis (præsertim supra) sparsis inconspicuis instructa breviter lateque (utrinque 5 mm. profunde) trilobata vel irregulariter 1–3 mm. profundeque lobulato-dentata, lobulis et lobis utrinque 1–5 integris apice saepe rotundis

vel obtusis; cymulis axillaribus subsessilibus vel usque 5 mm. longe pedunculatis; pedicellis floriferis 5–10 mm. longis gracilibus pilis glanduliferis simplicibus flavescentibus obtectis; calyce pilis stellatis longe graciliterque ramosis abundantibus villosa haud vel sparsissime glandulifero 5 mm. longo, lobis lanceolatis acutis 4 mm. longis basi imo usque 2 mm. latis; petalis purpureo-rubris ca. 9 mm. longis quam calycis lobis duplo longioribus; ovario glabro fructu 6 mm. diametro glaberrimo depresso alis exclusis 2 mm. alto alis lanceo-ovatis 2 mm. altis 1 mm. latis.

CHILE: Potrerillos, prov. Atacama, 2900 m., on golf-course, fl. magenta, March 25, 1933, *M. O'C. Greninger* 18 (TYPE, Gray Herb.; ISOTYPE, Stanford University).

Evidently related to *C. glomerulata* Johnston, which also came from the golf course at Potrerillos Mine. This new species, however, is a coarser plant with fewer flowers, larger petals, much more hairy larger calyces, and much more broadly and sparsely lobed velvety leaves which are practically devoid of glandular hairs. The lower leaves of *C. adenophora* have much smaller blades and a proportionately longer petiole than do the middle and upper ones. The lower leaves of *C. glomerulata* are the largest and the whole plant is sordid and dark with glands and glandular secretions. In the new species the stems, petioles and pedicels are brown or tawny because of the glands, but the calyx and leaf-blades are clean and lighter color because of the lack of them.

***Palaua mollendoensis* (Ulbr.), comb. nov.**

Malvastrum mollendoense Ulbrich, Bot. Jahrb. 42: 120 (1908).

This remarkable species has a habit more in agreement with *Palaua* than with *Malvastrum*. In its technical characters, the "carpels" being in two incomplete superimposed series, it clearly belongs to the former genus.

***Nototriche diminutiva* (Phil.), comb. nov.**

Malva diminutiva Phil. Cat. Pl. Itin. Tarapaca 8 (1891).

Malvastrum diminutivum (Phil.) Baker, Jour. Bot. 32: 36 (1894).

Nototriche nana Hill, Kew Bull. 1928: 19 (1928).

I have compared authentic material of *Malva diminutiva* with some of *Nototriche nana*. The species are unquestionably conspecific.

***Azara petiolaris* (Don), comb. nov.**

Quillaja petiolaris Don, Edinburgh New Philos. Jour. 12: 110 (Oct.-Dec. 1831).

Azara Gilliesii Hook. & Arnott, Bot. Miscel. 3: 144 (Aug. 1832).

The original description of Don's species is as follows, — "*Q. petiolaris*, foliis longe petiolatis ovalibus dentatis subserratis. *Hab.* In Chili.

D. Cuming (V. s. sp. in Herb. Lamb.). *Folia* ovalia, dentata, subserrata, glabra, nitida sesqui v. bipollicaria. *Petioles* fere unciales. *Stipulae* parvae, caducae. *Flores* nondum vidi. *Obs.* Maxime affinis *Q. saponariae*, sed abunde diversa petiolis 6-plo longioribus." The sterile specimens described represent the plant generally known as *Azara Gilliesii* H. & A., as was long ago indicated by the authors of that species, Bot. Miscel. 3: 305 (March 1833). Don's specific name, having priority, must become the accepted one for this well known tree of central Chile.

***Argylia checoensis* (Meyen), comb. nov.**

Oxalis checoensis Meyen, Reise 1: 406 (1834); Kunth in Engler, Pflanzenr. IV. 130[Heft 95]: 216, fig. 18a-e (1930).

Argylia geranioides DC. Prodr. 9: 235 (1845).

The type of *Oxalis checoensis* is labeled as collected near Copiapó at 3–4000 ft. The specific name, however, almost certainly refers to Mina de Checo, a mine in the hills southeast from Tierra Amarilla which was visited by Meyen. The plant represented is a form of *Argylia geranioides* DC. of the Bignoniaceae, and, indeed, is older than that species. In his recent monograph of *Oxalis*, Kunth, l. c., accepted Meyen's species as an *Oxalis* and erected a section for it.

***Psilocarphus Berteri*, nom. nov.**

Micropus globiferus DC. Prodr. 5: 460 (1840), not *P. globiferus* Nutt. (1840).

Psilocarphus globuliferus (DC.) Spegazzini, Anal. Soc. Cient. Argentina 48: 330 (1899).

Micropus globuliferus DC. ex Speg, l. c. lapsu calami; pro synon.

CHILE: near Coquimbo, 1856, *Harvey* (G); Coquimbo, 1931, *Jaffuel* 2682 (G); Coquimbo 1934, *Montero* 1884 (G); Tiltill, rather dry sandy places somewhat shaded by shrubs, 700 m., 1927, *Montero* 141 (G); Tiltill, 700 m., *Looser* 742 (G); Cerro Cruz, Limache, 1931, *Garaventa* (G); Valle de Marga Marga, 250 m., 1929–33, *Jaffuel & Pirion* 240, 2999 and 3091 (G); Rancagua, 1833, *Bertero* 433 (G, photo. of type).

The name proposed above is based entirely upon *Micropus globiferus* DC. and so upon the plant collected by Bertero, no. 433, near Rancagua, Chile. It thus applies to that one of the two Chilean species of the genus which is most closely related to *P. tenellus* Nutt. of California, and which is separated from *P. chilensis* (Remy) Meigen by having an arachnoid indument which is frequently deciduous on the old leaves, and by having smaller heads which are surrounded and usually hidden by numerous broadly oblong obtusish involucral leaves. There are indications that this plant frequents drier and better drained soils than its relative, *P. chilensis*. As now known it is a plant endemic to central Chile.

This species of Chile was the first of its genus to be described. It has remained, however, poorly understood and its name has been given a great variety of applications. Much of the confusion enveloping it began when Nuttall, Trans. Am. Philos. Soc. 7: 340 (1840), established the genus *Psilocarphus* and published the name, *Psilocarphus globiferus*. This latter has been variously interpreted, either as a new Californian species based upon material collected at Santa Barbara by Nuttall, or as a nomenclatorial transfer based upon *Micropus globiferus* DC. and hence upon the Chilean plant collected by Bertero. Though formerly thought to be conspecific, we now know that the plant collected by Nuttall and Bertero are distinct species. Only one of these two species can bear the name, *Psilocarphus globiferus*. Gray, Proc. Amer. Acad. 8: 652 (1873) and Synop. Fl. 1²: 228 (1878), first treated *P. globiferus* Nutt. as based upon *M. globiferus* DC. and hence as applicable to the Chilean plant. Later, however, Synop. Fl. 1²: suppl. 448 (1887), he applied Nuttall's binomial to the Californian endemic. This treatment has since generally prevailed. Recently, however, Cabrera, Revista Chilena Hist. Nat. 40: 230 (1936), has sponsored the name, "*Psilocarphus globiferus* (Bert.) Nutt." and has applied it to plants of California, Argentina and Chile. A consideration of the details attending the publication of Nuttall's binomial shows this to be incorrect.

When Nuttall published his binomial he preceded the trivial epithet by an asterisk, "*Psilocarphus *globiferus*," he gave a description of the Californian plant, and finally he cited the following reference, "*Micropus globiferus* ? Decand." A study of Nuttall's publication will show that he placed the asterisk before generic names or species names when these were newly proposed new genera or new species. He did not place an asterisk beside specific names that had been transferred from another genus. This well known practice of Nuttall, and the fact that he cited the name, *Micropus globiferus* DC., with a question mark, is clear indication that he was publishing an independent species and one not identified with DeCandolle's Chilean species nor taxonomically based upon it. The name *Psilocarphus globiferus* Nutt., accordingly, should be applied only to the plant of southern California which Nuttall collected near Santa Barbara. Since Nuttall's species bears a name preoccupying the epithet "*globiferus*," a new specific epithet under *Psilocarphus* is accordingly needed for the Chilean plant described as *Micropus globiferus* DC. The Chilean plant may be called, *Psilocarphus Berteri*.

Psilocarphus chilensis (Remy) Meigen, Bot. Jahrb. 17: 281 (1893);
Reiche, Anal. Univ. Chile 111: 186 (1902) and Fl. Chile 4: 36
(1905).

Bezanilla chilensis Remy in Gay, Fl. Chile 4: 110, t. 46 (1849).

CHILE: between Frai Jorge and Ovalle, 300 m., 1925, *Werdermann* 927 (G); Batuco, 500 m., 1936, *Looser* 3637, 3648 (G); Batuco, 1932, *Jaffuel* 1781 (G).

ARGENTINA: ?? Tehuelchel, 300 m., 1929, *Donat* 118 (G).

This plant is much coarser than *P. Berteri* and is enveloped in a very loose woolly tomentum and has very elongate involucre leaves which do not obscure the head. It is very much more closely related to the true *P. globiferus* Nutt. of California than to *P. Berteri* of Chile. The material from Patagonia which I have cited seems to be conspecific with that from Chile. In any case it is closely related to *P. chilensis* and can not be referred to *P. Berteri*. Cabrera, Revista Chilena Hist. Nat. 40: 231 (1936), cited four other collections from Patagonia as conspecific with two Chilean collections of *P. chilensis* (from Batuco) and a Californian collection of true *P. globiferus* (from La Verne). He appears to have had no collections of *P. Berteri*.

When Remy proposed *Bezanilla chilensis*, he cited *Micropus globiferus* DC. as a synonym. His plate, however, seems to be a representation of the present species and his description applies best to it also. I believe that his species can be used in the sense I have here adopted.

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