

STUDIES ON SOUTH AMERICAN LABIATAE. III¹

SYNOPSIS OF THE GENUS SATUREIA

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SATUREIA (Tourn.) L.

Gardoquia Ruiz et Pavon, Prodr. 86, pl. 17. 1794.

Rizoa Cav. in Anal. Cienc. Nat. 3: 133. 1801.

Xenopoma Willd. in Ges. Naturforsch. Fr. Berlin, Mag. 5: 399. 1811.

Thymus Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 315. 1817 (non L.); Swartz, Prodr. Veg. Ind. Occ. 89. 1788.

Micromeria Benth. in Bot. Reg. 15: sub pl. 1282. 1829.

Herbae perennes vel suffrutices in regione nostra, habitu diverso internodiis saepius foliis aequilongis vel brevioribus; foliis maximam partem parvis, non rugosis, venis saepe prominulis, margine integra vel sub serrata; floribus in cymulis nunc patentibus nunc densis in foliorum superiorum axillis, rarius solitariis; calyceibus tubulosis, fere cylindratis maturis non auctis, saepius 13-venis, venis prominulis, dentibus aequalibus vel patenter bilabiatis, erectis, intus saepius hirsutis; corollae tubo saepius exserto, frequenter subincluso, superne gradatim ampliato, intus frequenter villosa; labro erecto, subintegro vel bifido, brevior, labiolo quam labro paulo longiore, trifido, lobo medio majore et subpatente; staminibus 4, supra tubi medium saepius sitis, didymis, posticis paulo brevioribus, filamentis glabris, connectivo crasso thecassaepius separante, his late divaricatis, rarius subparallelis; stylo paulo exserto, inaequaliter bifido; nuculis oblongis, saepius apice obtusis, rarius apiculatis.

Satureia in the region under consideration is a genus of a certain diversity of habit and flower character, the species of

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which, however, form a continuous and interlocking series, so that subgeneric lines are difficult to distinguish. As concluded by Briquet,¹ the proposed genera *Gardoquia*, *Xenopoma*, and *Micromeria* are confluent, and the study of species herein described and unknown to him have strengthened this conclusion.

The primary differentiating characters of the genus *Gardoquia* were the long, recurved corolla-tube, the erect emarginate upper lip of the corolla, and the didymous cordate anthers. The genus was maintained by Benthham with the following note "Genus a *Micromeria* non nisi longitudine corollarum, limbique lobis sub-erectis, distinctum,"² while *Micromeria* (including *Xenopoma*) in turn was separated from *Satureia* on the basis of the narrower calyx and the character of its venation. With the present series of species these characters are insufficient. *Rizoa* is wholly synonymous with *Gardoquia*, being based on *Gardoquia multiflora* R. & P.

CONSPECTUS SPECIERUM

- A. Flores in axillis solitarii, pedicellis calyces subaequantibus vel longioribus elatis, bracteolis absentibus.1. *S. Brownei*
- AA. Flores 3-6 et ultra in axillis vel solitarii, pedicellis quam calycibus brevioribus, bracteolis praesentibus.
 - B. Herbae fruticulique humiles, altitudine 5-20 cm., floribus in axillis solitariis.
 - C. Bracteola ad pedicellorum medium sita; folia obovata, margine integra.
 - D. Calyces 13-venis, dentibus duobus anticis quam posticis subduplo longioribus, erectis.33. *S. pusilla*
 - DD. Calyces 15-venis, dentibus subaequalibus, subconniventibus.32. *S. Darwinii*
 - CC. Bracteola ad pedicellorum basim sita; folia ovata vel rotundato-ovata, margine leniter crenata.31. *S. nubigena*
 - BB. Suffrutices vel frutices, altitudine 30-200 cm., floribus 1-6 et ultra in axillis.
 - C. Calyces 1.5-3.5 mm. longi, corollae tubo incluso vel paulo exserto rarius quam calyce duplo longiore.
 - D. Calyces 1.5-2 mm. longi, corollae tubo incluso.
 - E. Folia utrinque glabra, anguste lanceolata, acuta.37. *S. axillaris*
 - EE. Folia puberula vel pubescentia, oblonga, obtusa.39. *S. oligantha*
 - DD. Calyces 3-3.5 mm. longi, corollae tubo breviter exserto.
 - E. Folia ovata vel rotundato-ovata, leniter crenata.34. *S. vana*
 - EE. Folia lanceolata, oblanceolata vel ovata, subintegra.

¹ Briquet, J. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 296. 1897.

² Benthham, G. in DC. Prodr. 12: 235. 1848.

- F. Folia lanceolata, acuta; flores saepius tres in axillis.
36. *S. simulans*
- FF. Folia oblanceolata, oblonga vel ovata, obtusa; flores saepius solitarii.
 G. Calyces subturbinati; corollae 7 mm. longae; folia ovalia vel elliptica, 3-5 mm. longa.....38. *S. brevicalyx*
- GG. Calyces tubulosi; corollae 9 mm. longae; folia oblanceolata vel oblonga, .5-1.5 cm. longa.....35. *S. boliviana*
- CC. Calyces 4.5-10 mm. (3.5-4 mm. in *S. rigidula* et *breviflora*), saepius 6-8 mm. longi, corollae tubo saepius longe exserto quam calycibus duplo triplove longiore.
- D. Folia 2-5 cm. longa, sat tenuia, ovata vel elliptica, crenato-serrata; flores 3-3.5 cm. longi.
- E. Flores pedicellis gracilibus calyces subaequantibus elevati; calyces glabri.....2. *S. multiflora*
- EE. Flores pedicellis quam calycibus brevioribus; calyces extus villosi.....3. *S. elliptica*
- DD. Folia raro 3 cm. longa, saepius .5-1.5 cm. vel breviora, forma diversiore saepius integra; flores saepius 2-2.5 cm. longi.
- E. Folia obovata vel oblanceolata, omnino obtusa; calycis dentes acuminati (acuti in *S. guamaniensis*) etiam subaristati.
- F. Folia rhomboideo-obovata, vel subrotunda.
- G. Folia rhomboideo-obovata, subtus puberula; flores fere 2 cm. longi.....6. *S. Matthewsii*
- GG. Folia rotunda, subtus parce villosa; flores vix 6 mm. longi.
8. *S. brevisflora*
- FF. Folia oblanceolata.
- G. Flores in axillis solitarii.....7. *S. guamaniensis*
- GG. Flores 3-7 in axillis.....5. *S. Gilliesii*
- EE. Folia elliptico-lanceolata, ovata, vel linearia, raro obtusa; calycis dentes saepius acuti, raro subaristati (*S. Lindeniana*, *rigidula*, *glabrata*).
- F. Folia 1-2.5 cm. longa, acuta (frequenter obtusa in *S. tomentosa*) pagina superiore subglabra, inferiore incana (sericea in *S. acutifolia*).
- G. Calyces vix 5 mm. longi, tubo extus villosissimo...12. *S. discolor*
- GG. Calyces 6-8 mm. longi, tubo extus appresso-villoso vel puberulo.
- H. Folia ovata, crenata, subtus incano-tomentosa...9. *S. tomentosa*
- HH. Folia elliptico-lanceolata, subintegra.
- J. Pagina superiore sericea, inferiore tomentosa; margo revoluta.....13. *S. acutifolia*
- JJ. Pagina superiore glabra, inferiore tomentella; margo plana.....15. *S. Pavoniana*
- FF. Folia 2-15 mm. longa utrinque glabra (tomentella in *S. Andrei*) saepius subnitida, venis prominulis, ascendentibus, rectis, parallelis; margo leniter vel nihil revoluta.
- G. Folia 5-15 mm. longa.
- H. Folia glabra.
- J. Calycis dentes subaristati, 2 mm. longi.....17. *S. glabrata*

- JJ. Calycis dentes lanceolati, acuti, 1-1.5 mm. longi.
 K. Folia utrinque acuta, internodiis multo longiora.
18. *S. taxifolia*
 KK. Folia utrinque obtusa, internodiis subaequilonga.
16. *S. pallida*
 HH. Folia praecipue subtus puberula.....19. *S. Andrei*
 GG. Folia 2-5 mm. longa.
 H. Folia in basi angustata, haud cordata.
 J. Margo integra; calycis dentes erecti.....20. *S. striata*
 JJ. Margo serratula; calycis dentes patentes....21. *S. plicatula*
 HH. Folia in basi cordata.
 J. Corolla 18-20 mm. longa; calycis dentes tres postices
 omnino connati.....23. *S. connata*
 JJ. Corolla 20-25 mm. longa; calycis dentes tres postices
 fere ad medium liberi.....22. *S. Jamesoni*
 FFF. Folia 2-6 mm. longa, pubescentia, saepe sericea (pagina
 superiore glabra in *S. Lindeniana*), venis obscuris; margo
 saepius valde revoluta.
 G. Calycis dentes duo antichi subulati, fere aristati.
 H. Dentes antichi 3 mm. longi, posticos superantes.
29. *S. Lindeniana*
 HH. Dentes antichi 1.5 mm. longi, posticos aequantes.
26. *S. rigidula*
 GG. Calycis dentes duo antichi anguste lanceolati, nullomodo
 aristati, posticos vix aequantes vel breviores.
 H. Folia linearia, utrinque sericeo-villosa; calyces 6 mm.
 longi.....27. *S. sericea*
 HH. Folia ovata, pagina superiore glabrata vel puberula;
 calyces 5 mm. longi.
 J. Foliorum margines valde revolutae; pagina inferiore
 tomentosa.....28. *S. revoluta*
 JJ. Foliorum margines revolutae; pagina inferiore pu-
 berula, venis prominulis.....24. *S. argentea*

Sect. *HESPEROTHYMUS* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Micromeria sect. *Hesperothymus* Benth. Lab. Gen. et Sp. 371. 1834.

Herbae prostratae, caulibus repentibus, foliis ovato-rotundis, subglabris; floribus in foliorum axillis solitatim dispositis, pedicellis calyces maximam partem superantibus, rarius paulo brevioribus, bracteolis duobus nunc praesentibus nunc absentibus; calycibus tubulosis, dentibus erectis subaequalibus, obscure bilabiatis, intus hirsutis; corollae tubo paulo exserto.

This section seems to the present author to be most nearly

allied to sect. *Gardoquia* (*Ellipticae*) through *Satureia Douglasii* (Benth.) Briquet.

1. *Satureia Brownei* (Swartz) Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Herba humilis, caule prostrato, repente, ramis filiformibus, ascendentibus, glabris vel tenuiter pilosis, quadratis, angulis acutis, submarginatis; foliis saepius tenuiter membranaceis minus quam internodiorum longitudine, saepius .5–1 cm. longis, rarius 1.5 cm., ovato-rotundatis, apice obtusioribus, in basi saepius subtruncatis et abrupte in petiolo angustatis, margine sinuato-crenata vel subintegra, omnino glabris vel subtus sparse sed patenter pilosis, petiolo gracillimo laminam aequante vel subnullo; floribus saepius solitariis, rarius duobus in axillis; calycibus glabris, rarius pilosis, 3–4 mm. longis, 13-venis, dentibus .8–1 mm. longis, subaequalibus, ovato-triangulis, acutis, ciliolatis, tubo intus ad dentium basim piloso-annulato, pedicello filiforme calyce aequilongo vel saepius longiore; corollis violaceis, fauce saepe variegatis, 4.5–5 mm. longis, tubo superne ampliato, intus glabro, labro 1 mm. longo, emarginato, labiolo longo 1.5 mm., lobo medio majore, patente, frequenter emarginato; staminibus didymis, supra tubi medium sitis, posticorum filamentis saepius 1 mm. longis, anticorum 2 mm., antheris .7 mm. latis, thecis paulo divergentibus; stylo e corolla subexserto; nuculis .8–1 mm. longis, oblongis, atris.

Subsp. *eubrownei* nom. nov.

Thymus Brownei Swartz, Prodr. Veg. Ind. Occ. 89. 1788, et Fl. Ind. Occ. 2: 1011. 1800; Benth. Lab. Gen. et Sp., 372. 1834.

Ramulis foliisque fere glabris; petiolis laminas aequantibus vel parte dimidia brevioribus; foliis nec sessilibus; florum pedicellis saepius calycibus aequilongis vel paulo brevioribus.

Specimens examined:

VENEZUELA: Galipán, 1250 m., June 7, 1885, *Jahn 201* (known as "Poleo") (US)¹; Paramo de la Sal, 3000 m., Mérida, Sept. 1,

¹ The following abbreviations are used herein: ASP, Academy of Natural Sciences of Philadelphia; FM, Field Museum of Natural History; GH, Gray Herbarium; MBG, Missouri Botanical Garden; NY, New York Botanical Garden; UC, University of California; US, United States National Herbarium.

1921, *Jahn* 569, 610 (US); between Antimano and Aguas Negros, 900–1500 m., Apr. 6–7, 1913, *Pittier* 6017 (US); prope coloniam Tovar, 1854–5, *Fendler* 869 (MBG; GH; NY); Paramo del Tambor, 2400 m., Mérida, Nov. 14, 1921, *Jahn* 736, 738 (US); between Colonia Tovar and Lagonazo, in meadows and forests, 1700–2300 m., trailing, forming colonies on road, Feb. 21, 1921, *Pittier* 9262 (US); Paramo del Jabón, 3000–3200 m., Oct. 2, 1910, *Jahn* 41 (US); Paramo de Piñango, 2600 m., March, 17, 1915, *Jahn* 410 (US).

COLOMBIA: Sabana de Bogotá, *Bro. Ariste-Joseph* A 903 (US); Cuestá de Tocotá, road from Buenaventura Cali, western Cordillera, 1500–1900 m., Dec. 1905, *Pittier* 724 (US); grassy wayside, north of Caramanta, Antioquia, 2000–2200 m., repent herb with odor of *Hedeoma*, Sept. 19, 1922, *Pennell* 10777 (US; ASP); forest, 2000–2500 m., Las Minutas, south of Caldás, Antioquia, Sept. 21–22, 1922, *Pennell* 10941 (US; ASP); forest, 2000–2500 m., Huila, Aug. 1–8, 1917, *Rusby & Pennell* 625 (US; MBG; GH; NY); meadow, 2000–2100 m., Balsillas, Huila, Aug. 3–6, 1917, *Rusby & Pennell* 727 (US; MBG; GH; NY); forest, 2600–2900 m., Pinares above Salento, Caldas, Aug. 2–10, 1922, *Pennell* 9243 (ASP; US); cliff near Rio San Andreas, 2500–2800 m., Caloguala, Coconuco, El Cauca, June 14, 18, 1922, *Pennell* 7157 (US; ASP); Quaranda, July 8, 1876, *Andre* 1016, mountains southeast of Bogotá, 2800 m., June 6, 1875, *Andre* 1016 (NY); Popayan, 1600–2000 m., *Lehmann B.T.* 1141 (blooms in Feb.) (NY); grassy open, 1500–1600 m., Rio Quindio, Salento, Caldas, July 27–30, 1922, *Killip & Hazen* 9040 (US; ASP); around Huila, Rio Paez Valley, El Cauca, 1600–1900 m., “a diminutive plant on wet sand and in moss; fl. purplish pink,” Jan. 1906, *Pittier* 1242 (US); wet slope, open forest, Susumoco, southeast of Quetamo, 1200–1400 m., Sept. 5, 1917, *Pennell* 1735 (cor. violet) (NY); Popayan, *Hartweg* 1335 (NY); moist soil near stream, 2000–2200 m., San Isidro, Puracé, El Cauca, June 10–11, 1922, *Pennell & Killip* 6430 (US; ASP); field, 2000–2200 m., Santa Elena, above Santuario, Caldas, Sept. 7–13, 1922, *Pennell* 10592 (“corolla pale amparo-purple with markings of violet-purple”) (US; ASP); thicket below San Jose, 2300–2500 m., San Antonio, El Cauca, July 1, 1922, *Pennell* 7654 (US; ASP).

ECUADOR: in *Andibus Ecuadorensibus*, 1857–9, *Spruce 5091* (GH); vic. of Huigra, Sept. 12, 1918, *Rose 22627* (known as “Po-leo”; growing in water; strong odor of pennyroyal) (US).

Sect. *GARDOQUIA* Briq. in Engler u. Prantl, *Nat. Pflanzenfam.*, ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia Ruiz et Pavon, *Prodr.* 86. *pl.* 17. 1794.

Frutices fruticulive ramulis saepius ascendentibus, brevioribus; foliis saepe fasciculatis, forma diversioribus, maximam partem subintegris, glabris vel pubescentibus; floribus 1–6 in foliorum axillis, pedicellis singulis bracteolis duobus ornatis (*S. multiflora* exclusa) quam calycibus brevioribus elatis; calycibus tubulosis, cylindratis, dentibus maximam partem bilabiatis, tribus posticis anticis superantibus, acutis, etiam subaristatis, intus nudis vel hirsutis, saepius erectis; corollae tubo maximam partem calycem duplo triplove superante.

Gardoquia merges into *Xenopoma* imperceptibly in habit, as illustrated by *S. breviflora* and *S. tomentosa* or *S. boliviana* and *S. Gilliesii*, and in floral characters, as in *S. rigidula*, *breviflora*, *argentea*, *boliviana* and *vana*. The closest alliance between the two sections appears to lie between *S. boliviana* and members of the subsection *Obovatae*, or between *S. breviflora*, *tomentosa* and *vana*.

A. *Ellipticae*

Foliis 2–5 cm. longis, sat tenuibus, ovalibus vel ellipticis, glabris vel subglabris, crenatis; floribus 3–15 in cymulis in foliorum axillis, corollis 3–3.5 cm. longis.

2. *Satureia multiflora* Briq. in Engler u. Prantl, *Nat. Pflanzenfam.*, ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia multiflora Ruiz et Pav. *Syst. Veg.* 149. 1798; Benth. *Lab. Gen. et Sp.*, 398. 1834, et in DC. *Prodr.* 12: 235. 1848.

Rizoa ovatifolia Cav. *Anal. Cienc. Nat.* 3: 133. 1801.

Frutex aromaticus erectus, ramis altitudine circa 1 m., ramulisque subglabris, purpureis, quadratis, angulis obtusis, internodiis quam foliis sat longioribus, ramulis lateralibus brevibus, gracilibus; foliis membranaceis, 3–5 cm. longis, 1–2 cm. latis, lanceolatis vel ovatis, apice obtusis, in basi rotundatis, margine

convexa, leniter crenata, crenarum culminibus inter se 4-5 mm. distantibus, petiolis gracilibus, 5-12 mm. longis, glabris; floribus 3-7-15 in cymis laxis, raro solitariis, pedunculis gracilimimis .5-1.5 cm. longis elevatis, bracteolis parvis 1-1.5 mm. longis subulatis ornatis, pedunculis secundariis .3-1 cm. longis; calycibus membranaceis, 8 mm. longis, in basi paulo angustatis, extus glabris, fauce intus nudis; dentibus circa 1 mm. longis, lanceolatis, acutissimis, subaequalibus, duobus anticis tamen paulo longioribus approximatisque; corollis ut videtur purpureis, 20-30 mm. longis, maximam partem circa 25 mm., tubo extra calycem multo dilato, extus puberulis vel subglabris, intus pilosis, labro longo circa 4 mm., retuso, labiolo aequilongo lobis rotundatis medio lateralibus paulo longiore, in basi angusto; staminibus didymis, paulo supra tubi medium sitis, anticis corolla longioribus, posticis labro subaequilongis, thecis late divergentibus, .7-.8 mm. longis; stylo paulo exserto; nuculis oblongis, fuscis, 1.2 mm. longis.

Specimens examined:

CHILI: *unknown collector 245* (NY); 1828-34, *Gay 148* (NY); *Gay* (GH); *Chanco, Reed* (GH); *Valdivia, Ufergebüsch des Calle-Calle, Jan. 17, 1898, Buchtien* (US); *Chiquayante (?Chiguailante), Feb. 19, 1892, Kuntze* (US); *Budi, Jan. 1923, Bro. Claude-Joseph 2016* (US); *Temuco, Jan. 1920, Bro. Claude-Joseph 1043* (US); *bushy slopes above Aranco, 50-100 m., March 6, 1925, Pennell 12953* (GH).

ARGENTINA: *Panguipulli, July 1924, Bro. Claude-Joseph 2627* (US).

3. *Satureia elliptica* Briq. in Engler u. Prantl, *Nat. Pflanzenfam.*, ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia elliptica Ruiz et Pavon, *Syst. Veg.* 149. 1798; Benth. *Lab. Gen. et Sp.* 399. 1834; et in DC. *Prodr.* 12: 235. 1848.

Stachys speciosa Hook. *Bot. Misc.* 2: 235. 1831.

Frutex erectus odoratissimus, ramosus, ramis teretibus cortice discedente, ramulis glabratis, nitidis, quadratis, angulis acutis; internodiis plerumque foliis aequantibus vel longioribus; foliis 20-30 mm. longis, 10-15 mm. latis, ellipticis, apice obtusis, in basi acutiusculis et ad petiolum 3 mm. longum angustatis,

membranaceis, planis, rugosis, margine supra medium breviter serrata, utrinque glabris vel sparse ciliatis, subtus pallidiore, venis prominentioribus; floribus 4–12 in axillis, pedunculis brevissimis elatis, bracteolis linearibus, quam pedicellis brevioribus ornatis; calycibus 8–11 mm. longis, extus villosis, fauce intus nudis, dentibus duobus anticis fere 3 mm. longis, lanceolato-acuminatis, approximatis, tribus posticis connatis, circa 1 mm. longis; pedicellis 3–5 mm. longis, villosis; corollis coccineis, interdum flavis, 35–40 mm. longis, extus hirtellis, tubo extra calycem multo dilato, intus ad basim hirsuto, labro 4.5–5.5 mm. longo, leniter emarginato, ovato, labiolo subaequilongo, lobo medio lateralibus paulo longiore; staminibus supra tubi medium insertis, didymis, anticis labro longioribus, posticis aequilongis, thecis late divergentibus, 1 mm. longis; stylo e corolla 10 mm. exserto, ramis 1 mm. longis, planis, acutis; nuculis 2 mm. longis, oblongo-obovatis.

Specimens examined:

PERU: Obrajillo, *Wilkes Exp.* (US); rock ledges at cascades of Rio Chillon, above Obrajillo, Lima, 3100–3300 m., June 13–23, 1925, *Pennell 14401* (GH); abundant on open rocky slopes, Huaros, Lima, 3200–3600 m., June 23, 1925, *Pennell 14734* (GH).

4. *Satureia Loesneriana* Mansfeld in Bot. Gart. Berlin-Dahlem, Notizbl. 9: 287. 1925.

“Frutex 1 m. altus. Rami juniores quadrangulares, brevissime puberuli. Foliorum lamina 9–22 mm. longa, 3–8 mm. lata, elliptica vel rarius oblonga vel obovata, apice acuta, brevissime mucronulata, basi in petiolum brevissimum angustata, margine ± remote et breviter dentata vel integra, subrevoluta vel plana, penninervis, utrinque glanduloso-punctata, nervis utrinque prominulis (vel supra vix conspicuis), initio utrinque breviter puberula, postea praecipue supra glabrescens vel glabra. Verticillastri usque 16-flori. Calyx circ. 5.5 mm. longus, bilabiatus, labio tridentato dentibus 0.6 mm. longis, labiolo dentibus 1.5 mm. longis, dentibus extus et intus brevissime puberulus. Corolla circ. 15 mm. longa, labio sat profunde emarginato 2.5 mm. longo, labiolo tripartito 3 mm. longo, extus pubescens, tubo intus antice piloso. Stamina didynamia ± exserta, filamenta antica 5, postica 3.5 mm. longa, antheris divergentibus. Stylus exsertus.

"Peru: Prov. Huamachuco, Depart. Libertad, über Huamachuco, Grassteppe mit eingestreuten immer oder regengrünen Sträuchern, 3400–3500 m. ü. M., 1 m. hoher Strauch, Blüten violett (Fl. 3. VII. 1914.—WEBERBAUER n. 7008!).

"Die Art gehört in die Nähe von *S. elliptica* (Ruiz et Pav.) Briq. und *S. Matthewsii* Briq., die erstere Art weicht schon durch eine viel längere Korolla ab, die letztere besitzt nach der Beschreibung eine längere, innen kahle Krone und kürzere Kelchzähne."

Mihi ignota; ad *S. ellipticam* affinis videtur. Inquire praeterea in *S. rugosani* Briq. in Engler u. Prantl. Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

B. *Obovatae*

Foliis saepius 1–1.5 cm. longis, obovatis vel oblanceolatis, glabris vel pubescentibus, margine integra vel crenata; floribus 1–6 in verticillastris sat densis in foliorum axillis, corollis circa 2–2.5 cm. longis (6 mm. in *S. breviflora*).

5. *Satureia Gilliesii* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia Gilliesii Grah. in Edinb. Phil. Jour. 1831: 377. Sept. 1831; Benth. in DC. Prodr. 12: 235. 1848.

G. chilensis Benth. in Hook. and Arn. Bot. Beechey's Voyage, 58. 1841.

Satureia chilensis Briq. in Ann. Conserv. et Jard. Bot. Genève 2: 191. 1898.

Fruticulis suaveolens altitudine ad 1–1.5 m., caulibus in basi lignosis, procumbentibus, ramis teretibus, cortice discedente, ramulis pubescentibus, quadratis, angulis obtusis, internodiis ramulorum sterilium quam foliis brevioribus, his itaque densis, eis fertilium sat distantibus; foliis 7–10 mm. longis, rarius 10–20 mm., anguste oblanceolatis apice rotundatis, in basi ad petiolum brevem attenuatis, margine integra, revoluta, utrinque subglabris, rarius patenter puberulis; floribus 3–7 saepius circa 5 in axillis, pedunculis .5–2 mm. longis, bracteolis foliis conformalibus minoribus; calycibus 7–12 mm. longis, in basi paulo angustatis, extus saepius puberulis, fauce intus nudis, dentibus 2–3 mm. longis, lanceolato-acuminatis, subaristatis, duobus anticis quam

posticis tribus saepe longioribus approximatisque; corollis circa 12–18 mm. longis, coccineis, extus pubescentibus, tubo ampliato, intus pilosis, labro longo 2–3 mm., emarginato, sinu .5 mm. profundo, labiolo paulo longiore, lobo medio lateralibus superante, in basi angustato; staminibus didymis, supra tubi medium sitis, posticis vix e tubo exsertis, anticis corolla aequilongis, thecis late divergentibus, .5 mm. longis; stylo paulo exserto; nuculis non visis.

Specimens examined:

PERU: *Dombey* 291 (GH).

CHILI: Valparaiso, June 1885, *Rusby* 1061 (GH); Valparaiso, July 1851, *Gillies* (GH); Valparaiso, Apr.–July, 1856, *Harvey* (GH); ex regione inferiori Andium Chilensium juxta tepidaria Cauquenes, 3000–5000 m., May 14–17, 1882, *Ball* (GH; NY); Maule, *Reed* (GH); Valparaiso, *Arnott* (NY); no locality, 1884–85, *Statin* (NY); no data, *Wilkes Exp.* (ASP; US; NY); Santiago, montaña, Dec. 5, 1920, *Bro. Claude-Joseph* 1321 (US); Valparaiso, *Eights* (US); Valparaiso, in Gebüsch, Sept. 5, 1895, *Buch-tien* (US); Isle of St. Marys, *Eights* (US); mountains east of Santiago, 769 m., Dec. 27, 1900, *Hastings* 310 (US; NY; UC); Santiago, Jan. 1919, *Bro. Claude-Joseph* 840 (US); Valparaiso, Feb. 1922, *Bro. Claude-Joseph* 1619 (US); Rio Blanco, Jan. 1924, *Bro. Claude-Joseph* 2479 (US); Valparaiso, *Mertens* (MBG); Santiago, Jan. 1920, *Bro. Claude-Joseph* 956 (US); near Valparaiso, June 1885, *Rusby* 1061 (ASP; US); no data, *Styles* (ASP); in fruticetis apricis collum St. Jago, Quillota, Feb., 1829, Sept.–Oct., 1829, *Bertero* 291, 1015 (MBG; GH; NY); Prov. Curicó, hacienda Monte Grande, 1000 m., Dec., 1924, *Werderman* 547 (UC); Cerro Echaurreina (San Fernando), Prov. Colchagua, Oct., 1925, *Montero* 13 (GH).

6. *Satureia Matthewsii* Briq. in Ann. Conserv. et Jard. Bot. Genève. 2: 189. 1898.

Frutex ut videtur elatus, ramis ascendentibus, teretibus, glabris, mox ligneis, ramulis gracilibus, glabris, nodis inter se 3–5 mm. vel in ramulis sterilibus 1–1.5 cm. distantibus; foliis 1–1.5 cm. longis, elliptico- vel rhomboideo-obovatis, frequenter subrotundatis, apice saepius obtusis, in basi rotundato-extenuatis,

utrinque glabris, dense glanduloso-punctatis, margine integra, revoluta; verticillastris 1-3 floribus, in foliorum ad ramulorum apices axillis approximatis, bracteis lineari-spatulatis, quam pedicellis paulo longioribus; calycibus fere 1 cm. longis, anguste tubulosis, extus puberulis, fauce intus nudis, patenter bilabiatis, labia superiore erecta, 3 mm. longa, dentibus subulatis ad medium connatis, inferiore 2.5 mm. longa, dentibus patentibus, subulatis, ad basim connatis, pedicellis 2 mm. longis elatis; corollis circa 2 cm. longis, tubo 18 mm. longo, intus subnudo, extus hirtello, superne ampliato, labro 3 mm. longo, emarginato, labiolo paulo longiore, lobo medio majore; staminibus supra tubi medium sitis, didymis, breviter exsertis, thecis valde divergentibus; stylo 5-6 mm. longo, exserto; nuculis non visis.

Specimens examined:

PERU: Near San Felipe, Cajamarca, 1950 m., May, 1915, *Weberbauer 7109* (FM).

7. *Satureia guamaniensis* Mansfeld in Bot. Gart. Berlin-Dahlem Notizbl. 9: 286. 1925.

S. obovata Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. 3a, 300. 1897, non Lag. Gen. et Sp. Nov. 18. 1816.

Gardoquia obovata Ruiz et Pavon, Syst. Veg. 150. 1798; Benth. Lab. Gen. et Sp., 403. 1834, et in D.C. Prodr. 12: 236. 1848.

Frutex altitudine circa 1 m., ramis teretibus, ramulis quadratis, pubescentibus glabratisve, nodis approximatis; foliis 5-7 mm. longis, obovatis oblanceolatisve, in basi ad petiolum brevissimum angustatis, utrinque glabris, subtus pallidioribus; margine integra, revoluta; floribus in axillis solitariis, bracteolis foliis conformalibus, quam pedicellis longioribus; calycibus 5-6 mm. longis, extus glabratis, fauce intus hirsutis, dentibus subaequalibus, lanceolatis, acutiusculis, labia postica tamen longiore, ore itaque obliquo, pedicellis 2 mm. longis elatis; corollis coccineis, 22-24 mm. longis, tubo extra calycem valde dilato, fauce diametro 8 mm., extus pubescentes, intus leniter piloso, labro 5 mm. longo, emarginato, sinu 1 mm. profundo, labiolo aequilongo, lobis aequalibus; staminibus paulo supra tubi medium sitis, didymis, anticisecorolla 5-6 mm. exsertis, posticis e tubo exsertis; thecis late divaricatis, .6 mm. longis; stylo e corolla 8 mm. exserto; nuculis non visis.

S. guamaniensis, as suggested by its author,¹ is scarcely separable from *Gardoquia obovata* R. & P.

Specimens examined:

PERU: between Cuanabamba and Oyavaca, 3200 m., May, 1912, *Weberbauer 6323* (FM, type collection of *S. guamaniensis* Mansf).

8. *Satureia breviflora* Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia breviflora Benth. Lab. Gen. et Sp. 401. 1834, et in DC. Prodr. 12: 237. 1848.

Frutex ramulis quadratis, pubescentibus, angulis obtusis, internodiis saepius folia superantibus; foliis .5–1 cm. longis, rotundatis vel rotundato-ovatis, obtusis, subsessilibus, pagina superiore viride, puberula, venis impressis, inferiore cano-tomentosa venis prominenter costatis, margine subintegra vel frequenter dentato-crenata, crenis fere 1 mm. altis; floribus 3–6 in axillis, brevissime pedunculatis, verticillastris saepius ad ramulorum brevium laterali-um extremitates congestis, foliis floralibus calyces subaequantibus, bracteolis linearibus 1–2 mm. longis; calycibus 3.5–4 mm. longis, extus hirtellis, fauce intus nudis, dentibus 1–1.5 mm. longis, anguste lanceolatis, acutissimis, duobus anticis quam posticis paulo longioribus, pedicellis gracilibus circa 1 mm. longis; corollis 6–7 mm. longis, tubo intus ad staminum anticorum bases piloso, labro 1 mm. longo, emarginato, labioli lobis subaequalibus, fere 2 mm. longis, medio paulo majore; staminibus in fauce sitis, didymis, vix e tubo exsertis, thecis paulo divergentibus; stylo e tubo paulo exserto; nuculis non visis.

Specimens examined:

ECUADOR: Quitensian Andes, *Jameson* (US).

C. Discolores

Foliis saepius 1–2 cm. longis, lanceolatis vel elliptici-lanceolatis, pagina superiore glabra, sericea vel villosula, inferiore cano-tomentosa vel tomentella, margine saepius integra (crenata in

¹ "Die am nächsten stehende Art *S. obovata* (Ruiz et Pav.) Briq. unterscheidet sich nach der (nicht mehr ausreichenden) Beschreibung nur durch längere Blätter, grau behaarte zweige an der Basis behaarte kelch und innen Kahle Krone."—Mansfeld, *l.c.*

S. tomentosa); floribus 1-6 in verticillastris sat densis in foliorum axillis; corollis 1.5-3 cm. longis.

9. *Satureia tomentosa* Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia tomentosa Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. 2: 314. 1817; Benth. in DC. Prodr. 12: 237. 1848.

Frutex ramosus altitudine ad 1 m., ramis duris, ascendentibus, subteretibus, cortice saepe discedente, internodiis saepius 2-3 cm. longis, ramulis gracilibus, ascendentibus, quadratis, angulis obtusis, superne cano-puberulis vel tomentosus, internodiis maximam partem quam foliis brevioribus; foliis 1-1.5 cm. longis, saepius ovatis, frequenter rotundatis vel ellipticis, apice acutis vel obtusis, in basi cuneato-angustatis, margine revoluta, saepius obscure crenata, pagina superior rugosa, nunc glabra nunc hirtella, inferiore albo-tomentosa, rarius villosa, venis subtus prominentioribus, petiolis 1-2 mm. longis elatis; verticillastris saepius 3-6-floribus, rarius breviter pedunculatis, in axillis foliorum superiorum dispositis, his calyces paulo superantibus; calycibus 7 mm. longis, extus molliter appresso-villosis, sub-bilabiatis, labia superiore longiore, dentibus supra medium connatis, vix .5 mm. longis, triangulo-lanceolatis, inferiore 2 mm. longa, dentibus liberis, lanceolato-subulatis, approximatis; pedicellis 2 mm. longis elatis; corollis rubris, 2-3 cm. longis, extus pubescentibus, tubo superne gradatim ampliato, intus tenuiter piloso, labro subrecto 5 mm. longo, emarginato, labiolo subaequilongo, lobo medio lateralibus nunc aequilongo nunc fere duplo longiore; staminibus breviter exsertis, didymis, supra tubo medium sitis, thecis divergentibus; stylo exserto, circa 5 mm. longo; nuculis atris, oblongis, angustis, 1.5 mm. longis.

A species of some variability in habit and pubescence and to which *S. Kunthii* (*grandiflora*), *elegans*, and *pulchella* may apparently be referred. Considering the variability of the species as shown by the fairly large series of specimens examined, there is nothing in Kunth's descriptions to permit of their differentiation.

Specimens examined:

?COLOMBIA: Tobacundo, June 9, 1876, *Andre* 3598 (NY); no data, *Andre* K 460 (NY).

ECUADOR: Banos, Prov. Tunguragua, 2000 m., *Tate 607* (US); ad sepes, in planitie Rumibamba, Quito, *Hartweg 1340* (NY); ad pontem Guapalo prope Quito *Hartweg 1339* (NY); Punin, Quebrada Chalan, 2779 m., Oct. 28–Nov. 4, 1923, *Anthony & Tate 423* (US); ad vicum Guapalo prope Quito, 2076 m., *Jameson 659* (ASP); no data, *Jameson* (US); Quitensian Andes, 1855, *Couthouy* (GH); Riobamba, Aug. 11, 1920, *Holway 870* (US; GH); bei Riobamba, Ambato, Gualabamba, 1800–2700 m., Nov. 25, 1880, *Lehmann 149* (US).

PERU: thickets and stream banks, 15 mi. southeast of Huanuco, 3230 m., May 31–June 3, 1922, *Macbride & Featherstone 2084* (forma villosa) (MBG; FM).

10. *Satureia thymoides* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia thymoides Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 314. 1817; et Benth. in DC. Prodr. 12: 238. 1848.

“Frutex ramosissimus; ramis tetragonis, pubescentibus. Folia opposita, brevissime petiolata, ovata, subcordata, acuta, subserrata, margine revoluta, venosa, supra glabriuscula, subtus cano-pubescentia, tres lineas longa, duas lineas lata. Petioli pubescentes. Flores verticillati, pedunculati, semipollicares; verticillis multifloris, distantibus; internodiis quinque aut novem lineas longis. Calyx tubulosus, decemsulcatus, quinque-dentatus, pubescens; dentibus inaequalibus, acuminato-subulatis. Corolla calyce triplo longior, flava (?) ex Bonpl., pubescens; tubo interne pubescente; fauce longissima, inferne barbata; limbo bilabiato, purpureo-maculato; labio superiore emarginato; inferiore trifido; laciniis obtusis. Stamina quatuor, didynama, distantia, subinclusa. Filamenta glabra. Antherae arcuatae. Stylus exsertus, glaber. Stigma bifidum. Fructus ignotus. Crescit in Andibus Quitensibus?”

Ut videtur ad *Discolores* referenda et ab affinibus imprimis foliis subsessilibus, ovatis, subcordatis, parvis (3 lin. longis) separanda est.

11. *Satureia foliolosa* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia foliolosa Benth. in DC. Prodr. 12: 238. 1848.

"foliis parvis subsessilibus ovatis obtusis integerrimis supra pallidis puberulis glabrativve subtus canescenti-tomentellis, verticillastris 2-6-floris, calyce subsessili hirsutissimo dentibus acutissimis patentibus tubo suo vix brevioribus. Ad Chapada de Santa Martha (Purdie!). Frutex decumbens, ramosissimus, dense foliosus. Rami nunc pilis longis hirsutissimis, nunc fere glabri. Folia 2-3 lin. longa, floralia conformia. Calyces 2 lin. longi, latiuscule campanulati, incurvi. Corolla villosa, semipollicaris? ei *G. discoloris* similis videtur, sed in specimine nondum aperta (v.s.)."

Planta mihi ignota similis *S. discolori* est, tamen ut videtur foliis ovatis, subsessilibus, minoribus (2-3 lin. longis) et ramis nunc fere glabris, nunc densissime pilis longis ornatis imprimis differt.

12. *Satureia discolor* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia discolor Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 312. 1817; Benth. in DC. Prodr. 12: 238. 1848.

Frutex ramosissimus, ramis teretibus, duris, cortice discedente, ramulis quadratis, puberulis, nodis approximatis; foliis densis, membranaceis, 5-10 mm. longis, maximam partem anguste ellipticis, rarius lanceolatis vel oblanceolatis apice acutiusculis, in basi ad petiolum brevem angustatis, margine integra, revoluta, pagina superiore subglabra nec nitida, inferiore patenter pallidior, albo-tomentella, venis prominentioribus; floribus in axillis solitariis, bracteolis foliosis sed minoribus; calycibus 4.5-5 mm. longis, extus piloso-villosis, fauce intus subglabris, dentibus tubum aequantibus, lanceolato-acuminatis, approximatis, tribus posticis connatis, lanceolatis, acutis, 1.5 mm. longis, omnibus pubescentibus, vix villosis, pedicellis gracilibus, 2 mm. longis, corollis purpureis (Bonpland), 14-15 mm. longis, extus villosulis, tubo extra calycem dilato, intus ad faucem piloso; labro fere 2 mm. longo, emarginato, sinu .5 mm. profundo, labiolo aequilongo, lobis subaequalibus; staminibus didymis supra tubi medium sitis, anticis longioribus, omnibus inclusis, thecis divergentibus, .6 mm. longis; stylo e corolla vix exserto; nuculis non visis.

Specimens examined:

VENEZUELA: prope coloniam Tovar, 1854-5, *Fendler 2058*

(MBG; GH); Silla de Caracas, 2600 m., Apr. 27, 1884, *Jahn 288* (US); Silla de Caracas, 2000–2640 m., Dec. 26–29, 1918, *Pittier 8360* (US); Silla de Caracas, 2461 m., May 21, 1874, *Kuntze 1640* (1–3 ft. tall; fl. violet) (US; NY).

13. *Satureia acutifolia* Briq. in Engler u. Prantl, *Die Nat. Pflanzenfam.*, ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia acutifolia Benth. in DC. *Prodr.* 12: 236. 1848.

Frutex ut videtur, ramulis quadratis, sericeo-villosis, ad extremitates albis, mox fuscis, ramorum internodiis foliorum longitudine subaequilongis, sed foliis ramulorum fertilium (vel ? juvenilium) fasciculatis; foliis 1.5–3 cm. longis, elliptico-lanceolatis, utrinque acutis vel in basi angustatis, margine patenter revoluta, integra, pagina superiore sericeo-villosa, inferiore albotomentosa, petiolis 1–2 mm. longis elatis; floribus tribus in axillis, bracteolis 2–3 mm. longis subtentis, calycibus 8 mm. longis, extus sericeis, 13-venis, labiis 2 mm. longis, dentibus duobus anticis anguste lanceolatis, acuminatis, liberis, tribus posticis supra medium connatis; pedicellis 1–2 mm. longis elatis; corollis ut videtur rubris, 2.5 (?–3.0) cm. longis, extus sparse villosis, tubo superne gradatim ampliato, labro erecto, fere 5 mm. longo, labiolo subaequilongo; staminibus ut videtur inclusis, stylo paulo exserto; nuculis non visis.

Specimens examined:

PERU: ? *Matthews* (NY).

14. *Satureia mantaroensis* Mansfeld in Bot. Gart. Berlin-Dahlem, *Notizbl.* 9: 287. 1925

“Frutex usque 2 m. altus. Rami juniores quadrangulares, dense puberuli. Foliorum lamina 7–14 mm. longa, 5–7 mm. lata, elliptica vel subobovata vel oblonga, supra brevissime puberula subtus pallidior, tomentella, plana, nervis utrinque prominulis, apice acuta vel obtusa, basi angustata, margine integerrima vel vix conspicue et remote dentata; petiolus circ. 2 mm. longus, tomentellus. Verticillastri plerumque biflori, foliis floralibus conformibus. Pedicelli circ. 2 mm. longi, cano-puberuli. Calyx 8 mm. longus extus cano-puberulus, dentibus intus breviter pilosis, bilabiatus (3/2), dentes labii circ. usque ad medium con-

nati, dentes labioli paullo breviores, liberi. Corolla 20–23 mm. longa (labio emarginato circ. 5 mm. longo, labiolo trilobato 4.5 mm. longo), extus dense pubescens, intus tubo antice piloso et paulo supra basin annulo pilorum vestita. Stamina didynamia, anticis longioribus circ. 9 mm. longis, posticis 4–5 mm. longis, antheris divergentibus, anticis et stylo exsertis. Stylus 32 mm. longus.

“Peru: Depart. und Prov. Huancavelica, südliche Talwand des Mantaro über Iscuchaca, Grassteppe mit eingestreuten Sträuchern, 3600 m.u.M., bis 2 m. hoher Strauch mit roten Blüten (Fl. 15. VI. 1910.—WEBERBAUER n. 5677!).

“Die Art steht nach der Länge der Krone zwischen *S. Pavoniana* Briq. (*Gardoquia incana* Ruiz et Pav.) und *S. discolor* (Kunth) Briq. in der Mitte; *S. discolor* hat ferner eingeschlossene Stamina und inne kahle Kronröhre, *S. Pavoniana* oberseits bleiche Blätter (nach der nicht mehr ausreichenden Beschreibung). *S. thymoides* (Kunth) Briq. weicht durch den fast herzförmigen Blattgrund und zurückgerollten deutlich gezähnten Blattrand ab, steht aber sonst besonders im Blütenbau der *S. mantaroënsis* wohl am nächsten.”

Ex descriptione ab *S. Pavoniana* vix distincta videtur.

15. *Satureia Pavoniana* Briq. in Ann. Conserv. et Jard. Bot. Genève 2: 189. 1898.

Gardoquia incana Ruiz et Pavon, Syst. Veg. 150. 1798; Benth. Lab. Gen. et Sp., 401. 1834, et in DC. Prodr. 12: 237. 1848.

Frutex altitudine 30 cm.–2 m., caulibus erectis vel ascendentibus, lignosis, subteretibus, cortice discedente, internodiis saepius 3–4 cm. longis, ramulis saepius 5–10 cm. longis, gracilibus, canescentibus, ascendentibus, internodiis quam foliis saepius brevioribus; foliis 1–1.5 cm. longis, ellipticis, rarius ovatis, acutis, in basi angustatis, margine maximam partem integra planaue, rarius denticulata vel subrevoluta, pagina superiore pallidiore, non rugosa sed venis tamen saepe prominentioribus, inferiore dense cano-tomentella, petiolis 1–2 mm. longis, verticillastris 1–3-floribus, decussatim instructis in foliorum superiorum axillis dispositis, his calyces paulo superantibus, bracteolis linearibus ornatis; calycibus incanis, paulo arcuatis, 6–8 mm. longis, subbi-

labiatis, fauce intus subnudis, labiis circa 1.5 mm. longis, dentibus lanceolato-subulatis, posticis tribus ad medium connatis, anticis fere liberis brevioribus, pedicellis 2–3 mm. longis elatis; corollis rubris, fere 3 cm. longis, arcuatis, extus pubescentibus, tubo superne gradatim ampliato intus infra staminum praecipue anticorum bases piloso, labro subrecto, 5 mm. longo, emarginato, labiolo subaequilongo, lobo medio longiore; staminibus didymis, omnibus breviter exsertis supra tubi medium sitis; stylo circa 5 mm. exserto; nuculis circa 1.5 mm. longis, oblongis, angustis, atris.

Specimens examined:

PERU: Yanahuanca, densely shrubby northeastern slope, 3076 m., June 16–22, 1922, *Macbride & Featherstone 1196* (FM; MBG); sunny blackberry patch, Mito, 2769 m., July 8–22, 1922, *Macbride & Featherstone 1411* (FM; MBG); dry hills, Oroya, Lima, 3076–3384 m., 1919, *Kalenborn 82* (US; MBG); no data, *Dombey* (GH).

D. Striatae

Foliis 2–15 mm. longis, forma diversis, utrinque glabris, saepius subnitidis, venis prominulis, ascendentibus, rectis, parallelis, margine subintegra, floribus solitariis vel tribus in foliorum axillis; corollis 1.5–3 cm. longis.

16. *Satureia pallida* sp. nov.

Frutex ramosus, altitudine ut videtur circa 1 m., ramis ascendentibus, teretibus, lignosis, cortice discedente, ramulis divaricatis, glabris, quadratis, angulis acutis, internodiis foliis subaequilongis vel brevioribus; foliis 1–1.5 cm. longis, maximam partem ovalibus vel elliptico-oblongis, obtusis, in basi saepius rotundatis, utrinque glabris et pallidioribus, margine leniter revoluta, integra, petiolis 1–2 mm. longis elatis; floribus 1–3 in foliorum supremorum axillis dispositis; calycibus in speciminibus visis 8–9 mm. longis, puberulis, subbilabiatis, fauce intus nudis, labiis fere 1.5 mm. longis, dentibus posticis tribus ad medium connatis, anticis liberis, omnibus subulatis, acutiusculis, pedicellis 3–4 mm. longis, bracteolis linearibus ad medium ornatis elatis; corollis 2.5 cm. vel ultra longis, arcuatis, extus pubescentibus, tubo superne gradatim dilato, intus infra staminum praecipue

anticorum bases piloso, labro subrecto, 4 mm. longo, emarginato, labiolo subaequilongo, lobo medio longiore; staminibus didymis, omnibus breviter exsertis, supra tubi medium sitis; stylo exserto; nuculis circa 1.5 mm. longis, ellipticis, atris.

A species allied to *S. Pavoniana* and at first thought to be a glabrous variety of it. However, study of other members of the type collection, together with an unnumbered collection by Bang at the New York Botanical Garden which is apparently conspecific, suggests a range of leaf variation too great to permit of reference to *S. Pavoniana*. The flowers of the two species are very similar, differing chiefly in the size of the calyces and in the more acute, even acuminate, calyx teeth of *S. pallida*. The species is intermediate with the groups *Discolores* and *Striatae*.

Specimens examined:

BOLIVIA: *Bang*, no data (NY); Turedon, Bolivian plateau, 1891, *Bang* 1127 (US; NY, TYPE; GH).

17. *Satureia glabrata* Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia glabrata Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 313. 1817; Benth. in DC. Prodr. 12: 236. 1848.

Frutex ramosissimus, ramis teretibus, cortice discedente, ramulis densis quadratis patenter pubescentibus; foliis confertis, 6-9 mm. longis, ellipticis vel elliptico-lanceolatis utrinque acutiusculis, subsessilibus, utrinque glabris, pagina superiore nitida, inferiore pallidior, punctata, venis prominentibus, margine subintegra, vix revoluta; floribus tribus in axillis, rarius solitariis pedunculis subnullis, bracteolis primis omnino foliosis, secundariis conformalibus, minoribus ornatis; calycibus 7 mm. longis, extus glabris, fauce intus leniter hirsutis, dentibus subaequalibus, fere 3 mm. longis, longe acuminatis, ore obliquo, pedicellis 2-2.5 mm. longis; corollis 27 mm. longis, extus pubescentibus, intus glabris, labro 7 mm. longo, emarginato, sinu 1 mm. profundo, labiolo paulo brevior, lobo medio lateralibus subduplo longiore; staminibus didymis, supra tubi medium sitis, posticis labro paulo brevioribus, anticis corollam superantibus; thecis late divergentibus, .7-.8 mm. longis; stylo e corolla 7-8 mm. exsertis; nuculis non visis.

Specimens examined:

ECUADOR: vic. of Tablón de Oña, Sept. 27, 1918, *Rose 23083* (US).

18. *Satureia taxifolia* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia taxifolia Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 312. 1817; Benth. in DC. Prodr. 12: 236. 1848.

Thymus taxifolius Willd. ex Benth. in Linnaea 11: 342. 1837.

Frutex ramosissimus altitudine 1–2 m., ramis teretibus, cortice discedente, ramulis densis, quadratis, puberulis; foliis densis, ad ramorum extremitates saepius imbricatis, maximam partem 10–12 mm. longis, saepius lanceolato-oblongis, frequente oblanceolatis etiam lineari-oblongis, apice obtusis, rarius acutiusculis, in basi ad petiolum brevissimum angustatis, utrinque glabris, pagina superiore nitida, inferiore pallidiore, venis prominentibus, margine revoluta, integra vel praecipue ad apicem obscure serrata; floribus in axillis solitariis, rarius didymis, bracteolis linearibus quam pedicellis duplo longioribus ornatis; calycibus 6–7 mm. longis, cano-puberulis, fauce intus nudis, dentibus subaequalibus, circa 1 mm. longis, lanceolatis, acutiusculis, labia postica longiore, ore itaque obliquo, pedicellis 1 mm. longis; corollis coccineis, 25–27 mm. longis, extus pubescentibus, tubo extra calycem multo dilato fauce intus sparse piloso, labro 3–3.5 mm. longo, emarginato, sinu .5 mm. profundo, labiolo aequilongo, lobis subaequalibus; staminibus supra tubi medium sitis, didymis, anticis corolla longioribus, posticis e tubo exsertis; thecis late divaricatis, .6 mm. longis; stylo e corolla 4–5 mm. exserto; nuculis non visis.

Specimens examined:

ECUADOR: Loja, between San Lucas and Oña, 2200–3100 m., Sept. 7, 1923, *Hitchcock 21527* (US); Loja, between La Toma and Loja, 1800–2600 m., Sept. 4, 1923, *Hitchcock 21437* (US); in montibus, Loja, *Hartweg 808* (cited by Benthams as 888) (NY); vicinity of Loja, Sept. 29–Oct. 3, 1918, *Rose 23279* (US).

19. *Satureia Andrei* sp. nov.

Frutex habitu foliisque fere *S. glabratae*, foliis ramulisque tamen utrinque tomentellis, eis 10–12 mm. longis, oblanceolatis,

obtusis, in basi angustatis, venis prominulis, margine subserrata, subrevoluta, petiolis subnullis; floribus in axillis solitariis, bracteolis deciduis ornatis; calycibus 5.5 mm. longis, extus puberulis, 13-venis, dentibus 1 mm. longis, lanceolatis, acutis, subaequalibus sed tamen leniter bilabiatis, intus hirsutis; corollis extus villosis ut videtur circa 15 mm. longis, antheris generis vix exsertis, stylo exserto 4–5 mm.; nuculis non visis.

Specimens examined:

COLOMBIA: Cisne, Oct. 30, 1876, *Andre 4331* (NY, TYPE, haud satis est).

20. *Satureia striata* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia striata Ruiz et Pavon, Syst. Veg. 148. 1798; Benth. Lab. Gen. et Sp. 404. 1834; et in DC. Prodr. 12: 238. 1848.

Frutex strictus, altitudine .5–2 m., caule in basi crasso, duro, terete, striato, ramis ramulisque gracilibus, confertis, fastigiatis, subquadratis, pubescentibus; foliis densis, subconduplicatis, 2–5 mm. longis, plerumque ovatis, obtusis, in basi rotundato-angustatis, vix cordatis, glabris vel vena media subtus ciliata, pagine superiore nitida, venis impressis, inferiore punctata, venis pulchre elevato-striatis lateralibus circa 4–6, pedicellis subnullis, pubescentibus; floribus in axillis solitariis, bracteolis foliis conformalibus; calycibus 6–7 mm. longis, profunde sulcatis, 13-venis, glabris, fauce intus nudis, dentibus 1 mm. longis, subaequalibus, lanceolatis, acutis, patentibus, subrecurvis, pedicellis gracilibus 2 mm. longis; corollis rubris, 20–25 mm. longis, extus molliter villosis, tubo extra calycem multo ampliato, intus infra labiolum pilosis, labro erecto, 5–6 mm. longo, emarginato, sinu 1 mm. profundo, labiolo 4 mm. longo, lobis subaequalibus, rotundatis, medio patentibus; staminibus didymis, posticis e tubo paulo exsertis, anticis labrum subaequantibus, omnibus supra tubi medium sitis; thecis divergentibus, .5–.6 mm. longis; stylo e corolla 3 mm. exserto; nuculis non visis.

Specimens examined:

PERU: Mito, July 23–Aug. 14, 1922, *Macbride & Featherstone 1734* (FM; MBG); 12 mi. south of Pano, 3,076 m., July 4–10, 1922, *Macbride & Featherstone 2213* ("a common hillside shrub") (FM; MBG).

21. *Satureia plicatula* sp. nov.

Suffrutex procumbens, caule duro, ramisque teretibus, ramulis subquadratis, puberulis, nodis approximatis, saepe in ramulis lateralibus brevibus confertissimis; foliis 3–5 mm. longis, ovatis, apice acutis, subacuminato-mucronulatis, in basi rotundatis, subsessilibus, utrinque subglaucis et minutissime puberulis, venis paginae superioris leniter impressis, inferioris pulchre elevatis, lateralibus parallelis plicatulis, media prominentiore, margine serratula nec revoluta; floribus in axillis solitariis, bracteolis pedicellis aequilongis, lineari-carinatis, mox deciduis ornatis, calycibus 6 mm. longis, extus pubescentibus, fauce intus hirsutis, dentibus anticis 1.3 mm. longis, subulatis, patentibus, tribus posticis connatis, subulatis, subpatentibus, pedicellis 2–2.5 mm. longis; corollis coccineis 25 mm. longis, tubo extra calycem multo dilato, extus pubescente, intus praecipue ad staminum bases piloso, labro 4.5 mm. longo, emarginato, sinu .5 mm. profundo, labiolo paulo longiore, lobo medio lateralibus duplo longiore, rotundato, in hoc specimine emarginato, in basi angustato; staminibus paulo supra tubi medium sitis, didymis, omnibus e tubo exsertis, anticis corolla subaequilongis; thecis divergentibus, .7 mm. longis, stylo e corolla 5 mm. exsertis; nuculis non visis.

Specimens examined:

PERU: pendant from river cliff ledges, 2153 m., Llata, Aug. 21, 1922, *Macbride & Featherstone 2238A* (FM, TYPE).

22. *Satureia Jamesoni* Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia Jamesoni Benth. Lab. Gen. et. Sp. 404. 1834, et in DC. Prodr. 12: 239. 1848.

Frutex ut videtur strictus ramosissimus altitudine .5–1 m., caule in basi crasso, duro, terete, striato, ramis ramulisque gracilibus, confertis, fastigiatis, subquadratis, pubescentibus; foliis parvis, confertis, 2 mm. longis, plerumque ovatis, obtusis, in basi rotundato-angustatis, utrinque tenuissime puberulis, subconduplicatis, margine revoluta integra, venis subtus prominentioribus, petiolis minimis, floribus solitariis vel tribus in axillis, bracteolis foliis conformalibus minutissimis; calycibus 5–7 mm. longis, profunde sulcatis, 13-venis, subglabris, fauce intus nudis, den-

tibus 1 mm. longis, subaequalibus, lanceolatis, acutis, patentibus, subrecurvis, pedicellis gracilibus 2 mm. longis; corollis rubris, 20–25 mm. longis, extus pubescentibus, tubo extra calycem multo ampliato, intus infra labiolum piloso, labro erecto, 3 mm. longo, emarginato, sinu 1 mm. profundo, labiolo brevior, lobis subaequalibus, rotundatis, medio patente; staminibus didymis, posticis vix e tubo exsertis, anticis labiolo paulo longioribus, omnibus supra tubi medium sitis, thecis divergentibus, .5–.6 mm. longis, stylo e corolla patenter exserto; nuculis non visis.

Specimens examined:

COLOMBIA: Ayapel, *Andre K 1564* (NY) (doubtful station).

ECUADOR: Provinces Azuay and Cañar, Paramo between Cuenca and Huigra, 2700–3000 m., Sept. 12–13, 1923, *Hitchcock 21693* (US); no data, *Lehmann 4676* (US); vicinity of Cañar, Sept. 15, 1918, *Rose 22720* (US).

23. *Satureia connata* nom. nov.

S. microphylla Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897; non Guss. Fl. Sic. Prodr. 2: 120. 1828.

Gardoquia microphylla Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 311. 1817; Benth. Lab. Gen. et Sp. 404. 1834, et in DC. Prodr. 12: 238. 1848.

? *Satureia ericoides* Willd. ex Benth. in Linnaea 11: 328. 1837.

Frutex ut videtur altitudine circa 1 m., ramis ascendentibus, teretibus, cortice discedente, ramulis quadratis pubescentibus, nodis approximatis; foliis 2–3 mm. longis, subconduplicatis, ovatis, apice obtusis, in basi cordatis, subsessilibus, margine integra, subrevoluta, pagina superiore subglabra, nitida, inferiore puberula, venis prominentioribus; floribus in axillis solitariis, bracteolis omnino foliosis, pedicellos breviter superantibus; calycibus 5 mm. longis, extus puberulis fauce intus glabris, dentibus anticis ovatis, acutis, 1 mm. longis, erectis, tribus posticis connatis, subnullis, labia itaque subintegra, pedicellis 1–1.5 mm. longis; corollis coccineis, 15–20 mm. longis, tubo extra calycem multo dilato, extus pubescente, intus infra labiolum piloso, lobo 2.5 mm. longo, emarginato, sinu 1 mm. profundo, labiolo paulo brevior, lobis subaequalibus; staminibus in hoc specimine subaequilongis, paulo supra tubi medium sitis, 1.5 mm. longis, in

tubo omnino inclusis, thecis parallelis, .5 mm. longis; stylo e corolla 1–2 mm. exserto; nuculis non visis.

Specimens examined:

ECUADOR: ranch between Ibarra and Tulcán, Carchi, 3000 m., Aug. 10–11, 1923, *Hitchcock 20793* (near type locality) (US; NY).

E. Revolutae

Foliis 2–6 mm. longis, ovatis vel linearibus, pagina superiore glabra, sericea vel pubescentia, inferiore tomentosa vel puberula, margine patenter saepius valde revoluta, integra; floribus solitariis in axillis (5–9 in verticillastris sat densis in *S. rigidula*); corollis 9–25 mm. longis.

This group represents the extremes of adaptation to an arid habitat to be found in the genus. The conformation of the leaves of *S. Lindeniana* is especially noteworthy.

24. *Satureia argentea* Briq. in Engler u. Prantl, Die Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia argentea Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 313. 1817; Benth. in DC. Prodr. 12: 237. 1848.

Suffrutex procumbens, ramosus, ramis teretibus, cortice discedente, ramulis pubescentibus, quadratis, nodis approximatis; foliis 3–4 mm. longis, lanceolatis, acutiusculis, in basi rotundato-angustatis, sessilibus, margine patenter revoluta, integra, vena media subtus prominentiore, utrinque argenteo-canis; floribus in axillis solitariis, bracteolis omnino foliosis; calycibus 4.5–5 mm. longis, extus argenteo-canis, fauce intus nudis, dentibus anticis 1 mm. longis, ovatis, acutis, tribus posticis connatis, vix .5 mm. longis, acutis, pedicellis 2 mm. longis elatis, corollis coccineis, 14 mm. longis, tubo extra calycem valde dilato, extus villosus, intus infra labiolum piloso, labro erecto, 2.5 mm. longo, emarginato, sinu .5 mm. profundo, labiolo quam labro paulo brevior, lobis subaequalibus; staminibus didymis, posticis 2–3 mm. longis, vix e tubo exsertis, anticis 2–4 mm. longis, plerumque e corolla breviter exsertis, thecis paulo divergentibus, .6–.7 mm. longis; stylo e corolla 3–4 mm. exserto; nuculis non visis.

Specimens examined:

PERU: pendant from river cliff ledges, 2153 m., Llata, Aug. 21, 1922, *Macbride & Featherstone 2238* (MBG.).

25. *Satureia Weberbaueri* Mansfeld in Bot. Gart. Berlin-Dahlem, Notizbl. 9: 285. 1925.

"Frutex 0.5 m. altus. Rami juniores quadrangulares, breviter puberuli. Foliorum lamina 6-11 mm. longa, 2-4 mm. lata, lamina majorum oblongo-elliptica v. lanceolato-elliptica, lamina minorum saepe linearis v. lanceolato-linearis, apice obtusiuscula, basi in petiolum angustata, margine revoluta (praecipue in foliis minoribus), supra et subtus, cano-brunneo-puberula, nervis supra immersis, subtus prominulis; petiolus 1 mm. longus vel subnullus, puberulus. Verticillastri apice ramulorum brevium spicas formantes, 2-6-flori; folia floralia conformia, calyces aequantia vel superantia; bractae lineares. Calyx 8 mm. longus, cano-brunneo-puberulus, costatus, bilabiatus ($3/2$), dentibus labii paullo connatis, dentibus labioli subliberis, intus puberulis. Corolla circ. 15 mm. longa, labio emarginato et labiolo trilobato circ. 3 mm. longis, extus $\pm$ pubescens, intus antice disperse pilosa. Stamina didynamia, filamenta antica 6 mm. longa, exserta, postica 4 mm. longa, subexserta; antherae divergentes. Stylus 20 mm. longus.

"Peru: Depart. Libertad, Prov. Santiago de Chuco, bei der Hacienda Angasmarca, lockeres, von Grassteppe durchsetztes Gesträuch, 3000-3100 m., $1/2$ m. hoher Strauch mit purpurnen Blüten (Fl. 8. VII. 1914.—WEBERBAUER n. 7016!).

"Die nächststehenden Arten *S. argentea* (Kunth) Briq. und *S. sericea* (Presl) Briq. unterscheiden sich schon durch die dichtere, weisse Behaarung."

Mihi omnino ignota.

26. *Satureia rigidula* nom. nov.

S. fasciculata Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897, nec Rafin. Préc. Découv. 39. 1814; nec Tausch in Syll. Ratisb. 2: 248. 1828.

Gardoquia fasciculata Benth. Pl. Hartweg. 243. 1839; et in DC. Prodr. 12: 239. 1848.

Frutex altitudine 40-80 cm., ramis erectis vel ascendentibus, virgatis, ramulis numerosis, brevibus, ascendentibus, omnibus subteretibus, pubescentibus, saepe incanis, ramulorum internodiis foliis subaequilongis; foliis in axillis fasciculatis, sessilibus.

3–5 mm. longis, saepius oblongo-linearibus et in basi .5–1.5 mm. latis, frequenter tamen anguste triangulis et in basi latoribus, acutis, fere ad venam mediam revoluta, pagina superiore puberula, inferiore cano-tomentosa; verticillastris saepius 5–9-floribus, decussatim instructis, in spicam densam 1–4 cm. longam ad ramulorum apices confertis, bracteis subulatis, calycibus brevioribus; calycibus 3.5–4 mm. longis, extus puberulis, subbilabiatis, fauce intus nudis, dentibus lanceolato-subulatis, superioribus circa 1.5 mm. longis, inferioribus fere 2 mm. longis, pedicellis subnullis; corollis violaceis, circa 10 mm. longis, extus pubescentibus, tubo superne ampliato, decurvo, intus infra stamines pubescentibus, labro bifido, sinu circa .5 mm. profundo, labiolo trifido, lobo medio paulo majore, staminibus didymis, ad corollae medium sitis, anticis subexsertis, posticis inclusis, thecis divergentibus; stylo paulo exserto; nuculis oblongis, angustis, circa 1 mm. longis, fuscis.

Specimens examined:

?COLOMBIA: Rio Chota, June 6, 1876, *Andre 3583* (NY).

ECUADOR: plains of Pamasqui and San Antonio, 2615 m., *Jameson* (NY); in planitie Rumibamba necnon juxta pontem Guapalo prope Quito, *Hartweg 1338* (NY); no data, *Lehmann 6347* (US); Alausí, Chimborazo, 2500 m., July 19, 27, 1923, *Hitchcock 20719* (US); crescit in apricis prope Quito, 2461 m., Jan. 21, 1856, *Jameson 181* (GH); 1857–9, *Spruce 6062* (GH); Alausí, Chimborazo, 2500 m., July 19, 27, 1923, *Hitchcock 20705* (US).

27. *Satureia sericea* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia sericea Presl in Benth. Lab. Gen. et Sp. 402. 1834; Benth. in DC. Prodr. 12: 238. 1848.

Suffrutex procumbens vel erectus, altitudine circa 1 m., ramis ascendentibus, teretibus, cortice discedente, ramulis quadratis, sericeo-villosis, gracilibus; foliis 5–7 mm. longis, oblongo-linearibus, 1–2 mm. latis, obtusis, in basi ad petiolum brevissimum angustatis, margine integra, valde revoluta, utrinque sericeo-villosis, argenteis, subtus albis, saepe in axillis fasciculatis; floribus tribus in axillis, rarius solitariis, brevissime pedunculatis, bracteolis primis omnino foliosis, secundariis conformalibus sed

minoribus; calycibus 6-7 mm. longis, extus sericeo-villosis, dentibus intus supra faucem pubescentibus duobus anticis 1.5 mm. longis, posticis 1 mm., omnibus lanceolatis, acutis, pedicellis 1-2 mm. longis elatis; corollis coccineis extus villosis, 22-24 mm. longis, tubo extra calycem valde dilato, intus infra labiolum piloso, labro erecto, 3 mm. longo, emarginato, sinu 1 mm. profundo, labiolo paulo brevior, lobis subaequalibus, medio tamen paulo longiore; staminibus didymis, supra tubi medium sitis, anticis 7 mm. longis, e corolla exsertis, posticis 4 mm. longis, tubo subaequalibus, antheris .7-.8 mm. longis, thecis divergentibus; stylo 6-8 mm. e corolla exserto; nuculis non visis.

Specimens examined:

PERU: sunny slopes, "Chunmis," Chasqui, 3230 m., Sept. 27, 1922, *Macbride & Featherstone 1765* (MBG; FM); grassy rocky canyon slope, 2153 m., Llata, Aug. 21, 1922, *Macbride & Featherstone 2243* (MBG; FM); hacienda, 9 mi. up river from Yanahuanca, 3282 m., northwest grassy slope, June 21, 1922, *Macbride & Featherstone 1272* (MBG; FM); no data, *Matthews* (NY).

28. *Satureia revoluta* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia revoluta Ruiz et Pavon, Syst. Veg. 149. 1798; Benth. Lab. Gen. et Sp., 405. 1834; et in DC. Prodr. 12: 239. 1848.

S. insignis Mansfeld Bot. Gart. Berlin-Dahlem, Notizbl. 9: 288. 1925.

Suffrutex procumbens, caulibus teretibus, cortice discedente, ramis ramulisque pubescentibus, subteretibus quadratisve, gracilibus, confertis et subfastigiatis; foliis densis, 2-3 mm. longis, ovatis vel patenter triangulis, apice obtusis, in basi truncatis, margine rarius convexa, valde et pulchre revoluta, pagina superiora viride, puberula, inferiore dense albo-tomentosa, petiolis 1 mm. longis elatis; floribus saepius solitariis in axillis, bracteolis omnino foliosis; calycibus 4.5-5 mm. longis, extus cano-puberulis, fauce intus nudis, patenter bilabiatis, labiis 1.5 mm. longis, dentibus parte dimidia brevior, lanceolatis, acutis, pedicellis maturis 3-4 mm. longis; corollis coccineis 20-22 mm. longis, tubo extra calycem multo dilato, extus molliter villoso intus infra labiolum pi-

losis, labro erecto 3 mm. longo, emarginato, sinu 1 mm. profundo, labiolo aequilongo vel paulo longiore, lobis subaequalibus; staminibus didymis supra tubi medium sitis, omnibus e tubo exsertis, anticis labro subaequilongis thecis subparallelis, .5 mm. longis; stylo e tubo 5–6 mm. exserto; nuculis non visis.

The present author has found no characters in the type collection of *S. insignis* as represented in the Field Museum to justify specific segregation from *S. revoluta* as understood by him.

Specimens examined:

PERU: *Wilkes Exp.* (US; GH); between Cuanabamba and Oyavaca, 3200 m., May 1912, *Weberbauer 6333*, (FM, *type collection* of *S. insignis* Mansf.); Oroya near Lima, 1919, *M. Kalenborn 162* (US; MBG); ? Culluy, July, *Matthews 666* (GH).

29. *Satureia Lindeniana* Briq. in *Ann. Conserv. et Jard. Bot. Genève* 2: 191. 1898.

Suffrutex ut videtur, altitudine circa 15 cm., ramis e caudice lignoso erectis, virgatis, subteretibus, pubescentibus, nodis inter se 2–5 mm. distantibus, ramulis brevibus, erecto-ascendentibus; foliis circa 4 mm. longis, erectis, sessilibus, oblongo-linearibus, apice obtusis, in basi rotundato-angustatis, marginibus integris, valde replicatis et infra venam mediam conniventibus, paginam inferiorem cano-tomentosam itaque toto adumbrantibus, facie superiore pubescente, inferiore glabra; floribus oppositis, solitariis in axillis, calycibus subtubulosis, 6 mm. longis, extus puberulis, paulo arcuatis, patente bilabiatis, labia superiore 2 mm. longa, dentibus ad medium connatis, breviter triangulari-lanceolatis, inferiore 3 mm. longa, dentibus lanceolato-subulatis inter se liberis et a labia superiore sinu distinctiore separatis, pedicellis 1 mm. longis elatis; corollis 9 mm. longis, extus pubescentibus, tubo intus nudo, superne ampliato, leviter arcuato, labro suberecto, 1 mm. longo, ovato, emarginato, labiolo 2 mm. longo, patente, lobo medio majore obovato; staminibus sub labro ascendentibus; stylo paulo exserto; nuculis non visis.

Specimens examined:

COLOMBIA: Nevada Sta. Marta, *Purdie* (GH).

30. *Satureia rugosa* Briq. in *Engler u. Prantl, Nat. Pflanzenfam.*, ed. 1, IV. Abt. 3a, 300. 1897.

Gardoquia rugosa Benth. Lab. Gen. et. Sp., 399. 1834; et in DC. Prodr. 12: 236. 1848.

“fruticosa, villosa, foliis petiolatis ovato-rhomboideis serrato-dentatis basi rotundatis coriaceis rugosis utrinque villosis subtus vix canescentibus, verticillastris laxis, multifloris, calycis villosi dentibus subulatis ciliatis, fauce intus subnuda, corollis calyce vix duplo longioribus. In Peruvia (Ruiz et Pavon!). Frutex ramosissimus, ramis duris tetragonis junioribus rufo-villosis. Folia 1-1½ pollicaria, reticulato-venosa, floralia minora et cymas superantia. Cymae breviter pedunculatae. Bracteae oblongae, villosae, calyce breviores. Pedicelli breves. Calyces 3 lin. longi, tenues, virides, villosissimi. Corolla villosa, labio superiore erecto, brevissime emarginato, inferiore subpatente, lobis oblongis inter se subaequalibus obtusis integerrimis. Stamina didynama, antheris sub labio superiore per paria approximatis. Species aequo jure ad *Melissam*, *Micromeriam*, vel *Gardoquiam* referenda (v.s. olim in herb. Lamb.).” (Benth. in DC. Prodr. 12: 236. 1848).

Sect. *Xenopoma* (Willd.) Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Xenopoma Willd. in Ges. Naturforsch. Fr. Berlin Mag. 5: 399. 1811.

Suffrutices fruticulive, rarius herbae perennes humiles, ramulis divaricatis, foliis obovatis, subintegris, pubescentibus; floribus 1-6 in foliorum axillis, praecipue in speciebus humilibus solitariis, pedicellis quam calycibus brevioribus, singulis bracteolis duobus ornatis elatis; calycibus tubulosis, frequenter subturbinatis, dentibus subaequalibus obscure bilabiatis acutis, intus nudis vel hirsutis, erectis vel patentibus; corollae tubo omnino incluso vel breviter exserto.

31. *Satureia nubigena* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Thymus nubigenus Kunth in Humboldt et Bonpland, Nov. Gen. et Sp. Pl. 2: 316. 1817.

Micromeria nubigena Benth. Lab. Gen. et Sp. 381. 1834; et in DC. Prodr. 12: 222. 1848.

Thymus humifusus Willd. ex Benth. in Linnaea 11: 342. 1837.

Herba procumbens, fragrans, caulibus reptantibus, ramosissimis, ramis ramulisque filiformis, atris, puberulis hispidisve, subteretibus, foliis 3–4 mm. longis, approximatis, plerumque ovatis, apice obtusis, in basi ad petiolum angustatis, frequenter rotundato-ovatis et in basi sub-truncatis, utrinque puberulis saepius villosulis vel hispidulis rarius subglabris, margine integra revoluta; floribus in axillis solitariis, bracteolis parvis, linearibus, parte tertia pedicellorum longis ornatis; calycibus 3–4 mm. longis, superne patenter dilatis, hirsutulis, sub-15-venis, fauce subnudis, dentibus .6–.9 mm. longis, lanceolato-acuminatis, aequilongis, anticis tamen patenter majoribus quam posticis tribus, pedicellis 1.5–2 mm. longis elatis; corollis 5–6 mm. longis, tubo superne sat ampliato, nectarostegio e pilis intus fauce areolam formante, labro emarginato, sinu parte dimidia labri longitudinis profundo, labioli lobo medio majore, rotundato, 1–1.5 mm. longo; staminibus parvis, circa 1 mm. longis, didymis, supra tubi medium sitis, thecis paulo divergentibus; stylo corolla aequilongo; nuculis .8–.9 mm. longis, oblongis, atris.

Specimens examined:

VENEZUELA: "Poleo de paramo," Paramo Sto. Domingo, 3600 m., Mérida, Sept. 14, 1922, *Jahn 1151* (US); Laguna Verde, Paramo Mucuchies, Mérida, 3384 m., 1922, *de Bellard 19* (US); summit of Páramo, Quirorá, 3200 m., Mérida, Feb. 24, 1922, *Jahn 882* (US); Sierra de Nevada de Mérida, Laguna del Gallo, 4070 m., Dec. 1910, *Jahn 74* (US).

COLOMBIA: in monte ignivomo Azufral, May 18, 1876, *Andre 3249* (NY); Hacienda de Antisana, *Hartweg 1337* (NY); Ruiz, 3000 m., 1918, *Dawe 750* (NY); Canaan, Mt. Puracè, El Cauca, open near Rio Anambiu, 2900–3200 m., June 11–16, 1922, *Killip 6732* (ASP; US); dry open, 3500–4000 m., Paramo de Ruiz, Tolima, Dec. 16–17, 1917, *Pennell 3015* (US; MBG; GH; NY); Westabhange des Paramó de Ruiz, El Cauca, 3000–3500 m., Sept. 11, 1883, *Lehmann 3111* (US).

ECUADOR: Andes near Quito, 4000 m., *Couthouy* (NY); Andes of Quito, 4000 m., *Jameson 217*, "crescit in graminosis alpinis (vernacule "paramo de los Andes"), 4000 m., Jan. 21, 1856 (US; GH); Paramo de Tuza, 3400 m., Jan. 31, 1881, *Lehmann 3092 a* (US); between Urbina and Mt. Chimborazo, 3600–4500 m., Prov.

Chimborazo, Oct. 4, 1923, *Hitchcock 21987* (US; NY); La Rinconada between Ibarra and Tulcan, 3000 m., Carchi, Aug. 10-11, 1923, *Hitchcock 20787* (US; NY); paramo between Oña and Cuenca, 2700-3300 m., Azuay, Sept. 9-10, 1923, *Hitchcock 21635* (US).

PERU: mountain of ? Pellshum, "very plentiful," *Jameson* (ASP); on mossy rock, Tambo de Vaca, 4000 m., June 10-24, 1923, *Macbride 4399* (FM; MBG).

Var. *glabrescens* Benth in DC. Prodr. 12: 222. 1848.

Ramis foliisque puberulis vel subglabris nec villosulis hispidentibus.

Specimens examined:

COLOMBIA: dry grassy paramo, 3700-4200 m., Paramo del Quindio, Caldas, Aug. 15-20, 1922, *Pennell & Hazen 10001* (US; ASP); grassy paramo, "Llano de Paletara," 2950-3100 m., June 15-17, 1922, *Pennell 6930* (ASP; US); no data, *Lehmann 4719* (US); Popayan, in paramo de Guanacas, *Hartweg 1336* (NY).

ECUADOR: Quitensian Andes, 1855, *Couthouy* (GH).

PERU: 6 mi. south of Mito, 3076 m., Aug. 1-5, 1922, *Macbride & Featherstone 1821* (NY; MBG).

32. *Satureia Darwinii* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Micromeria Darwinii Benth. in DC. Prodr. 12: 222. 1848.

Fruticulus humilis, prostratus, tegetes faciens, caulibus in basi lignosis, ramis numerosis, subteretibus, pubescentibus, internodiis maximam partem minus quam foliorum longitudine; foliis 4-5 mm. longis, obovatis vel subspatulatis, obtusis, in basi angustatis, paginis ambobus pubescentibus; floribus in axillis solitariis, pedicellis circa 1 mm. longis, bracteolis duobus supra medium positis; calycibus vix 4 mm. longis, 15-venis, extus pubescentibus, dentibus 1 mm. longis, ovato-lanceolatis, obtusis, subaequalibus, incurvis, intus hirsutis, corollis 5 mm. longis, tubo incluso, labro bifido, labioli lobo medio majore; staminibus inclusis, vix 1 mm. longis, thecis sub-parallelis; nuculis von visis.

Specimens examined:

ARGENTINA: S. Patagonia in patches everywhere, Nov. 15, 1896, *Peterson* (NY); Patagonia, 50/30, 1882, *Moreno 186* (NY); Killikaike, Patagonia, *Brown 65* (NY).

33. *Satureia pusilla* Macl. in Rept. Princeton Univ. Exp. to Patagonia 8: 698. 1905.

Micromeria pasilla (sic) Phil. Anal. Univ. Chile 90: 556. 1895.

Herba perennis humilis, altitudine 5–6 cm., caulibus in basi duris, repentibus, ramis numerosis, gracilibus, puberulis, subteretibus; foliis 3–4 mm. longis, obovatis, in basi angustatis, utrinque puberulis, subsessilibus; floribus in axillis solitariis, pedicellis circa 2 mm. longis, bracteolis duobus ad medium positis; calycibus 3.5 mm. longis, extus hispidissimis, setis patentibus, 13-venis, bilabiatis, dentibus tribus posticis circa .4 mm. longis, anticis circa .6 mm., omnibus ovato-triangularis, acutis, saepe purpurascentibus, intus hirsutis, margine ciliolata; corollis vix 5 mm. longis, labro bifido, labiolo longiore, lobo medio majore; staminibus inclusis, vix 1 mm. longis, thecis parallelis; nuculis non visis.

Specimens examined:

ARGENTINA: Gregory Bay, Magellan Sts., Nov. 23, 1886, *Safford* (NY, type collection).

34. *Satureia vana* sp. nov.

Frutex foliosus altitudine 2 m., ramis teretibus, ramulis divaricatis, quadratis, puberulis, internodiis folia subaequantibus, foliis 8–12 mm. longis, late ovatis vel subrotundatis, obtusis, in basi saepius cuneatis, rugosis, margine supra medium subserratis, paginis ambobus puberulis, petiolis circa 1 mm. longis; floribus 3–6 in foliorum axillis, verticillastris subsessilibus, bracteolis 1 mm. longis ornatis; calycibus 3.5 mm. longis, in basi leniter angustatis, 13-venis, extus praecipue ad venas hispidulis, dentibus circa 1 mm. longis, ovatis, acutis, subaequalibus sed duobus anticis tamen longioribus, intus tenuiter hirsutis, pedicellis subnullis; corollis 7–8 mm. longis, extus villosulis, tubo superne gradatim dilato, labro 1.5 mm. longo, bifido, labiolo paulo longiore, lobo medio majore; staminibus didymis, breviter exsertis, thecis divaricatis; nuculis non visis.

A nondescript species singularly devoid of any marked character, but combining characteristics of sections *Gardoquia* and *Xenopoma*.

Specimens examined:

PERU: rainy-green formation, 3100 m., Carumas, Moquegua, Feb. 21–March 6, 1925, *Weberbauer 7259* (FM, TYPE).

35. *Satureia boliviana* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Micromeria boliviana Benth. Lab. Gen. et Sp., 731. 1835; et in DC. Prodr. 12: 222. 1848.

Xenopoma bolivianum Griseb. in Goett. Abh. 25: 272. 1879.

Satureia Kuntzeana Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Frutex ramosus altitudine 30–90 cm., caulibus teretibus glabris, cortice discedente, ramis ramulisque puberulis, gracilibus, quadratis, angulis acutis, submarginatis; foliis .5–1.5 cm. longis, magnitudine formaque diversis, eis in ramulis sterilibus diffusis, ovato-ellipticis, obtusis vel subacutis, in basi cuneato-angustatis, margine frequenter obscure serrata et revoluta, plerumque 1–1.5 cm. longis, eis in ramulis florentibus densis saepius oblongis, obtusis, in basi angustatis, margine integra et revoluta, plerumque .5–1 cm. longis, omnibus utrinque puberulis floribus solitariis in axillis, subsessilibus et in paniculis brevibus lateralibus dispositis (frequenter tamen in ramis substerilibus tribus in axillis pedunculo breve elatis); calycibus 3 mm. longis, tubulosis, dentibus lanceolatis-acutis, subaequalibus, corollis 8–9 mm. longis, pubescentibus, tubo superne patenter ampliato, intus ad medium breviter piloso, labro 1 mm. longo, emarginato, labiolo 2 mm. longo, lobis subaequalibus, rotundatis, medio paulo majore; staminibus didymis 2–2.5 mm. longis, supra tubi medium insertis, thecis paulo divergentibus; stylo corolla aequilongo; nuculis non visis.

Satureia Kuntzeana was based by Briquet on a collection by Kuntze at Tunari, 4000 m., Apr. 1892. It was referred by him to the Section *Gardoquia* to a position near *S. microphylla* (*S. connata* nom. nov.) and *S. Jamesoni* with the following note "Les corolles sont blanches au lieu d'être écarlates, c'est encore une exception qui fortifie notre conception des *Gardoquia* comme simple section du genre *Satureia*." A sheet at the U. S. Nat. Herb. bearing the above-cited collection-data and labelled in Kuntze's hand "*Satureja Kuntzeana* Briq.," is assuredly *S.*

boliviana. It corresponds in every way to Briquet's description of the type.

Specimens examined:

BOLIVIA: Cotani, 2450 m., Sept. 1911, *Buchtien* 5878 (US); La Paz, 2653 m., Aug. 15, 1901, *Williams* 1674 (US; NY); Larecaja, Sorata, 2650–3300 m., Feb. 1857–July, 1858, *Mandon* 517 (GH; NY); an sonnigen Abhängen, 3600 m., La Paz, Sept. 3, 1906, *Buchtien* 438 (US); Tiahuanaco, 3900 m., Nov. 1913, *Buchtien* 438 (GH; NY); La Paz, sonnige Abhänge, 3700 m., Nov. 3, 1906, *Buchtien* (GH); vic. of La Paz, Aug. 15, 1914, *Rose* 18894 (US; NY); no data, *Bang* (NY); viciniis Achacache, monticula Arichaca in petrosis, 4000 m. alpine, Jan. 1859, *Mandon* 518 (apparently a dwarf from 15 to 20 cm. tall, otherwise about the same) (NY); Tunari, 4000 m., Apr. 5, 1892, *Kuntze* (type collection of *S. Kuntzeana* Briq.) (US); Sirupaya bei Yanacachi, 2100 m., Nov. 28, 1906, *Buchtien* 315 (US); Unduavi, 3076 m., Oct. 1885, *Rusby* 1500 (ASP; US; GH; NY).

Var. *tarijense* comb. nov.

Xenopoma bolivianum Griseb. var. *tarijense* Wedd. in Griseb. Symb. Fl. Argent. 272. 1879.

Foliis patenter serratis, crenarum culminibus acutis, inter se 1–2 mm. distantibus, pagina inferiore pallidior; corollae tubo calyce duplo longiore.

Specimens examined:

ARGENTINA: Cuesta de Tesanca et del Inca, May 25, 1873, *Lorentz & Hieronymus* 1037 (NY).

36. *Satureia simulans* sp. nov.

Frutex ramosus foliosusque altitudine circa 2 m., ramis teretibus vel subquadratis, cortice discedente, ramulis ascendentibus, pubescentibus, quadratis, angulis obtusis; foliis 1–2 cm. longis, lanceolatis, acutis, in basi rotundato-cuneatis, utrinque breviter pubescentibus, margine revoluta, subserrata, petiolis 1–2 mm. longis elatis, floribus 3–6 in axillis, pedunculis brevibus elatis, rarius in axillis superioribus solitariis, bracteolis circa 1 mm. longis ornatis; calycibus 3.5 mm. longis, extus hirsutis, fauce intus nudis, dentibus fere 1 mm. longis, lanceolatis, acutioribus, duobus anticis quam posticis tribus paulo longioribus et saepe patentibus,

pedicellis subnullis; corollis 6–8 mm. longis, tubo intus piloso, superne gradatim dilato, labiis 1.5–2 mm. longis, labro emarginato, sinu .5 mm. profundo, labioli lobis subaequalibus, rotundatis, medio ad basim angustato; staminibus didymis, supra tubi medium sitis, vix e tubo exsertis, thecis parallelis, .4 mm. longis; stylo e tubo paulo exserto; nuculis von visis.

Planta aspectu *S. boliviana* speciminibus substerilibus valde similis, floribus tamen differt.

Specimens examined:

BOLIVIA: Unduavi; Nord Yungas, 3300 m., Nov. 1910, *Buchtien 2954* (US); Unduavi, shrub 2 m., 3300 m., Nov. 1910, *Buchtien 2955* (US, TYPE); Sorata, Apr. 19, 1920, *Holway 550* (US).

37. *Satureia axillaris* (Rusby), comb. nov.

Bystropogon axillare Rusby, Mem. Torr. Bot. Club 6: 108. 1896.

B. uniflorus Busby in Briq. Bull. l'Herb. Boiss. 4: 802. 1896.

Suffrutex diffusus, ramosus, altitudine ad 1 m., caulibus ramis ramulisque gracillimis, glabris, quadratis vel caulibus teretibus, angulis submarginatis; foliis 10–25 mm. longis, 1.5–3.5 mm. latis, lineari-lanceolatis, rarius oblongis, apice acutiusculis, in basi ad petiolum brevem vel subnullum angustatis, utrinque omnino, glabris, margine subrevoluta, obscurissime et sparse serrata; floribus in axillis solitariis, bracteolis parvis, subulatis, quam pedicellis brevioribus subtentis; calycibus 1.5–2 mm. longis, tubulosis, dentibus lanceolatis, acutis, patentibus, subaequalibus, fauce intus glabris; corollis calyces vix superantibus, 2.5 mm. longis, tubo superne ampliato, intus glabro, labro emarginato, labioli lobo medio patente, rotundato, 1 mm. longo, staminibus minutissimis ad tubi medium sitis; stylo corolla aequilongo; nuculis non visis.

Specimens examined:

BOLIVIA: Bolivian plateau, 1891, *Bang 1125* (type of *Bystropogon axillare* Rusby) (US; ASP; MBG; GH); Sierra de Santa Cruz, 1600 m., May, 1892, *Kuntze* (NY).

38. *Satureia brevicalyx* sp. nov.

Suffrutex erectus altitudine 50–60 cm., caule ut videtur virgato, puberulo, quadrato, angulis obtusis, internodiis 2–4 cm. longis,

ramulis numerosis brevibus, ascendentibus, gracilibus, puberulis; internodiis 3–10 mm. longis; foliis 3–5 mm. longis, ellipticis vel ovalibus apice saepius obtusis, in basi rotundato-angustatis, margine revoluta, subintegra, utrinque molliter hirtellis, petiolis circa 1 mm. longis elatis; floribus solitariis in axillis, numerosis, bracteis subulatis, quam pedicello brevioribus subtentis; calycibus 3 mm. longis, late tubulosis, subbilabiatis, fauce intus nudis, dentibus ovatis, obtusis, subaequilongis; corollis 5–6 mm. longis, extus pubescentibus, tubo leniter arcuato, superne ampliato, intus infra stamines hirtello, labro subrecto, ovato, emarginato, labiolo quam labro paulo longiore, lobo medio obovato, majore; staminibus 1 mm. longis, inclusis, thecis parallelis, supra tubi medium sitis; stylo paulo exserto; nuculis ovatis, fuscis, .5 mm. longis.

Specimens examined:

PERU: Panticalla Pass, 3600 m., July 16, 1915, *Cook & Gilbert 1877* (US); "Bolivian and Peruvian Andes" (GH); Cuzco, March, 1925, *Herrera 825* (US, TYPE).

39. *Satureia oligantha* Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 380. 1897.

Micromeria Gilliesii Benth. Lab. Gen. et Sp. 381. 1834; et in DC. Prodr. 12: 222. 1848.

Xenopoma eugenoides Griseb. in Goett. Abh. 19: 237. 1874.

Micromeria eugenoides Hieronym. in Acad. Nac. Cordoba, Bol. 4: 413. 1881.

?*Bystropogon minutus* Briq. in Bull. l'Herb. Boiss. 4: 803. 1896.

Satureia Gilliesii Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897 (sub Sect. *Xenopoma*).

S. eugenoides Loes. ex Robt. Fries in Nov. Acta Soc. Upsal. IV. 1: 107. 1905.

Suffrutex ramosus altitudine circa .5 m., in basi lignosus, caule terete, cortice discedente, ramis ramulisque puberulis vel tenuiter pubescentibus, gracilibus, subtortis, quadratis, angulis acutis; foliis 3–8 mm. longis, approximatis, oblongis, obtusis, utrinque puberulis vel pubescentibus, glandulosis, margine subrevoluta; pedicellis .5–1 mm. longis, subsolitariis, tribus tamen frequenter

in axillis inferioribus pedunculo breve elatis, bracteolis subulatis, pedicellis aequilongis ornatis; calycibus parvis, 1.5–2 mm. longis, campanulatis, dentibus subaequalibus, acuminatis, patentibus et paulo recurvis, fauce intus subvillosis; corollis calyces vix superantibus, 2.5 mm. longis, tubo superne ampliato, intus glabro, labro emarginato, labioli lobo medio patente, rotundato, 1 mm. longo, staminibus minutissimis ad tubi medium sitis; stylo corolla aequilongo; nuculis oblongis, .7 mm. longis.

Specimens examined:

PERU: above Chivay, Coilloma, Arequipa, March, 1914, *Weberbauer 6891* (FM).

BOLIVIA: Oruro, Tapacari, 4000 m., March 17, 1892, *Kuntze* (type collection of *Bystropogon minutus*) Briq. (NY).

ARGENTINA: Sierra Farmatura, 1873, *Lorentz & Hieronymus* (NY); Cuesta de la Muschaca, Catamarca, Feb. 1876, *Schickendanz 254* (NY); Sierra de Tucuman, Jan. 10–17, 1878, *Lorentz & Hieronymus 722* (US); Capillitas, Catamarca, 1875, collector unknown (ASP); El Candado, Andalgalá, Oct. 2, 1916, *Jørgensen 1139* (MBG; UC).

SPECIES MIHI OMNINO IGNOTAE

Micromeria pulchella Wedd. Chlor. And. 2: 151. 1857.

Gardoquia salviaefolia Colla Mem. Accad. Torin. 39: 2. 1836.

Satureia bonariensis Briq. in Engler u. Prantl, Nat. Pflanzenfam., ed. 1, IV. Abt. 3a, 300. 1897.

Micromeria bonariensis Fisch. et Mey. Ind. Sem. Hort. Petrop. 10: 56. 1845.

“hispidula, caulibus erectiusculis, foliis linearibus punctatoglandulosis integerrimis, verticillastris sexfloris, corollis inclusis. In Bonaria unde sem. misit Bonpl. Thymus Bonariensis Ten. Ind. Sem. Hort. Neap. 1839. Corolla in planta culta saepissime calyptraeformis, non expansa, ex Fisch. Mey. An revera didynama? An eadem ac Hedeoma multiflora?” (Benth. in DC. Prodr. 12: 223. 1848.)

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New species, varieties, and combinations are printed in bold face type; synonyms, in *italics*; and previously published valid names in ordinary type.

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<i>Micromeria</i> sect. <i>Hesperothymus</i>	50	<i>nubigena</i> var. <i>glabrescens</i>	78
<i>Rizoa</i>	47	<i>obovata</i>	58
<i>ovatifolia</i>	53	<i>oligantha</i>	83
<i>Satureia</i>	47	pallida	65
— <i>Discolores</i>	59	<i>Pavoniana</i>	64
— <i>Ellipticae</i>	53	plicatula	69



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