

«LYCIUM» IN ARGENTINA

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RESUMEN

«*Lycium*» en Argentina. — El autor estudia los representantes argentinos del género *Lycium* (*Solanaceae*). Publica los siguientes taxa nuevos: *L. cuneatum* Dammer var. *Rojasii*, *L. Gilliesianum* Miers var. *Ruiz-Lealii*, *L. Miersii*, *L. Hieronymi*, *L. O'Donellii*, *L. Hunzikeri*, *L. Schreiteri*, *L. Schickendantzii*, *L. ovalilobum* Hitchc. var. *Sleumeri*, *L. Comberi* Hitchc. var. *Donatii*, *L. Hitchcockii*, *L. Sparrei*, *L. chilense* Miers ex Bertero var. *O'Donellii*, *L. chilense* Miers ex Bertero var. *Descolei*, y *L. Chilense* Miers ex Bertero var. *Meyeri*, y las nuevas combinaciones: *L. Morongii* Britton var. *parvifolium* (Hitchc.) (= *L. Morongii* Britton f. *parvifolium* Hitchc.), *L. Gilliesianum* Miers var. *fuscum* (= *L. fuscum* Miers), *L. chilense* Miers ex Bertero var. *confertifolium* (Miers) (= *L. scoparium* Miers var. *confertifolium* Miers) y *L. chilense* Miers ex Bertero var. *minutifolium* Miers) (= *L. filiforme* Miers var. *minutifolium* Miers). El trabajo lleva claves para la identificación de las distintas taxas tratadas y un índice de los ejemplares revisados.

Exclusive of Tierra del Fuego, almost every region of Argentina has one or more species of *Lycium* present either as a dominant or as a subdominant. In recent years the collections of this important plant have been augmented enormously. An attempt to order up the recent collections in the herbarium of Fundación Miguel Lillo, started the present work.

In 1932 Charles Leo Hitchcock¹ published a monographic study of the genus in the Western Hemisphere. This excellent monograph has been the basis for the present work. There are apparently several new entities which have appeared in recent collections which he

¹ HITCHCOCK, C. LEO, *A Monographic Study of the Genus «Lycium» of the Western Hemisphere*. — *Annals of the Missouri Botanical Garden*, 19, 179-374, 1932.

did not have available for his studies. Otherwise, the present work differs mainly in the reflection of a somewhat different concept in regards to separation of varieties and in the treatment of possible hybrids. Unfortunately time has not permitted the study of the collections of additional herbaria, and only the specimens of the Fundación Miguel Lillo are cited in the present study.

The genus *Lycium* is essentially cosmopolitan. Historically it has been known since the time of Pliny and Dioscorides. The post-Linnean history of the genus can be obtained by reference to Hitchcock's monograph. Probably the most important studies as regards the Argentinian species, before the monograph of Hitchcock, was that of Miers.

The stems of all of the species are perennial; a few species have dwarfed stems which are scarcely ligneous, but most species have woody stems which are usually rigid. Most species bear small rigid lateral branches which are spinous-tipped. Rhizomes are very common and often all of the shrubs of one group are connected by their rhizomes.

Xerophytic leaves are typical of the genus. Large ovate, flat, thin leaves are characteristic of some species, thick, vermiform, fleshy leaves are characteristic of others, while others have small, flat leaves densely covered with pubescence. Often a whole series of specimens of a species will show only small foliage which is characteristic of the older outer branches, while the plant bears larger leaves often of different shape (and often with different pubescence) on younger, fast growing branches produced from the base into the interior of the (almost impenetrable network of spiny branches of the) crown.

The calyx is usually quite characteristic for each species. It is composed of a tubular portion with four to six lobes, their proportionate length being characteristic for the species. The calyx is often somewhat accrescent but often splits during the growth of the fruit.

In the present study the length of the corolla tube is given including the entire portion below the corolla lobes. The pubescence of the corolla is often very characteristic for the species. The size of the corolla of some species differs notably on individual specimens, while in other species the size is quite constant.

The stamens are adnate to the tube of the corolla alternating with the lobes, most species are pubescent near the base of the filaments. In the section *Selidophora* the base of the filament is enlarg-

ed, and the inner surface is flat and without pubescence. The position of the insertion of the stamens in the corolla tube is rather constant within each species.

The relative length of the style is often useful in separating related species.

The fruit are rather characteristic for each species. The section *Sclerocarpellum* has a fruit of two carpels, each carpel with hardened pericarp and bearing one seed. The other sections have a soft pericarp and bear many seed.

KEY TO THE ARGENTINIAN TAXONS OF «LYCIUM»

1. Filaments neither enlarged nor glandular but often covered with hairs near the base.
 2. Carpels 1-ovuled; fruit 2-seeded. Section *Sclerocarpellum*
 1. *L. Ameghinoi*
 2. Carpels 2-many-ovuled; fruit 2-many-seeded, but if only s-seeded with many abortive ovules.

Section *Eulycium*

 3. Flowers numerous, borne in glomerules at the nodes; usually tree-like forms with leaves 1-8 cm long, 8-3 cm broad (if flowers few at the nodes, then the corolla 10 mm long and the corolla lobes shortly but densely white-lanate-ciliate).
 4. Flowers less than 10 mm long, the corolla lobes not white-lanate ciliate.
 5. Tubular portion of corolla glabrate exteriorly, less than 4.5 mm long.
 6. Leaves densely and persistently floccose-lanate.
 7. Leaves 8-30 mm wide, 10-60 mm long; sparsely branched, usually moderately leafy shrub or small tree.

2. *L. cuneatum*
 7. Leaves 4-20 mm wide, 5-30 mm long; densely branched, densely leafy shrub.

2a. *L. cuneatum* var. *Rojasii*
 6. Leaves glabrate (or rarely subglabrate with minute and sparse simple puberulence).
 7. Leaves 3-6 cm long, thin, lanceolate-elliptic.

3. *L. Morongii*
 7. Leaves 1-4 cm long, thick, ovate or when lance-elliptic less than 2 cm long.

3a. *L. Morongii* var. *parrifolium*
 5. Tubular portion of corolla sparsely persistent-pubescent exteriorly at the base, 3-5 mm or more long.

4. *L. glomeratum*
 4. Flowers more than 10 mm long, the corolla lobes white-pilose-ciliate.

5. *L. cestroides*
 3. Flowers few, 1-3 at the nodes or rarely more, leaves seldom 1 cm wide.
 4. Corolla lobes less than one third as long as the tubular portion.

5. Corolla lobes less than one sixth as long as the tube of the corolla, tube of the corolla 12-25 mm long, or if less than 12 mm long then with calyx pubescent.
6. Corolla pubescent exteriorly at least near the base; calyx lobes as long as the calyx tube.
 - 6a. *L. Gilliesianum* var. *longitubum*
6. Corolla glabrous exteriorly.
 7. Style usually exserted 2-4 mm, or if not exserted then the leaves less than 5 mm broad; calyx lobes not over one-half as long as the tube.
 8. Corolla 12-13 mm long; leaves 1-3 mm broad; calyx sparingly pubescent. 6. *L. Gilliesianum*
 8. Corolla 14-17 mm long; leaves 2-5 mm broad; calyx glabrous.
 - 6b. *L. Gilliesianum* var. *Ruiz Lealii*
 7. Style not (or scarcely) exserted.
 8. Corolla lobes over 1.5 mm long; leaves 4-6 mm broad; corolla tube 18-23 mm long; calyx glabrous except ciliate.
 - 6c. *L. Gilliesianum* var. *fuscum*
 8. Corolla lobes less than 1 mm long. *L. Miersii*
 5. Corolla lobes more than one sixth as long as the tube of the corolla; corolla tube more than 7 mm long and less than 12 mm long.
 6. Filaments adnate to below the center of the corolla tube; stamens usually 4; calyx 2-lipped, lobes less than two thirds as long as the tube. 8. *L. pubitubum*
 6. Filaments adnate to above center of corolla-tube; stamens usually 5; calyx rarely two-lipped, lobes over one third as long as the tube
 7. Leaves lanceolate to obovate, 2-5 mm broad.
 9. *L. Hieronymi*
 7. Leaves linear or linear-spatulate, 5-1 mm broad.
 10. *L. elongatum*
 4. Corolla lobes over one third as long as tubular portion.
 5. Plants low and spineless; calyx lobes over one half as long as the calyx tube.
 6. Calyx glabrous or at most ciliate at margin; corolla glabrous except for long ciliate margin; flowers broad; corolla tube 7 mm long, lobes 3.5 mm. 11. *L. O'Donellii*
 6. Calyx pubescent; corolla pubescent outside at least on the veins.
 7. Lobes of corolla longer than the tube.
 12. *L. Hunzikeri*
 7. Lobes of corolla shorter than the tube.
 13. *L. repens*
 5. Plants tall and usually spiny.
 6. Calyx glabrous except ciliate on the margins of the

- lobes, usually two-lipped but often with lobes equal, the lobes less than half the length of the tube; leaves glabrous.
7. Calyx tube not splitting down one side in fruit, the tube over 4 mm long. 14. *L. Schreiteri*
 7. Calyx tube usually splitting down one side in fruit, the tube less than 4 mm long.
 8. Leaves less than 4 mm in breadth.
 9. Leaves spatulate, 1-4 mm wide, thickish, succulent; anthers inserted 1.5-3 mm from the base of the corolla tube.
 15. *L. vimineum*
 9. Leaves linear; anthers inserted 3-4.5 mm from base of the corolla tube.
 16. *L. infaustum*
 8. Leaves or some of them 5 mm or more broad.
 17. *L. nodosum*
 6. Calyx pubescent with glandular hairs or simple hairs or both, sometimes sparsely so; calyx lobes more than one-half the length of the tube; leaves glandular puberulent, pilose or both, but sometimes very sparsely so.
 7. Filaments glabrous; corolla pubescent outside at constriction of tube; calyx very sparsely pilose or subglabrous.
 18. *L. Schickendantzii*
 7. Filaments pubescent at or near base; corolla not pubescent outside at constriction of tube; calyx pubescent, increasing in size in fruit and not often splitting in fruit; calyx not noticeably two-lipped.
 8. Corolla tube 4 mm long; filaments attached below center of tube, their base glabrous; leaves linear spatulate, .5 mm broad. 19. *L. pubescens*
 8. Corolla tube 4.5 mm or more long.
 9. Calyx minutely glandularly pubescent with sessile or stalked glands, usually sparsely so, rarely with three or four simple hairs present; corolla tube glabrous or with a few stalked glands, the lobes rarely ciliate.
 20. *L. Venturii*
 9. Calyx glandularly pubescent with sessile or stalked glands, usually interspersed with considerable simple pilosity.
 10. Leaves obovate-spatulate.
 11. Stems appearing glabrate to naked eye.
 - 21a. *L. ovalilobum* var. *Sleumeri*
 11. Stems appearing pilose to naked eye.
 21. *L. ovalilobum*
 10. Leaves linear or linear-spatulate.

11. Leaves linear.
 12. Plants very rigid and heavy branched. 22. *L. decipiens*
 12. Plants with branches slender. 23. *L. tenuispinosum*
11. Leaves linear-spatulate.
 23a. *L. tenuispinosum* var. *Friesii*
1. Filaments glandular (and usually enlarged) just above the point of attachment, this enlargement usually bordered with cilia, but the flattened inner face is glabrous.
2. Corolla glabrous on outside at the constriction of the tube and below the constriction.
 3. Calyx 2-2.5 mm long, lobes one third as long as tube; leaves or at least some of them elliptical; slender branched, subpungent.
 24. *L. fimbriatum*
3. Calyx 2-4 mm long, lobes one third to three fourths as long as the tube; leaves linear or linear-spatulate; rigid branched, spinose.
 4. Calyx sparsely pilose, tube about 1.5 mm long, lobes 5-1 mm long.
 25. *L. Comberi*
4. Calyx glabrous, tube 2 mm long, 1-1.5 mm long.
 25a. *L. Comberi* var. *Donatii*
2. Corolla pilose exteriorly near the base at the constriction of the corolla tube or rarely with only a few hairs on the constricted portion of the tube.
 3. Corolla tube much longer than the lobes; shrubs. 26. *L. Hitchcockii*
 3. Corolla tube not longer than the lobes, or if somewhat longer then a prostrate shrub.
 4. If larger leaves less than 5 mm wide, then ovate and thinnish; calyx lobes usually twice to three times as long as calyx tube at least in fruit.
 27. *L. ciliatum*
 4. If larger leaves over 5 mm wide, then lanceolate and thickish and then the calyx lobes usually not longer than the tube.
 5. Plants low.
 6. Calyx tube 2 mm long, lobes 1-2 mm long; corolla tube 4-4.5 mm long, lobes 3-4 mm long. 28. *L. Sparrei*
 6. Calyx tube 1 mm long, lobes 3-4 mm long; corolla tube 2 mm long, lobes 6 mm long. 29. *L. Vergarae*
5. Plants taller than 30 cm; tube of calyx 1-2.5 mm long, lobes 1.3 mm long; corolla tube 1.5-4.5 mm long, lobes 2.5-5.5 mm long.
 6. Plants 30 to 50 cm tall; pedicels white pilose, calyx and tube of corolla long pilose stamens long exserted.
 30e. *L. chilense* var. *Meyeri*
 6. Plants taller than 50 cm; pedicels not white pilose.
 7. Intricately and rigidly branched shrubs with thick leaves.
 8. Spinose rigid lateral branches many; corolla tube 3 mm long, lobes 3.5 mm long.
 30b. *L. chilense* var. *O'Donellii*

8. Subspinose slender lateral branches many; corolla tube 5 mm long, lobes 4 mm long.
 30c. *L. chilense* var. *Descolei*
7. Branched shrubs, but branches scarcely rigid, rarely spinose or subspinose branched; leaves thin or thickish.
 8. Leaves mostly elliptic, short and blunt, thinnish; calyx usually pilose and rarely sparsely so. 30a. *L. chilense* var. *scoparium*
 8. Leaves mostly lanceolate or linear, usually decidedly dimorphic, thickish; calyx sparsely pilose to glabrous.
 9. Branches very slender; leaves linear, acute, 1 mm broad or less.
 30d. *L. chilense* var. *filifolium*
9. Branches rather thick, leaves lanceolate or lanceolate-spatulate, dimorphic, some leaves usually over 1 mm broad.
 30. *L. chilense*

Section SCLEROCARPELLUM C. L. Hitchcock

C. L. Hitchcock, *Ann. Mo. Bot. Gard.* 19 : 325. 1932.

Densely branched, rigid, shrubs, the branches subpungent; fruit of two 1-seeded carpels, with pericarp much hardened; the filaments not enlarged and glandular at base.

Type: *Lycium californicum* Nutt. ex Gray, *Bot. Calif.* 1: 542. 1876.

Represented in South America with the single Argentinian species:

1. *Lycium Ameghinoi* Speg.

Speg., *Rev. Fac. Agr. y Vet. La Plata* 3 : 553. 1897.

Grabowskia Ameghinoi Speg., *Anal. Soc. Cient. Arg.* 53 : 168. 1902.

Lycium durispina Dusén, *Svensk. Exped. Magell.* 35 : 251. 1900.

A heavy, rigid, spreading shrub; branches and branchlets thick, stout, ending in blunt spines, yellow-gray to dark gray, glabrous (or rarely subpuberulent when young), much corrugated and glabrous with age; leaves spatulate or linear-elliptic, fleshy, terete or flattened, 3-10 mm long, 1-1.5 mm broad, glabrous or very minutely pubescent, 1-6 in a fascicle, from rather conspicuous swollen nodes (short-shoots), these from 1-4 mm apart; flowers 1-4 in a fascicle, on glabrous pedicels 1-2 mm long; calyx tubular, 2.5-3 (rarely 1-4) mm long, about 2 mm in diameter, glabrous except usually ciliate on the

margin of the calyx lobes, lobes 4, very short (.5-1 mm); corolla tubular, long persistent (apparently usually present in fruit), the tube 4.5 mm long, 2 mm in diameter at summit, glabrous without, pubescent within below insertion of the stamens, lobes 4, more or less recurved, rounded, about 1 mm long, ciliate; stamens 4, slightly exserted from the tube, filaments unequal, 2-3 mm long, attached from 1.3 mm from the base of the tube, when inserted from 1-1.5 mm from base of tube pilose for 1 mm above the adnate portion, when inserted 3 mm from base then glabrous; style about 2.5-3 mm long; glandular disk below ovary often prominent; fruit of 2 carpels, one large seed in each carpel, 1.5 by 1.5 to 2 by 2 mm in diameter.

Type: Golfo de San Jorge, Argentina, II-1896, C. Ameghino in the Spiegazzini Herbarium of the Museo de La Plata.

Donat 37 has the stamens attached about 3 mm from the base of the corolla tube; O'Donell 3771 and 3732 have leaves to 3 mm wide and 12 mm long. In distribution this is limited to Santa Cruz and Chubut, Argentina.

Specimens examined:

CHUBUT: Biedma: Puerto Madryn, 24-X-1945, O'Donell 3217; Escalante: Comodoro Rivadavia, 4-XI-1945, O'Donell 3413; Gaiman: Gaiman, 29-X-1945, O'Donell 3280; Rawson: Grelen, 27-X-1945, O'Donell 3275.

SANTA CRUZ: Corpen Aike: Comandante Piedrabuena, 30-XI-1945, O'Donell 3771; Deseado: Tehuelches, 250 m alt., 15-XI-1928, Donat 37; Magallanes: San Julián, 24-XI-1945, O'Donell 3732.

Section EULYCIUM G. Don

Gen. Hist. Dickl. Pl. 4 : 458. 1838; Hitchc., *Ann. Mo. Bot. Gard.* 19 : 206. 1932.

Usually woody shrubs, but sometimes herbs or small trees, usually with spinose branches, branches slender to very stout; carpels many-ovuled; fruit 2-to many seeded, if 2-seeded with abortive ovules below; filaments glabrous or pilose at base but not with a flattened inner portion at the base more or less glandular.

This section is represented in Argentina by a number of species, these falling into a number of groups of species, each group with the species more or less similar and with many intermediates. These groups may be listed as follows: *Morongii-cuneatum-glomeratum*, *cestroides*, *O'Donelli repens*, *vimineum-infaustum-nodosum*, *Schickendantzii*, *pubescens-Venturii-ovalilobum-decipliens-tenuispinosum*, *Schreiteri*, *elongatum-pubitubum*, *Gilliesianum-Miersii*.

2. *Lycium cuneatum* U. Dammer

In *Engl. Bot. Jahrb.* 37 : 169. 1905.

Lycium pruinatum var. *puberulum* Griseb., *Abhandl. König. Ges. Wiss. Gött.* 24 : 245. 1879.

Lycium colorans U. Dammer, *Meded. Rijks Herb. Leid.* 29 : 22. 1916.

A sparingly branched, spreading, spindly, densely stellate-pubescent shrub or small tree, 2-3 m tall; branches usually slender, leafy and floriferous, whitish tan to dark gray, with few to many very stout spines 1-2 cm long; leaves persistently stellate pubescent, borne in fascicles of 1-5, blades usually ovate, sometimes very broadly so, 1-6 cm long, .8-3.5 cm broad, veins plainly visible beneath, apex acute to obtuse, margins undulate, entire or minutely crenulate, base tapering to a petiole 3-12 mm long; flowers borne in globose clusters of 3-20 at the nodes, rarely densely aggregated on short lateral or terminal branchlets, nodes at length bearing one to 3 short-shoots; pedicels short pilose, 1-3 mm long; calyx campanulate, 1.5-2 mm long, 2/3 to as broad as length of tube, pilose pubescent, lobes four (2 to 5), broadly triangular, these .5-.8 mm long and ciliate, calyx not splitting in fruit; corolla infundibuliform, whitish, tube about 3-4 mm long, 2-3 mm wide at summit, 1-1.5 mm wide at base and essentially glabrous exteriorly or very sparsely and minutely pilose puberulent, lobes 4, ovate, 1.5 mm long, spreading, their margins ciliate; stamens about equal to corolla lobes, hence slightly exserted, filaments adnate to slightly more than .5 mm from base of corolla-tube, densely pilose for nearly 2 mm from point of adnation, adjacent corolla-tube also hairy above the base of filaments, filaments about 3 mm long, anthers 1 mm or less long; style usually slightly exceeding stamens (4-6 mm long); fruit a globose berry, 2.5-3.0 mm in diameter, several-seeded.

Type: Caiza, Gran Chaco, Bolivia, 20-III-1902, Fries 1430 in the herbarium at Stockholm.

A series of specimens from Bolivia (Paredo 45, 329, 342, & s. n.) have sparse pilosity at the base of the corolla tube.

JUJUY: Capital: Termas de Reyes, 12-I-1947, Garolera-Romero s. n.; Carmen: Perico, 2-II-1910, Lillo 9840; Perico, 930 m alt., 28-I-1925. Schreiter 3542.



SALTA : Campo Santo : Güemes, III-1941, Zabala 14; La Caldera : Estancia La Despensa, 25 kms de la Caldera, 16-IV-1942, Hunziker 1580; Orán : Embarcación, 20-XII-1946, Malvarez 316, Padre Lozano, 2-I-1947, 434, and Manuel Elordi, 300 m alt., 7-I-1947, Malvarez 508; 14-IV-1945, O'Donell 3160; Río Bermejo, 25-III-1940, Ragonese y Covas 4550; Tabacal, 5-XI-1913, Rodríguez 1091, Urundel, X-1913, 1145, 1-XII-1913, 1145, and Río de las Piedras, 5-XII-1911, Rodríguez 1911; Quebrada San Lorenzo, 1100 m alt., 23-X-1925, Schreiter 5094, Río Bermejo, 250 m alt., 20-III-1927, 5453, Loma, 250 m alt., 20-III-1927, 5461, km 1317, 300 m alt., 22-II-1940, 11190, and Tartagal a Vespucio, 300 m alt., 2-III-1940, Schreiter 11324 and 11353; San Pedro : 580 m alt., 29-III-1943, Hunziker 2718.

2a. *Lycium cuneatum* var. *Rojasii* Barkley, n. var.

Frutex; ramis densis, spinosis, pubescentibus, gracilibus; foliis persistenter stellato-pubescentibus, fasciculariter ortis, laminis rotunda-dato-ovatis, 5-30 mm longis, apice obtuso; calyce campanulato, tubo circa 1 mm longo, piloso-puberulo, lobis circa 1 mm longis, ciliatis; corolla tubo 3.5-4.5 mm longo praedita; staminibus subprocidentibus; bacca globosa 4 mm lata.

A much branched, spreading, spiny, stellate pubescent shrub, 1-2 m tall; branches slender, very densely leafy and floriferous, with few to many very stout spines .5-1 cm long, tan and striate; leaves persistently stellate pubescent, borne in fascicles of 1-5, blades usually rotundly ovate, 5-30 mm long, 4-20 mm broad, veins scarcely visible beneath, apex obtuse or rarely subacute, margins undulate, entire, base tapering to a petiole about 3 mm long; flowers borne in glomerules of 5-20 at the nodes, frequently densely aggregated on short lateral or terminal branchlets, pedicels 1-3 mm long, densely pilose; calyx campanulate, tube about 1 mm long, 1.5-2 mm broad, pilose-puberulent, lobes 3 or 4, broadly triangular, about 1 mm long, ciliate; corolla infundibuliform, whitish, tube 3.5-4.5 mm long, 4 mm wide at summit, about 1 mm wide above the base, margins of lobes ciliate; stamens slightly exserted, filaments 4-6 mm long, adnate .5 mm from base of corolla-tube, densely hairy for 2-3 mm from point of adnation, adjacent corolla-tube also hairy above base of filaments, anthers about 1 mm long; style usually slightly exceeding stamens, 5-6 mm long; berry globose, about 4 mm in diameter, several-seeded.

Type : Argentina : Chaco : Napalpí : Sáenz Peña, 4-VII-1944, T. Rojas 11497.

Similar to the typical variety but more densely branched, the leaves smaller, apparently thicker, and more abundant.

PTE. PERÓN (ex CHACO) : Campo del Cielo : Santa Sylvina, 29-I-1947, Schulz 1166; Napalpí : Sáenz Peña, 4-VII-1944, Rojas 11497; Tapenaga : Enrique Urien, 27-I-1946, Schulz 867.

3. *Lycium Morongii* Britton

Britton, Ann. N. Y. Acad. Sci. 7 : 180. 1892.

Lycium Morongii Brit. var. *typicum* Hassler, Fedde Rep. Spec. Nov. 15 : 241. 1918.

A sparingly to rarely much branched, spreading, spiny, glabrate shrub or small tree, 1-4 m tall; branches stout, usually markedly zigzag between the nodes, densely leafy and floriferous, with few to many very stout spines 10-15 mm long, tan to dark gray, prominently pilose short-shoots at many nodes; leaves borne singly or in fascicles of 1-5, blades usually lanceolate to ovate, rarely broadly so, thick, 3-6 cm long, 1-4 cm broad, veins plainly visible beneath, apex usually acute but sometimes rounded-acute, margins undulate, entire (or minutely crenulate), base cuneate, tapering to a petiole 5-15 mm long; flowers borne in glomerules of 5 to 50 at the nodes or rarely solitary, frequently densely aggregated on short lateral and terminal branchlets, nodes with dense gray tomentum; pedicels 1-3 mm long; calyx campanulate, tube 1 mm long, 2/3 as broad, glabrate, except for small tuft of hairs on the tips of the four (3-5) broadly triangular lobes or along the margins ciliate, the lobes half as long as the tube or usually in fruit calyx twice as large and tube split on one side; corolla infundibuliform, whitish, tube 3-4 mm long, 2-2.5 mm wide at summit, about 1 mm wide at base, glabrous exteriorly, interiorly pilose in a ring 1 mm above insertion of stamens, lobes four (3-5), ovate, spreading, their margins ciliate; stamens about equal to the corolla lobes, hence slightly exserted, filaments adnate from 1-1.5 mm from base of corolla-tube, densely hairy for nearly 2-3 mm from point of adnation of filaments; filaments usually 3.5-4.5 mm long, anthers 1 mm or less long; style 4-5 mm long, usually slightly exceeding stamens; berry globose, 2.5-4 mm in diameter, several seeded.

Type : Asunción, 1888-1890, Morong 161 in the herbarium of the New York Botanical Garden.

While the flowers are ordinarily produced while there are mature leaves on the plant, Morel 2193 and 2433 have only immature leaves. Morel 4627 and 7129 are somewhat pubescent.

Distribution from central Paraguay to northeastern Argentina.

CORRIENTES : *Capital* : Laguna Brava, 11-IV-1944, Ibarrola 227; ciudad, 28-III-1948, de la Sota 980; *Empedrado* : 2 leguas al este de El Pollo, 29-VIII-1945, Ibarrola 3203; El Sombrero, 10-III-1950, Schwarz 10122; *Saladas* : Mcumenya, 13-VI-1945, Ibarrola 1075; Río San Lorenzo, 28-I-1950, Schwarz 9411 and Estancia Pando, 14-II-1950, 9700; *San Cosme* : San Cosme, 2-IV-1948, de la Sota 1024.

FORMOSA : II-1918, Jörgensen 2984; Barrancas del Río Paraguay, 63 m alt., 6-I-1945, Krapovickas 934; Loma Plorá, 20-XII-1946, Morel 1883; Puesto Porteño, 3-IV-1947, 2433; a 2 kms de Puesto Porteño, 21-IV-1947, 2611; ruta 86 al km 55, 10-II-1948, 4627; Recho. Porteño, 7-VIII-1948, 6066; Paraíso, 8-X-1948, 6161; Puerto Ramos, 2-II-1949, 7129, and o a 2 kms de la Frontera, 8-IX-1949, Morel s. n.; Estancia Vela, 17-VIII-1944, Rojas 11973; *Pilcomayo* : Clorinda, 24-VIII-1946, Morel 1094; Ruta 11, cda. a Laguna Blanca al km 7, 18-III-1947, 2193; SE. a 5 km de Marca «M», 22-VIII-1949, 8182; Riacho Hehé, 28-VIII-1949, 8335; and Sura, 2 km del km 55, ruta 86, 26-I-1950, Morel 9426; Riacho Negro, 22-III-1947, Reales 389; *Pirané* : Chacras, 30-IX-1945, Pierotti 4150.

PTE. PERÓN (ex CHACO) : 1917, Jörgensen 2208B; *Capital* : Barranqueras, 10-III-1947, Malvarez 1138; Barranqueras, 14-XI-1913, Muniez, Acevedo y Currán 5 and Barranqueras, 15-XI-1913, 36; *Resistencia* : Laguna Blanca, 27-XII-1944, Aguilar s. n. and Margarita Belén, 16-XII-1945, 593; Fontana, III-1929, Meyer 87; Colonia Benítez, 1939, 2733, entre Río Arazá y Tirol, 16-V-1945, 8592 and entre Tirol y este Río Arazá, 17-V-1945, Meyer 8638; camino a Colonia Benítez, 21-III-1948, de la Sota 763; Brazo Tres Horquetas, 20-III-1948, 783, and Resistencia, 22-III-1948, de la Sota 900; 16-VI-1944, Rojas 11232; *Río Bermejo* : Las Palmas, 15-III-1947, Malvarez s. n.

SANTA FE : 24-III-1904, Venturi 203.

3a. *Lycium Morongii* var. *parvifolium* (Hitchc.) Barkl., n. stat.

Lycium Morongii Brit. forma *parvifolium* C. L. Hitchcock, *Ann. Mo. Bot. Gard.* 19 : 210. 1932.

A sparsely branched, spreading, spiny shrub 1-2 m tall; branches stoutish, pilose puberulent when young, leafy and often densely floriferous, with few to many stout spines 10-15 mm long, straw-colored to dark gray; leaves borne in fascicles of 1-5, blades glabrate with usually sparse pilose pubescence, usually very broadly ovate, rarely lanceolate, 1-7 cm long, .5-2.5 cm broad, veins plainly visible beneath, apex usually obtuse or less often acute, margins undulate-entire, base tapering to a petiole 1-7 mm long; flowers borne in globose clusters of 1-20 at the nodes, frequently densely aggregated on short lateral or terminal branchlets, nodes often with dense gray tomentum, pedicels 1-3 mm long, very sparsely pilose puberulent; calyx campanulate, tube 1.5-2 mm long, 2 mm broad, glabrate, except for small tuft of hairs on the tips of the four broadly triangular lobes, .7-1 mm long; corolla infundibuliform, whitish, tube 3-4 mm long, 2-3 mm wide at summit, about 1 mm wide at base, glabrous exteriorly, lobes 4, ovate, 2 mm long, spreading, their margins ciliate; stamens exserted, filaments about 5 mm long, adnate about 1 mm from base of corolla tube, densely hairy for nearly 2 mm from point of adnation, adjacent corolla-tube also hairy about 1 mm above and .5 mm below base of filaments, anthers about 1 mm long; style 5-6 mm long; berry globose, 2.5-3.5 mm in diameter, several seeded.

Type : Argentina : Santiago del Estero : El Charco, alt. 300 m, 15-II-1930, Venturi 10105 in the Missouri Botanical Garden Herbarium.

Buratovich 114 has leaves reminiscent of *L. nodosum*, and spines to 20 mm in length.

Distribution central Paraguay (Rojas 1988) and northern Argentina Tucumán and Santiago del Estero.

CORRIENTES : *Empedrado* : Puerto Empedrado, 27-II-1950, Schwarz 9834 and Empedrado, 3-III-1950, 9948; *Santo Tomé* : Paso de la Patria, 26-V-1945, Worth 92.

FORMOSA : *Pilcomayo* : Buena Vista, 3-XI-1948, Morel 6519; *Pirané* : Pirané, 12-I-1945, Krapovickas 1182; al sur a 1 km de Pirané, 25-XI-1945, Morel 443; IX-1945, Pierotti 4117.

PTE. PERÓN (ex CHACO) : *Napalpí* : Quitilipi, 31-XII-1944, Aguilar 125; Colonia José J. Márquez, 31-XII-1946, Buratovich 114; Colonia

José J. Mármol, 30-XII-1946, 174 & 179; Escuela 180, 3-I-1947, 197; Las Cuchillas, Lote 7, 7-I-1947, 364, and Colonia José J. Mármol a Las Cuchillas, 15-I-1947, Buratovich 739.

SANTIAGO DEL ESTERO: Giménez: El Charco, 300 m alt., 15-II-1930, Venturi 10105 (Isotype).

SALTA: Anta: Joaquín V. González, 19-I-1945, Aguilar 249; Viñal Pozo, 9-I-1948, Luna 629; Coronel Mollinedo, 335 m alt., 15-I-1947, Malvarez 594 and El Quebrachal, 340 m alt., 1-II-1947, 613; Rosario de la Frontera: 790 m alt., 7-II-1921, Schreiter 1532.

TUCUMÁN: Trancas: XII-1913, Rodríguez 1192.

4. *Lycium glomeratum* Sendtner

Sendtner in Mart., *Fl. Bras.* 10: 154. 1846; Hitchcock, *Ann. Mo. Bot. Gard.* 19: 213. 1932.

Lycium glomeratum var. *obovatum* Miers, *Ann. & Mag. Nat. Hist.* II, 14: 139. 1854.

Lycium Martii ? *glomeratum* Terrac., *Malpighia* 4: 534. 1891.

Lycium Martii ? *glomeratum* var. *obovatum* (Miers) Terrac., l. c.

A sparingly branched, spreading, rarely spiny, glabrate shrub or small tree 1-4 m tall; branches slender but not flexuous, leafy and floriferous, usually spineless but sometimes with a few branches eventually producing stout spines 5 to 15 mm long, tan to dark brown; leaves usually solitary but sometimes borne in fascicles of 1-5, blades usually ovate, sometimes very broadly so, 2-6 cm long, 1-3 cm broad, veins plainly visible beneath, apex acute to acuminate or rarely rounded, margins undulate and entire, base tapering to a sparsely short pilose petiole 5-15 mm long; flowers borne in glomerules of 2 to rarely 15 at the nodes, frequently aggregated on the terminal branchlets, nodes of the older branches often of short-shoot form with dense gray tomentum, pedicels 2-5 mm long; calyx campanulate, 1.5-2.5 mm long, 1-1.5 times as broad, glabrate except for small tuft of hairs on the tips of the four (3-5) broadly triangular lobes, these more than half as long as the tube; corolla infundibuliform, whitish, tube 3.5-5 mm long, 2.5-4 mm wide at summit, about 1 mm wide at base, pilose exteriorly at the base, lobe 4 (3-5), ovate, 2-3 mm long, spreading, their margins ciliate; stamens about equal to corolla lobes, hence slightly exserted, filaments adnate to slightly more than 1 mm from base of corolla-tube, densely hairy for nearly 3 mm from point of adnation, adjacent corolla-tube also hairy above

and below base of filaments, filaments about 8 mm long, anthers 1.5 mm or less long; style usually 8-9 mm long; berry globose, 5 mm in diameter, several seeded.

Type: Brazil: Alagoas: IV-1839, Jardner 1370 at Munich.

The flowers of this species are usually produced at the same time as the new leaves, while in the very similar *L. Morongii* the flowers are usually produced long after the new leaves. This species is separable from *L. Morongii* only by careful observation of detail, however, their ranges seem to be quite distinct.

Distribution southern Paraguay and northern Argentina.

MISIONES: Candelaria: orillas del Paraná, 1-II-1946, Bertoni 2693; Santa Ana, 10-II-1913, Rodríguez 762; Capital: alrededores de Posadas, 26-VII-1945, Bertoni 1738; Posadas, 26-VII-1945, Sesmero s. n.; Corpus: Salta, 2-V-1945. Bertoni 1250.

FORMOSA: Pilcomayo: Isla Leona, 9-V-1949, Morel 7700.

5. *Lycium cestroides* Schlecht.

Schlecht., *Liunaea* 7: 70. 1882; Hitchc., *Ann. Mo. Bot. Gard.* 19: 214. 1932.

Aenistus cestroides Miers, *Hook. Lond. Jour. Bot.* 4: 343. 1845.

Lycium cestroides × *normale* Terrac., *Malpighia* 4: 534. 1891.

Shrub or small tree of 2-3 meters with straight or zigzag branches, often each node bearing a whitish spine (branch) 1-1.5 cm long; stems glabrous to minutely but usually densely pilose, whitish at first, later grayish or dark gray and glabrate, leaves glabrous or glabrate, ovate or ovate-lanceolate, usually acuminate, cuneate at base, petioles microscopically sparse pilose, lamina decurrent on the petiole which is about 1/6 as long as the lamina, the stem leaves 17 to 45 mm wide, 4.5 to 11 cm long, often fascicled, the leaves on the branches bearing the flowers usually much reduced; flowers clustered in short peduncled glomerules or the axis elongated with one to 5 at a node, the inflorescences lateral and terminal; peduncles and pedicels densely or sparsely puberulent-pilose, pedicels 4-10 mm long; calyx glabrous to sparsely puberulent-pilose, tube 2.8 (2-4) mm long, lobes 1.3 (.5-2) mm long, densely white-ciliate, at anthesis tube 2 mm wide, calyx growing slightly in fruit but tube splitting down one side, calyx lobes 5 or rarely 3 and then two having two veins which converge at apex of lobes; corolla long tubular, .7-1.5 mm wide at base, 2-4 mm wide at apex, glabrous outside and sparsely pilose inside in

a band for about 1 mm above and below insertion of stamens, tube 13 (8-17) mm long, lobes 1.7 (1-2) mm long, lobes obtuse to subacute, densely white-lanate ciliate or rarely only ciliate; stamens attached about 3.5 (rarely 6) mm above base of corolla tube, filaments unequal, 2 to 6 mm long, pilose 1-1.2 mm from base; style 8-12 mm long; fruit spherical, 5 by 6 mm, many seeded.

Vegetatively *L. cestroides* looks very much like *L. Morongii*. This widespread, common plant of Argentina is extremely variable, and specimens show it as being even more variable since the samples taken from the same plant may appear quite different. Specimens from Catamarca usually have completely glabrous stems and lanceolate leaves, and the flowers are often somewhat longer than average.

Type: In Brasilia meridionalis prope San José, Uruguay, Sello.

Distribution from Bolivia and Uruguay to central Argentina.

SANTA FE: *Castellanos*: Castellanos, 2-XII-1946, Terrible 424.

BUENOS AIRES: *Quilmes*: Pereyra, 13-II-1945, Alvarez 504; *San Isidro*: 25-IX-1937, Holmberg 72; 25-IX-1937, Pujals 97; Martínez, III-1941, Torrent 38; *Vicente López*: 22-XII-1926, Hicken 10948; *Zárate*: 10-II-1946, Krapovickas: 2860.

SANTIAGO DEL ESTERO: Río Colorado, 21-XI-1949, Brizuela 26; 11-IX-1942, Argañaraz 408; *Capital*: La Dársena, 19-XI-1947, Meyer 12714; Río Dulce, 18-I-1949, Montenegro 170; 185 m alt., 20-VII-1944, Vieta 6; *Copo*: Matoque, 14-VII-1947, Luna 280; *Guasayán*: San Pedro, 11-III-1944, Pierotti s. n.; *La Banda*: Antagé, 12-IV-1944, García 213; La Banda, 28-XII-1944, 246; El Líbano, 27-I-1945, 823; Estación Clodomira, 15-IV-1944, s. n., and 8 kms NO de Estación Clodomira, 1-15-IV-1944, García s. n.; La Banda, 17-IV-1907, Lillo 6066 and IV-1907, 6200; Clodomira a San Felipe, 24-X-1946, Luna 10, Clodomira a San Felipe, 28-X-1946, 80, and Desmonte, VIII-1948, Luna 1253; 200 m alt., 15-IX-1944, Meyer 6842; alrededores de La Banda, 25-XII-1946, O'Donell 4258 and 4270; *Pellegrini*: Río Horcones a La Fragua, 400 m alt., XII-1932, Peirano s. n.; *Río Hondo*: Las Termas, 13-I-1949, Legname 32; Yutuyacu, 15-I-1949, 70, and Mansupa, 24-I-1949, Legname 161; Termas de Río Hondo, 21-IX-1944, Vieta 19; *Robles*: 11-I-1945, García 677; Vilmer, 1-XI-1946, Ruiz 3093; Colonia Jaimez, 10-XI-1948, Luna 1319.

CÓRDOBA: *Capital*: alrededores de la ciudad, 9-I-1924, Castellanos s. n.; Paja Blanca, 1-VI-1946, Pierotti 512; Villa Urquiza, 20-III-1944, Ruiz 388; *Colón*: Jesús María, 22-XII-1947, Balegno 1498; Jesús María, 16-XI-1936, Giardelli 752; Jesús María, 23-XII-1947,

Meyer 13030; Río Ceballos, 5-XII-1948, Montenegro-Legname 112; Salsipuedes, 26-III-1944, O'Donell-Rodríguez 671; Salsipuedes, 20-XI-1950, de la Sota 2015; *Cruz del Eje*: 470 m alt., 20-XII-1947, Meyer 12858 and Soto, 470 m alt., 21-XII-1947, 12916; Río Cruz del Eje, 19-I-1947, O'Donell 4957; 28-III-1944, O'Donell-Rodríguez 1290; 11-I-1948, Videla 300; Los Sauces, 3-I-1947, Villafañe 265; *Ischilín*: Deán Funes, 3-XII-1948, Montenegro-Legname 123; Deán Funes, 20-XII-1946, Villafañe 123; *Río I*: 10-XII-1946, Balegno 1022; *Totoral*: Las Peñas, 23-XII-1946, Balegno 1186; *Tulumba*: 24-XII-1947, Balegno 1577; 3-XI-1945, Cuezzo 843.

SAN LUIS: *Ayacucho*: Candelaria, 6-XII-1944, Varela 787.

JUJUY: *Capital*: camino entre Jujuy y Los Alisos, 13-XI-1948, Pereira s. n.

SALTA: *Anta*: Joaquín V. González, 18-I-1945, Aguilar 235; Vinal Pozo, 21-XI-1947, Luna 476, Chañarmuyo, 28-I-1948, 671, and El Dorado, 5-V-1948, Luna 1020; Joaquín V. González, 380 m alt., 11-XII-1946, Malvarez 216; *Capital*: Calle Tucumán, 30-I-1941, Correa 12; *Coronel Moldes*: La Viña, 23-I-1945, Krapovickas 1355; La Viña, 1100 m alt., 31-I-1941, Meyer 3656; *Metán*: Río Concha, 11-II-1945, Herrera 57; Metán, 860 m alt., 8-XII-1946, Malvarez 143, and El Galón, 10-XII-1946, 184; Metán, 28-I-1947, O'Donell 4679 and camino a Salta, 12-II-1948, 5510; vía férrea, 19-VI-1944, Rojas 11259; *Orán*: Cedral, 11-X-1913, Rodríguez 1008; Orán, 23-VI-1944, Rojas 11483; 23-VI-1944, Ruiz s. n.; orillas de caminos, 300 m alt., 22-VI-1944, Schulz-Varela 5028; Santa María, 27-IV-1944, Willink 67; *Rosario de la Frontera*: La Juntas, 690 m alt., 29-I-1935, Carbone s. n., and El Morenillo, 29-I-1935, s. n.; 2-XI-1943, Descole 1468.

TUCUMÁN: 450 m alt., 21-XII-1917, Schreiter 61; *Burruyacu*: cerros de la Ramada, 500 m alt., XII-1914, Monetti 3042; El Barrialito, 540 m alt., 24-II-1941, Ousset 83; La Ramada de Abajo, 400 m alt., 15-VIII-1932, Peirano 9123; Ramada de Abajo, 400 m alt., 17-VII-1948, Rocha 494; T. Pampa, 29-III-1944, Varela s. n.

TUCUMÁN: *Capital*: Yerba Buena, 1911, Castillón 1004; Villa 9 de Julio, 7-VIII-1941, Chermis 10; Villa 9 de Julio, 22-VIII-1942, Gil 14; Los Bulacios, 450 m alt., 10-X-1943, Herrera 23; 4-IX-1904, Lillo 3801; Villa 9 de Julio, 425 m alt., 27-IX-1942, Mendilaharzu 19; Ingenio Amalia, 12-V-1941, Mazur 3; 17-IX-1939, Meyer 3044, 30-X-1939, 3303; La Aguadita, 12-X-1942, 4487 and Parque Avellaneda, 5-II-1949, Meyer s. n.; 1-X-1942, Salcedo 28; alrededores de

Tucumán, 450 m alt., 20-X-1923, Schreiter s. n.; 400 m alt., 27-IX-1943, C. A. Tranchet s. n.; Banda del Río Salí, 1-X-1946, Terribile 145 and Los Vásquez, 22-X-1946, 251; Villa Luján, 460 m alt., XII-1918, Venturi 24; Empalme Centenario, 10-VI-1945, Villa s. n.; Villa Quilmes, Sept., Yolde 3; Cruz Alta: 400 m alt., IV-1917, Bailetti 41; Banda Río Salí, 10-VI-1945, Ortiz s. n.; Camino a la quebrada de Tafí Viejo, 600 m alt., 8-VII-1923, Schreiter s. n.; Famaillá: La Rinconada, Ousset 202; Graneros: Río Graneros, La Madrid, 14-XI-1946, Malvarez 90; Leales: borde de camino, 12-II-1945, Krapovickas 1730; III-1910, Monetti s. n. and Las Herreras, 270 m alt., 20-V-1913, 15225; Esquina, 28-X-1946, Terribile 296; Chañar Rojo, 300 m alt., XI-1919, Venturi 24; Monteros: km 1290, 8-V-1945, Ortiz s. n.; km 1220, 14-XII-1944, Romero 3; Río Chico: La Cocha, 440 m alt., II-1919, Bailetti 13; La Calera, 25-XI-1903, Monetti 1893; Tafí: La Toma, 10-VI-1945, Herrera 645; 600 m alt., 16-XI-1925, Madera 116; Garabatal, 31-XI-1944, Olea 31 and Sala Ancajulio, 14-XII-1944, 70; La Toma, 22-IV-1945, Ortiz s. n.; Tafí Viejo, 18-IX-1949, Stachino 103; Tafí Viejo, 7-X-1945, Villa 522 and Tafíello, 3-XI-1945, s. n.; Trancas: Tapia, 23-XII-1911, Rodríguez 217; Estación Trancas, 22-IX-1944, Rojas 12337; Vipos, 2-II-1948, Sotelo 9; Tapia, 750 m alt., X-1923, Venturi 2459.

CATAMARCA: Ambato: 7 kms de El Rodeo, 1800 m alt., 12-XII-1949, Barkley 19Ar603 and El Rodeo, 1700 m alt., 12-XII-1949, 19Ar637; 7 km de El Rodeo, 1800 m alt., 12-XII-1949, Hessling-Araque 603; La Puerta, 950 m alt., 6-IV-1947, Muller 6; Ancasti: Río de Motegasta, 29-I-1950, Brizuela 501, El Cajón, 18-IV-1950, 1243, and Los Quebrachos, 14-XI-1947, Brizuela 1285; Andalgalá: Andalgalá, 9-IX-1915, Jörgensen 970 and 10-IX-1914; Chaquiao, 800 m alt., 9-IV-1945, Lourteig 1011; Alto de las Juntas, 1700 m alt., 13-II-1949, Meyer 14734; Andalgalá a Capillitas km 30, 1950 m alt., 28-XI-1946, O'Donell 4192; Capayán: Miraflores, 14-I-1947, Brizuela 107; Miraflores, 6-I-1947, Luna 414 and Las Pampitas, 12-IV-1947, 906; 26-VII-1947, Muller 178 and Chumbicha, 27-VII-1946, 184; Capital: Catamarca, 13-I-1947, Brizuela 24; alrededores de Catamarca, V-1908, Castillón 1037, 5-X-1908, 1037, and Choya, 27-IX-1910, Castillón 14308; Choya, 6-V-1944, Varela 29; El Alto: Tintigasta, 8-II-1947, Ahumada 28; La Pampa, 12-II-1947, Quintero s. n.; Fray M. Esquiú: Pomancillo, 11-I-1940, Castellanos 33917; Pomancillo, 8-IV-1947, Muller 70 and Piedra Blanca, 600 m alt., 15-IV-1947, 95; La Paz: Aibas, 24-XII-1947, Brizuela 510, Las Pe-

ñas, 26-XII-1946, 560, and Olta, 15-I-1947, Brizuela 709; Icaño La Paz, 8-V-1950, Sapaga 29; Paclin: Superí, 22-XII-1946, Luna 127; Santa Ana: San Isidro, 11-V-1944, Varela 105; Santa Rosa: El Bañado, 13-I-1947, Brizuela 48 and 15-I-1947, 162; San Pedro, 15-XI-1946, Malvarez 61; Bañado de Obanta, 12-III-1944, Pierotti s. n.

LA RIOJA: Capital: Puerta de la Quebrada, km 8, 500 m alt., 28-XI-1941, Alariz 46; alrededores de La Rioja, 15-XII-1949, Barkley 19Ar712; Saladillo, 18-I-1905, Giacomelli 4813 and alrededores de La Rioja, 15-XI-1927, s. n.; 1-I-1947, Muller 216.

6. *Lycium Gilliesianum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 344. 1854; Hitchc., Ann. Mo. Bot. Gard. 19: 267. 1932.

Lycium floribundum β *infaustum* var. *Gilliesianum* Terrac., Malpighia 4: 531. 1891.

Lycium rigidum Gill. ex Miers, Ann. & Mag. Nat. Hist. II, 14: 344. 1854, non *L. rigidum* Thunb.

Lycium longiflorum Philippi, Anal. Univ. Chil. V, 212: 403. 1862.

Lycium patagonicum β *longiflorum* (Phil.) Terrac., l. c. 533.

Lycium elongatum Miers. var. *longiflorum* (Phil.) Haum.-Merck, Anal. Mus. Nac. B. A. 24: 416. 1913.

Lycium Wilkesii Ball, Jour. Linn. Soc. Bot. 21: 228. 1884.

Lycium acanthocladum Speg., Rev. Fac. Agr. y Vet. La Plata 3: 552. 1897.

A very leafy, somewhat branched, glabrous or sparingly pubescent shrub, 1-2 m tall; branched slender to stout, not flexuous, very crooked, silvery-gray, spines thick; leaves 1-7 in a fascicle on a short-shoot, linear-spatulate to narrowly oblanceolate, 6-20 mm long, .6-3 mm broad, somewhat fleshy, pruinose and glabrous except for a few cilia on margins or rarely very sparsely and minutely puberulent, base long attenuate; flowers 1-3 in clusters at the nodes, pedicels 2-4 mm long in flower, 4-6 mm long in fruit, glabrous; calyx small, cup-shaped, glabrous, tube 1-1.5 mm long, irregularly 4-lobed, the lobes .3-.7 mm long or in fruit rarely 1 mm long, ciliate; corolla very narrowly tubular-obconic, tube 11-13 mm long, 2-3 mm in diameter at the summit, about 1 mm in diameter above the ovary, glabrous externally, lobes 4, rounded or deltoid-rounded, 1-1.5 mm long, recurved, their margins sparsely ciliate; stamens 4, equal to the tube or exserted as much as 2 mm, filaments equal or subequal, adnate to about the center of the tube or slightly below, sparsely pilose at base of free portion for about 1 mm rarely glabrous or

pilose, corolla-tube sparsely pubescent for nearly 5 mm below this region, anthers slightly more than 1 mm long; style usually exserted and then exserted 1.5 mm; berry ovoid, 4-9 mm long, 3-5 mm thick, 5-16-seeded, basal disc very evident.

Type: Argentina: Mendoza: Copuncoa, Gillies in the British Museum.

Distribution from Río Negro to Mendoza.

BUENOS AIRES: Patagones: Carmen de Patagones, 20-XI-1944. Meyer 7033.

EVA PERÓN (ex LA PAMPA): Estancia el Bosque, 16-IX-1916, Rodríguez 931.

LA RIOJA: Famatina: en el cauce arenoso y seco del río Gualco, 1600 m alt., 11-I-1947, Hunziker 1812.

MENDOZA: Las Heras: Quebrada del Toro, 5-XI-1942, Covas 617; Luján: Chacras de Coria, 24-XI-1944, Ruiz 9404; Chacras de Coria, 900 m alt., 24-IX-1944, Semper 23; San Carlos: Eugenio Bustos, 850 m alt., 1-X-1944, Ruiz 9415; Eugenio Bustos, 6-II-1945, Schulz 6246; Tunuyán: Los Árboles, 17-X-1934, Ruiz 2304; Tupungato: 10-IV-1934, Ruiz 2184 and La Arboleda, 25-XI-1942, Leal 8120.

CHUBUT: Río Chubut, Piedra Parada, 16-II-1945, Castellanos s. n.; Río Hualjaina, 14-II-1945, Castellanos s. n.

6a. *Lycium Gilliesianum* Miers var. *longitubum* (Dammer)

Hitchc., Ann. Mo. Bot. Gard. 19: 269. 1932.

Lycium longitubum U. Dammer in Engl. Bot. Jahrb. 37: 169. 1905.

A very leafy, somewhat branched, sparingly pubescent shrub 1.2 m tall; branches thick, very crooked, spines thick; leaves 1-7 in a fascicle, linear-spatulate to narrowly oblanceolate, 8-15 mm long, 1-3 mm broad, somewhat fleshy, densely minutely pubescent, base long-attenuate; flowers 1-3 at the nodes, pedicels 2-5 mm long; calyx tube small, cup-shaped, very finely but densely pubescent, 1-1.5 mm long, irregularly 4-lobed, the lobes 1.5-3 mm long, ciliate; corolla very narrowly tubular-obconic, tube 15 mm long, 2-2.5 mm in diameter at the summit, about 1 mm in diameter above the ovary, sparsely pubescent externally, lobes 4, rounded, 1-1.5 mm long, recurved, their margins sparsely ciliate; stamens 4, slightly exserted, filaments equal or subequal, adnate to slightly below the center of the tube, sparsely pilose at base of the free portion for about 1 mm, corolla tube sparsely pubescent for nearly 5 mm below this region, anthers slightly more than 1 mm long; style exserted 2-5 mm; berry ovoid, 4-7 mm long, about 1/2 as thick, 5-10-seeded, basal disc very evident.

ly pubescent for nearly 5 mm below this region, anthers slightly more than 1 mm long; style exserted 2-4 mm.

Type: Argentina: Salta: Tambo in Quebrada del Toro, 20 XI-1901, Höfsten 833 from the herbarium at Stockholm.

The above description was drawn from C. Vargas C. 7966, from pedregales, Cerros de Yura (baños), Arequipa, Perú, 2575 m alt., 28-III-1949, which appears to be the same variety which Hitchcock described.

6b. *Lycium Gilliesianum* Miers var. *Ruiz-Lealii* Barkl., n. var.

Frutex; ramis tortis, parris, pubescentibus; foliis linearispatulatis, 15-28 mm longis, 2-5 mm latis, succulentis; calyce cupulari, glabro, tubo 1.5-2 mm longo praedito, quadrilobato, inaequali, lobis 1 mm longis, ciliatis; corolla tubo 14-17 mm longo, glabro praedita, lobis rotundis, 1 mm longis, sparse ciliatis; staminibus subprocidentibus.

A very leafy, somewhat branched, sparingly pubescent shrub 1.2 m tall; branches slender, but not flexuous, very crooked, silvery-gray, spines thick; leaves 1-7 in a fascicle, linear-spatulate to obovate-spatulate, 15-28 mm long, 2-5 mm broad, somewhat fleshy, pruinose-glabrous except rarely for a few cilia on margins, base long attenuate; flowers 1-3 at the nodes, pedicels 5-6 mm long; calyx tube small, cup-shaped, glabrous, 1.5-2 mm long, irregularly lobed, the lobes 1 mm long, ciliate; corolla very narrowly tubular-obconic, tube 14-17 mm long, 2-2.5 mm in diameter at the summit, about 1 mm in diameter above the ovary, glabrous externally, lobes 4, rounded, about 1 mm long, recurved, their margins sparsely ciliate; stamens 4, equal to tube or very slightly exserted, filaments equal or subequal, adnate to about the center of the tube or slightly below, sparsely pilose at base of the free portion for about 1 mm, corolla tube sparsely pubescent for nearly 5 mm below this region, anthers slightly more than 1 mm long; style exserted 2-5 mm; berry ovoid, 4-7 mm long, about 1/2 as thick, 5-10-seeded, basal disc very evident.

Type: Argentina: Mendoza: San Carlos: Arroyo La Faja, 26-XI-1944, A. Ruiz Leal 9632 in the herbarium of Fundación Miguel Lillo.

MENDOZA: Las Heras: in collibus siccis circa Ida de la Mina la Atala, 20-IX-1937, Ruiz 3431; Luján: Potrerillos, 26-IX/2-XII-1942, Semper 8255; Rivadavia: La Libertad, 15-VIII-1939, Ruiz 6158; San Carlos: Arroyo La Faja, 26-XI-1944, Ruiz 9632.

6c. *Lycium Gilliesianum* Miers var. *fuscum* (Miers) Barkl., n. comb.

Lycium fuscum Miers, Ann. & Mag. Nat. Hist. II, 14 : 137. 1854 ; Hitchc., Ann. Mo. Bot. Gard. 19 : 270. 1932.

A leafy, erect, somewhat branched, glabrous shrub 1.2 m tall; branches rigid, thick, gnarled and very crooked, silvery-gray, spines thick; leaves 1-7 in a fascicle, spatulate to spatulate-obovate, 8-30 mm long, 3-10 mm broad, somewhat fleshy, pruinose-glabrous, base attenuate; flowers 1-3 at a node, pedicels about 6 mm long, glabrous; calyx tube small, cup-shaped, glabrous, about 2.5 mm long, irregularly 4-lobed, the lobes about .5 mm long, ciliate; corolla very narrowly tubular-obconic, tube 18-24 mm long, 2-2.5 mm in diameter at the summit, about 1 mm in diameter above the ovary, glabrous externally, lobes 4, rounded, 1-1.5 mm long, recurved, their margins sparsely ciliate; stamens 4, equal to tube or very slightly exserted, filaments equal or subequal, adnate to slightly above the center of the tube, very sparsely pilose at base of the free portion for about 1 mm, corolla-tube pubescent for nearly 5 mm below this region anthers slightly more than 1 mm long; style not exserted.

Type : Argentina : Mendoza : Las Heras : San Pedro de Uspallata, Miers s. n. in the British Museum.

Distribution from Mendoza to San Juan, Argentina.

Unless the author misinterprets this entity, it cannot be considered other than as varietally related to *L. Gilliesianum*.

MENDOZA : Las Heras : Garganta del Diablo, 2000 m alt., 21-XII-1949, Barkley 19Ar850 : Paramillo de Uspallata, 5-XII-1945, Ruiz 10479 and El Centinela en la Quebrada del Toro, 21-XII-1947, 11065.

7. *Lycium Miersii* Barkley, n. sp.

Frutex; ramis crassissimis rigidisque, multis ramulis spinosis crassisque; foliis glabris, obovatis, crassis, obtusis, 1-4 mm latis, 2-4 mm longis, cuneatis ad basin, decurrentibus; petiolis longitudine laminis aequalibus; calyce glabro, tubo 13 mm longo, lobis 1 mm longis, truncatis; stylo circa 12 mm longo; bacca ovoidea, 2×4 mm.

A heavy spiny glabrous shrub; branches exceedingly thick and rigid, rough, gray-brown with lighter striae, armed with many pungent, thick heavy branchlets; leaves glabrous, obovate to very broadly obovate, rarely oblanceolate, thick, obtuse or rarely sub-

acute, 1-4 mm wide, 2-4 mm long, fascicled in groups of 3 to 8 per short-shoot, lamina cuneate at base and decurrent on the petiole which is nearly as long as the blade; flowers one to three on the rather prominent short-shoots; pedicels 1-3 mm long, glabrous; calyx glabrous, tube 1.9 mm long, lobes nearly equal, 4-6 mm long, very finely ciliate; corolla glabrous outside except for lobes finely ciliate but sparsely pilose inside for 2 mm below insertion of stamens, tube 13 mm long, lobes 1 mm long, 1.5 mm broad, truncate; stamens not exserted, inserted 5-6 mm from base of the corolla tube, anthers ovate, 1.2 mm long, filaments 5-6 mm long, pilose .5 mm from their bases; style 12.5 mm long; fruit dark, ovoid, 3 by 4 mm, many seeded.

Type : Argentina : Catamarca : Tinogasta : Chaschual : a Casaderos Grandes, 3150 m alt., 26-I-1930, Schreiter 6014 in the herbarium of the Fundación Miguel Lillo.

While similar to *L. Gilliesianum* and its varieties, this seems so distinctive as to warrant separation as a distinct species. Ruiz 3476, 21-XI-1937, Paramillo de los Uspallatas, Las Heras, Mendoza, seems better referred here than to *L. Gilliesianum* var. *fuscum*.

8. *Lycium pubitubum* Hitchc.

Hitchc., Ann. Mo. Bot. Gard. 19 : 237. 1932.

Cfr. Description Hitchcock, l. c. The present writer has not seen material of this species.

9. *Lycium Hieronymi* Barkley, n. sp.

Fruticosum; ramis gracilibus, spinosis vel non spinosis, pilosis; foliis elliptico-lanceolatis, 15-25 mm longis, subacutis, glabris vel subglabris, in ramis parvis fasciculatis; calyce minute et sparse puberulo-pilos, tubo 8-11 mm longo, lobis 2-3 mm longis; staminibus non proiectibus; stylo 10 mm longo; bacca ovoidea.

Shrub, densely branched, bearing short pungent branches and non-pungent branches with prominent short-shoots, branches at first minutely pilose, creamy-tan in color, soon glabrate and brownish; leaves several per short-shoot, glabrous except sparsely pilose puberulent near base, abovate-spatulate and rounded-obtuse to elliptic lanceolate and subacute, 2-5 mm wide, 15-25 mm long, rarely lanceolate and acute; flowers 1-3 per short-shoot; pedicels 2-5 mm long, minutely glandular; calyx minutely and sparsely pilose-puberulent,

tube 2-3 mm long, lobes .5-2 mm long, densely white-pilose ciliate; corolla glabrous outside, sparsely pilose below insertion of stamens, tube 8-11 mm long, lobes 2-3 mm long with margin obscurely ciliate; stamens not exserted, inserted 6 mm from base of corolla tube, anthers ovate, 1 mm long, filaments 2-5 mm long, sparsely pilose for .5 mm at their base; style 10 mm long; fruit ovoid, 3 by 5 mm, reddish.

Type: Argentina: Catamarca: Ambato: El Potrero, 15-III-1909, Castillón 1043 in the herbarium of Fundación Miguel Lillo.

CATAMARCA: Ambato: El Potrero, 15-III-1909; El Potrero, 28-VI-1909, 1783, VII-1909, 9745, and Potrero, V-1910, Castillón 14309; Fray M. Esquiú: Pomancillo, 14-I-1940, Castellanos 33919.

10. *Lycium elongatum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 136. 1854; Hitchc., Ann. Mo. Bot. Gard. 19: 258. 1932.

Lycium elongatum var. *riojana* Hieron. ex Haum.-Merck, Anal. Mus. Nac. Buenos Aires 24: 416. 1913.

Lycium confertum Miers, Ann. & Mag. Nat. Hist. II, 14: 137. 1854.

Lycium floribundum β *infaustum* var. *elongatum* (Miers) Terrac., Malpighia 4: 531. 1891.

Lycium floribundum β *infaustum* var. *confertum* (Miers) Terrac., l. c.

Shrub with straight, moderately thick branches, from few to many short pungent branches, glabrous; leaves glabrous (or microscopically papillate near base), leaves linear-spatulate, .5-1 mm broad, 7-20 mm long, fascicled on short-shoots; flowers lilac, usually solitary; pedicels 3 mm long, glabrous; calyx 3 or more mm long, tube 1.5-2 mm long, lobes 1-2.5 mm long, ciliate, rarely two-lipped, increasing a little in fruit but tube splitting in fruit; corolla glabrous outside, with a few hairs inside between insertion of stamens and for 1 mm below, tube 5-10 mm long, lobes 2-3 mm long; stamens inserted 6-7 mm from base of corolla, anthers deltoid-ovate, .8 mm long, filaments 1-4 mm long, glabrous or sparsely pilose at base; style 9 mm long; fruit red, ovoid, 2 by 4 mm long, many-seeded.

Type: in desertis salsuginosis intra Cordovam et Santiago de Tucumán, Argentina, Tweedie 1212 in the herbarium of the British Museum.

This species is similar in appearance to *L. infaustum* but has larger calyx and *L. infaustum* is never pubescent below insertion of the anthers.

PTE. PERÓN (ex CHACO): Campo del Cielo: Gancedo, 21-XII-1946, Schulz 1036.

SANTIAGO DEL ESTERO: Guasayán: San Carlos, 10-V-1942, Arganaraz 388; La Banda: La Banda, 12-IV-1907, Lillo 6076; Moreno: Weisburg, 25-IX-1947, Castellanos s. n.; Ojo de Agua: Puesto el Corbalán, 28-XI-1944, Balegno 193; Pellegrini: Algarrobal Viejo, 20-IV-1947, Luna 96; Cerro del Remate, 550 m alt., 23-XII-1927, Venturi 5690; Robles: Colonia Jaimes, 15-XI-1948, Lune 1388; 28 de Marzo: Añatuya, 21-II-1947, Schulz 1351.

CÓRDOBA: Calamuchita: Villa Dolores, 25-III-1947, Terribile 693; Capital: San Vicente, 19-I-1921, Castellanos 36988; Jardín Zoológico, 23-I-1948, Meyer 13372; Barrio Perezoni, 24-III-1944, Ruiz 306; Cruz del Eje: Cruz del Eje, Dique, 19-V-1947, O'Donnell 4500; Ischilín: Villa Quilino, 16-XII-1947, Meyer 13723; Los Tártagos, 31-III-1944, O'Donnell-Rodríguez 660; Sobremonte: San Francisco del Chañar, 5-XII-1944, Balegno 289; Totoral: Las Peñas, 22-XII-1946, Balegno 1158; Tulumba: Cerro Sauce Puneo, 2-XI-1945, Cuezzo 761.

SAN LUIS: Capital: Alto Pencoso, 30-X-1945, Ruiz 10442; General Belgrano: inmediaciones de Alto Pencoso, 30-X-1945, Ruiz 10442; General Pedernera: Unión, Schulz 6063.

TUCUMÁN: Burruyacu: cajón del Río Loro, 750 m alt., 12-I-1924, Venturi 2501; Río Chico: La Cocha, 440 m alt., II-1919, Bailetti 132; Tafí: camino a Tapia, VII-1941, Borsini 31 and 32B; Trancas: Tapia, 24-XI-1950, Hueck 345; Vipos, 650 m alt., 22-I-1905, Lillo 3446; Vipos, 800 m alt., 22-XII-1907, 7269, and Vipos, 25-III-1908, Lillo 7899; Vipos, 650 m alt., 27-II-1921, Schreiter s. n.; Tapia, 600 m alt., 29-IX-1920, 1374, and Tapia, 650 m alt., 13-IX-1925, Schreiter 4577; Tapia, 850 m alt., X-1920, Venturi 968 and Tapia, 700 m alt., 2-XI-1924, 3528.

CATAMARCA: Castillón 1529; Capayán: La Brea, 20-IV-1908, Lillo 1040; Capital: 22-II-1909, Castillón 1045 and 3-X-1910, 14311; 22-II-1909, Lillo 9340; Fray Mamerto Esquiú: Pomancillo, 17-I-1940, Castellanos 33948.

MENDOZA: La Paz: Desaguadero inmediaciones del Pozo de las Tropas, 16-II-1944, Ruiz 8796.

11. *Lycium O'Donellii* Barkley, n. sp.

Fruticosum, glabrum, 4-25 cm altum, sublignosum; ramis non spinosis; foliis crassis, spatulato-obovatis, 5-14 mm longis, glabris vel ciliolatis; calyce glabro, tubo 2-3 mm longo, lobis circa 1.5 mm longis triangularibus, ciliolatis; corolla tubo 6-7 mm longo, glabro praedita, lobis erectis, rotundis, glabris vel margine ciliolatis; staminibus 3-3.4 mm supra basin tubi corollae adhaesis; stylo 5-6 mm longo.

Plant low, 4-25 cm tall, scarcely woody; stems spineless, glabrous, at first greenish-white, later gray; leaves thick, spatulate-obovate, 5-14 mm long, 1.5-2.5 mm broad, glabrous, ciliate at margin with white, simple or branched hairs, usually one at a node but often several fascicled; pedicels coarse, 5-6 mm long, glabrous; calyx glabrous, calyx tube 3 mm broad, 2-3 mm long, calyx lobes about 1.5 mm long, triangular, ciliate; corolla tube 6-7 mm long, glabrous, corolla lobes erect, rotund, 2-3 mm long, glabrous, ciliate; stamens attached 3-3.5 mm from base of corolla tube, anthers 1.5 mm long, filaments 2-3 mm long, glabrous; style 5-6 mm long.

Type : Argentina : Santa Cruz : Guer-Aike, 15-XII-1945, Carlos A. O'Donell 4082 in the herbarium of Fundación Miguel Lillo.

This species which grows in the same localities with *L. repens*, often intermixed with it, looks very much like that species. The glabrous calyx and corolla of this species readily separates it from the pubescent calyx and corolla of *L. repens*.

CHUBUT : Escalante : Cañadón Faryays, 1-XI-1945, O'Donell 3465 and Escalante, 14-XI-1945, s. n.

SANTA CRUZ : Güer-Aike, 15-XII-1945, O'Donell 4031 and 4082, and Guer-Aike, 21-XII-1945, s. n.

12. *Lycium Hunzikeri* Barkley, n. sp.

Frutex parvus, non spinosus; ramis glabratis; foliis spatulatis, subacutis, 5 mm longis, pilosis fasciculatis; calyce tubo 2 mm longo praedito, pubescenti, lobis 1.5 mm longis, ciliatis, acuminate; corolla tubo 2.5 mm longo praedita, pubescenti ad latus exterius, lobis 4-5 mm longis, ovatis, subacutis; staminibus procientibus; stylo 5 mm longo; baccia ovata.

Plant low, essentially spineless, 5-30 cm tall; branches gray or brown, glabrate, in age very rough; leaves spatulate, subacute, 1.5 mm broad, 5 mm long, pilose, 1-7 fascicled on short-shoots; pedicels

2 mm long, pubescent; calyx tube 2 mm long, pubescent, calyx lobes 1.5 mm long, ciliate, acuminate, calyx not enlarging in fruit; corolla tube 2.5 mm long, pubescent outside, glabrous within, lobes 4-5 mm long, ovate, subacute, pubescent outside; stamens with anthers 1 mm long, filaments 3 mm long, glabrous above, attached 2 mm above base of corolla tube, densely long pubescent below; style 5 mm long; fruit ovate, 2 by 4 mm.

Type : Argentina : Catamarca : Tinogasta : San Francisco, 4200 m alt., 31-I-1930, Schreiter 6087 in the herbarium of the Fundación Miguel Lillo.

Known only from the type collection.

13. *Lycium repens* Speg.

Speg., Rev. Fac. Agr. y Vet. La Plata 3 : 554. 1897 ; Hitchc., Ann. Mo. Bot. Gard. 19 : 289. 1932.

Unarmed, prostrate or tufted pubescent, semiwoody plant, 2-20 cm tall; stems whitish-green at first, later gray or brown, pubescent with simple and forked trichomes, tardily glabrate, weak, spreading by creeping branches or by underground stems; pedicels 2-3 mm long, pubescent; calyx pubescent, tube 3 mm broad, 2-2.5 mm long, lobes triangular, 2 mm long, growing about 1 mm in fruit, but the tube splitting; corolla tube 6-6.5 mm long, glabrous except sparsely pilose outside on the veins, lobes 2.5 mm long, usually ciliate; stamens subequal, anthers 2 mm long, filaments 3 mm long, glabrous attached to tube of corolla 2 mm above base; styles 5 mm long; fruit glabrous, spherical, 6 by 6 mm.

Type : in Lapidosis ad marginem laculorum salsorum prope Santa Cruz, Argentina, 1882, C. Spegazzini.

CHUBUT : Escalante, 14-XI-1945, O'Donell 3530.

SANTA CRUZ : 200 m alt., 25-XI-1929, Donat 170; Güer-Aike : 2-XII-1945, O'Donell 4020.

14. *Lycium Schreiteri* Barkley, n. sp.

Frutex usque ad 2 m altus; ramis gracilibus, glabris, spinosis; foliis glabris, obovato-spatulatis, 1-2 cm longis, decurrentibus; petiolis longis; calyce glabro, tubo circa 8 mm longo, 4 mm lato, bilabiato, labiis 2 mm longis; corolla tubo 7-13 mm longo praedita, extus glabra, quinquelobata, lobis 5-6 mm longis, sparse ciliatis; staminibus proi-

cinctibus, 3 mm supra basin corollae insertis; stylo 14-15 mm longo; baccia obconica.

A shrub or small tree to two meters, with many dark colored, glabrous, moderately slender branches which are usually pungent tipped, in age with prominent short-shoots at the nodes; leaves glabrous, thin and succulent, obovate-spatulate, 5-8 mm wide, 1-2 cm long, obtuse or rarely subacute, cuneate at base, decurrent on the 3-7 mm long petiole, apparently early deciduous; flowers borne 1 or 2 to a node on subligneous lateral short-shoots; pedicels .5-2.5 mm long, glabrous; calyx glabrous, the tube (4-) 8 mm long, about 4 mm wide, somewhat two-lipped, the lips 2 mm long, the lobes 1 mm long, pilose-ciliate near the tips; corolla tube 7-13 mm long, about 1.5 mm broad at constriction, 6 mm at the apex, glabrous outside, with a pilose ring inside at point of insertion of the stamens, lobes 5, obovate, 5-6 mm long, 4 mm broad, sparsely ciliate; stamens exserted, inserted 3 mm above the base of the corolla tube, anthers rectangular-ovate, about 2 mm long, filaments 7-11 mm long, densely pilose for 3-4 mm above their base; style 14-15 mm long; fruit short obconical, 4.5-5.5 mm, many seeded.

Type: Argentina: Tucumán: Trancas: Quebrada del Chorro, 2700 m alt., 1-II-1927, Schreiter 4820, in the herbarium of the Fundación Miguel Lillo.

A plant from general appearance more likely to be placed in *Iochroma* or *Grabowskia*, but whose many seeded capsule and imbricate corolla lobes places it in *Lycium*. Its large flowers look like overgrown and distorted flowers of *L. nodosum*.

TUCUMÁN: Tafí: Colalao del Valle, 1800 m alt., I-1913, Dinelli 12898; Trancas: Quebrada del Chorro, 2700 m alt., 1-II-1927, Schreiter 4820.

CATAMARCA: Santa María: el Cajón, entrada de la quebrada de Santa María, I-1915, Castillón s. n.

15. *Lycium vimineum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 140. 1854.

Lycium chilense ? *implexum* var. *vimineum* (Miers) Terrac., Malpighia 4: 530. 1891.

Shrub 1-2 meters tall; branches slender, few, light colored, with short spinose branches; leaves spatulate, 1-4 mm wide, 5-15 mm long, glabrous, probably succulent, fascicled in the short-shoots; flowers

usually solitary at the nodes; pedicels slender, glabrous, 4-8 mm long; calyx glabrous, tube 1.8 mm long, lips 1-1.5 mm long, lobes 3-5, .6 mm long or tube 2 mm long, lobes equal, 1-1.5 mm long, pilose-ciliate; corolla glabrous outside but with a pilose ring inside about 1 mm above insertion of stamens, tube 6 (rarely only 3) mm long, lobes 3 (2.5-4) mm long, ciliate; stamens inserted 2.5 (1.5-3) mm from base of corolla tube, anthers ovate, 1.5 mm long, filaments 4 mm long, glabrous at base .1 to .5 mm then densely pilose for 1 mm above this; style 7 mm long.

Type: near the town of Santa Fe, Province of Santa Fe, Argentina, Tweedie in the herbarium of the British Museum.

Balegno 1034 has larger flowers than typical but seems better placed here than in *L. nodosum*.

CORRIENTES: San Luis Palmar: Estación Herlitzka, 28-IX-1945, Ibarrola s. n.

PTE. PERÓN (ex CHACO): Resistencia: Colonia Benítez, II-1932, Meyer 700 and Margarita Belén, I-1938, 2428; Enrique Urien, 1-XII-1945, Schulz 811; Mborebí río Guaicurú, 17-VI-1944 and Las Palmas, 2-VIII-1944, 11645B; Margarita Belén, 7-V-1948, Vega 857.

CÓRDOBA: Río 1º: Obispo Trejo, 13-XII-1946, Balegno 1034 and 1035.

16. *Lycium infaustum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 192. 1854; Hitchc., Ann. Mo. Bot. Gard. 19: 234. 1932.

Lycium floribundum ? *infaustum* (Miers) Terrac., Malpighia 4: 531. 1891.
pr. p.

Glabrous shrub with many branches, these at first light and later dark, often the branchlets very slender and pungent; leaves linear-spatulate, fascicled at the nodes, fleshy, glabrous, .5-.7 (rarely 1.2) mm wide, 5 to 10 mm long; flowers solitary at the nodes; pedicels glabrous, 6 mm long; calyx glabrous, tube 2 (1-3) mm long, the lobes 1-1.5 mm long, or two lipped, then the tube about 2.5 mm long, the lips 1-1.5 mm long and the lobes .5-1 mm long, the calyx increasing in diameter in fruit but splitting down one side; corolla glabrous outside and inside, or with a few hairs inside between the insertion of the stamens; tube 6 (4-7) mm long, lobes 3 (2.5-3.5) mm long; stamens exserted, inserted 4 mm from base of corolla tube, anthers ovate, 1.5 mm long, filaments 4 (3-5) mm long, glabrous or essentially so for .4 mm at the base, then densely pilose for .6 mm above this;



style 8 mm long; fruit globular, 4 by 4 mm to 7 by 7 mm, many seeded.

Type: near Rio Colorado and Bahia Blanca, south of Province of Buenos Aires, Argentina, Tweedie s. n. in the herbarium of the British Museum.

This species superficially resembles *L. elongatum* and several specimens seem to be intermediate between the two, namely Ruiz 8837, Schreiter 6365 and 5958, and Venturi 4227.

TUCUMÁN: *Tafí*: Colalao del Valle, 23-XI-1949, Araque Barkley 19Ar348; Sierra del Cajón, quebrada de los Batenues, 2200 m alt., 29-IV-1926, Venturi 4227.

CATAMARCA: Totoralejo, 7-XII-1946, Brizuela 346, and La Perforadora, 11-XII-1946, 424; *Belén*: La Florida, puerta del Corral Quemado, 1800 m alt., 15-III-1934, Schreiter s. n.; *La Paz*: El Barrial, 28-XII-1946, Brizuela 71; La Guardia, ramal de Chumbicha a Recreo, 20-II-1930, Schreiter 5958; *Santa María*: cerca a Santa María, 1800 m alt., 22-XI-1949, Araque Barkley 19Ar302; *Tinogasta*: de Tinogasta a cerro Negro, 1200 m alt., 17-II-1930, Schreiter 6365.

SAN JUAN: Pasto de Curro, II-1910, Venturi 10741.

MENDOZA: *Las Heras*: Desaguadero entre Paso de Las Tropas y Bajada del Perro, 16/19-II-1944, Ruiz 8837 and 29-II-1944, 8863, and Ramblón a Lavalle, 9261; Ramblón, Semper s. n. and Desaguadero, 14/18-II-1944, s. n.; *San Rafael*: Mihuil, 1260 m alt., 15-XI-1949, Romanella 7.

17. *Lycium nodosum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14 : 139. 1854; Hitchc., Ann. Mo. Bot. Gard. 19 : 220. 1932.

Lycium chilense Miers ex Bert. var. *heterophyllum* Hassler, Fedde Rep. Spec. Nov. 15 : 240. 1918.

Lycium chilense & *implexum* var. *nodosum* (Miers) Terrac., Malpighia 4 : 530. 1891.

Lycium confusum Dammer, Arkiv f. Bot. 1 : 404. 1903.

Lycium infaustum Griseb., Abhandl. König. Ges. Wiss. Gött. 19 : 217. 1874.

Lycium Johnstonii Blake, Contr. Gray Herb. n. s. 53 : 49. 1918.

Lycium paucifolium Rusby, Mem. Torr. Bot. Club 6 : 91. 1896.

Lycium salsum Ruiz & Pavón ex Miers, Ann. & Mag. Nat. Hist. II, 14 : 337. 1854.

Lycium subtridentatum Dammer, Meded. Rijks Herb. Leid. 29 : 25. 1916.

Lycium Tweedianum Griseb., Abhandl. König. Ges. Wiss. Gött. 19 : 216. 1874.

Lycium Tweedianum Griseb. var. *pruinosum* (Griseb.) Hassler, Ann. Cons. et Jard. Bot. Genève 20 : 188. 1917.

Grabowskia Schlechtendalii Chodat, Bull. Soc. Bot. Genève II, 8 : 150. 1916, pr. p.

A much branched shrub with a few short spines and often bearing very prominent white-pilose short-shoots at the nodes and even on the spines; stems gray, glabrate, later brown; leaves obovate-spatulate rounded-obtuse, obovate-obtuse, or lance-elliptic subacute, glabrous, 3-11 mm broad, 4-40 mm long, cuneate at base and decurrent on the 4-13 mm long petiole; flowers 1-3 per node; pedicels 3-13 mm long, glabrous; calyx glabrous, tube 1-3 mm long, cup-shaped, two lips 2-3 mm long and the lobes .5-1.5 mm long or not two-lipped and then the lobes .4-1.5 mm long, broadly ovate-triangular, subciliate to ciliate; corolla glabrous outside, with dense pilose tuft 1 mm above and between the insertion of the stamens or pilose in a ring at the insertion of the stamens, the tube 4-7 mm long, lobes ovate-obtuse, 2-5 mm long, 2-2.5 mm broad, usually ciliate; stamens exserted, attached 2-5.5 mm above base of tube of corolla, filaments about 4-6 mm long, base glabrous for .4-1 mm and then densely pilose for .6-1.2 mm and glabrous above, or without the glabrous base; style 8-9 mm long, fruit spherical, red, 3 by 3 to 5 by 5 mm, many seeded.

Type: Tucumán, Argentina, Tweedie s. n. in the herbarium of the British Museum.

This species as represented in Argentina, is a very variable plant. The two extremes fall very nicely into the two species, *L. nodosum* and *L. Tweedianum*, as delimited by Hitchcock. However, most of the more recent collections are intermediates, and the present writer is unable to find a means of separating the two in practice, therefore it seems best to him to unite the two.

Distribution from Argentina to Paraguay, Bolivia and Perú, and along the coast of Ecuador, Colombia and Venezuela.

FORMOSA: km 139 del FC., II-1918, Jörgensen 2210; *Pirané*: Pirané, 18-X-1945, Morel 51 and Pirané, 20-X-1945, 67; Chacras, 30-XI-1945, Pierotti 4152.

PTE. PERÓN (EX CHACO): La Fidelidad, IV-1918, Jörgensen 2824 and 2825; Campo Villafaña, 1-IX-1944, Rojas 12175; *Campo del Cielo*: Las Breñas, 250 m alt., 10-XI-1929, Venturi 9799.

SANTIAGO DEL ESTERO: Capital: Parque Aguirre, 12-XII-1949, Meyer-Sleumer 15818; Copo: Monte Quemado, 3-II-1947, Malvárez 639; La Banda: Estación Clodomira, 1-15-IV-1944, García s. n.,

15-IV-1944, s. n., and La Banda, 29-XII-1944, García 285; alrededores de La Banda, 25-XII-1946, O'Donell 4241; Pellegrini: Algarrobal Viejo, 20-IV-1947, Luna 95; La Fragua, Río Horcones, 400 m alt., XII-1932, Schreiter 8918; Cerro del Remate, 550 m alt., 21-XII-1927, Venturi 5684; Robles: Vilmer, 1-XI-1946, Ruiz 3096; 28 de Marzo: Añatuya, 21-II-1947, Schulz 1349.

SALTA: Anta: Joaquín V. González, 22-I-1945, Aguilar 274; Vinal Pozo, 1-VI-1947, Luna 192; Capital: Cabeza de Buey, 15-V-1944, Ruiz 601; Chilcas: márgenes del río Pasaje, 7-I-1888, Lillo 567; Rosario de la Frontera: junto al arroyo Salado, 7-I-1905, Lillo 3886.

TUCUMÁN: Burruyacu: Cañada Alegre, 5-I-1910, Stuckert 21283; Timbó, 600 m alt., 20-IV-1924, Venturi 3526; Chilicasta: Chilicasta, 300 m alt., 15-X-1913, Monetti 1261; Cruz Alta: La Florida, 270 m alt., 11-VI-1913, Monetti 15222; Agua Dulce, 450 m alt., 8-XII-1925, Schreiter 4578; Leales: Alurralde, XII-1889, Lillo s. n.; Las Décimas, 270 m alt., 28-V-1913, Monetti 15219; Alurralde, I-1888, Schickendantz s. n.; Chañar Pozo, 300 m alt., X-1919, Venturi 438 and XII-1919, 708; Trancas: Tapia, 700 m alt., 2-XI-1924, Venturi 3527.

CATAMARCA: Santa María: El Cajón, entrada de la Quebrada Santa María, 13-I-1914, Castillón 3368.

18. *Lycium Schickendantzii* Barkley, n. sp.

Frutex; ramis parvis, crassis, spinis crassis praeditis, glabris; foliis ciliatis lanceolatis, 6-12 mm longis; pedicellis 2-3 mm longis sparse pilosis; calyce sparse piloso, tubo 3 mm longo, lobis 1.5 mm longis, lanceolatis, ciliolatis; corolla dense pilosa extus ad partem constrictam, tubo 3 mm longo, lobis 2.5 mm longis, ovatis, ciliolatis; filamenti glabris ex toto; stylo 5 mm longo.

Shrub with few, heavy, rigid branches, spinose with coarse spines; branches glabrous, at first white but soon dark gray; leaves at first ciliate, soon glabrous, lanceolate 1.5-2 mm wide, 6-12 mm long, single or 1-3 at a node; pedicels 2-3 mm long, very sparsely pilose; calyx very sparsely pilose, tube 3 mm long, lobes 1.5 mm long, lanceolate, ciliate; corolla densely pilose on constriction without, with pilosity within a ring above the insertion of the stamens, tube 3 mm long, lobes 2.5 mm long, ovate, ciliate; stamens inserted 1 mm from base of corolla tube, not glandular at base, anthers oval, 1 mm long, fila-

ments glabrous throughout their length, 2 mm long; style 5 mm long; fruit not seen.

Type: Argentina: Tucumán: Tafi: El Molle, 19-XI-1943, Descole 1402 in the herbarium of the Fundación Miguel Lillo.

Known only from the type collection.

19. *Lycium pubescens* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 339. 1854; Hitchc., Ann. Mo. Bot. Gard. 19: 227. 1932.

Lycium patagonicum & *normale* var. *pubescens* Terrac., Malpighia 4: 533. 1891.

Cfr. description Hitchcock, l. c. The present writer has seen only one specimen which seems to fit the description of this species:

RÍO NEGRO: Pichi-Mahuída: Río Colorado, 79 m alt., 20-XI-1944, O'Donell 1529.

20. *Lycium Venturii* Hitchc.

Hitchc., Ann. Mo. Bot. Gard. 19: 232. 1932.

Little branched shrub, somewhat spiny; branches dark, glandular at first, soon glabrate; leaves spatulate, 2 mm wide, 10 mm long, evenly glandularly puberulent; flowers solitary; pedicels 1.5-3 mm long, glandular puberulent; calyx tube 1.8 mm long, lobes 2 mm long, oblong, rounded obtuse, glandular puberulent; corolla minutely puberulent without, sparsely pilose within at insertion of stamens, tube 5-10 mm long, lobes 3-5 mm long, often with much variation in flower dimensions on the same branch; stamens inserted 3.5 mm from base of corolla tube, anthers oval, 1.5 mm long, filaments 5-6 mm long, pilose 1.5 mm from their bases; style 10 mm long; fruit globular, black, 4 by 4 mm, many seeded.

Type: Argentina: Tucumán: Los Quemados, X-1919, Venturi 534 in the herbarium of the Missouri Botanical Garden.

SANTIAGO DEL ESTERO: Carlos Pellegrini: Cerro del Remate, 550 m alt., 21-XII-1927, Venturi 5691.

JUJUY: Tumbaya: Volcán, 2100 m alt., 20-I-1917, Castillón 294 and Estación Volcán, 2200 m alt., 26-I-1927, 334; Marimars, XII-1905, Dinelli 4696; entre las rocas Purmamarca, 2200 m alt., 10-XII-1905, Lillo, 4641; Camino al Volcán, 30-XI-1947, Rial-Lauro s. n.

SALTA: Rosario de Lerma: Gólgota, 17-I-1941, Meyer 3660; Quebradas del Río Toro y del Río Blanco, I-1923, Vattuone 192; San Carlos, 16-III-1943, Hunziker 2703.

TUCUMÁN : *Burruyacu* : Cajón del río Loro, 750 m alt., 13-I-1923. Venturi 2502; *Leales* : Las Salinas, 270 m alt., 29-V-1913, Monetti 15223 and Orán, 400 m alt., 29-IX-1913, 15227; *Cachi Yaco*, 400 m alt., 18-VI-1950, Sleumer 727; *Guardamontes*, 10-XI-1946, Vaca 24; *Los Quemados*, 300 m alt., X-1919, Venturi 534; *Tafí* : camino a *Tapia*, VII-1941, Borsini 32A; *Trancas* : *Tapia*, 600 m alt., 8-VI-1943; Iñigo 13; *Vipos*, 800 m alt., 27-XII-1907, Lillo 7279, and *Vipos*, 1887, Lillo s. n.; *Tapia*, 650 m alt., 26-V-1921, Schreiter s. n.; *Tapia*, 500 m alt., 24-XI-1917, 284 and *Vipos*, 790 m alt., 30-X-1921, Schreiter 1696; *Tapia*, 850 m alt., 10-X-1920, Venturi 962 and *Vipos*, 900 m alt., 30-X-1921, Venturi 1384.

CATAMARCA : *Andalgalá* : Campo Pucará, 1700 m alt., 13-I-1949, Lamb s. n.; *Andalgalá*, 22-X-1933, Peirano 9898; *Belén* : Hualfín, 16-I-1934, Peirano s. n.; *Pomán* : Salar de Pipanaco, 690 m alt., 8-III-1950, Vervoort 701; *Santa María* : Santa María, 1800 m alt., 22-XI-1949, Araque y Barkley 19Ar287 [and 19Ar316]; arenas de Punta de Balasto en el Valle del Cajón, XI-1915, Schreiter s. n.

LA RIOJA : *Chilecito* : Los Llanos, El Retamo, 14-II-1940, Caste-llanos 33935; entre Chilecito y Mina de Oro, 1100 m alt., 12-I-1942, Meyer 4020 and 13-I-1942, 4096; *Sañogasta*, 17-I-1950, Palacios, Balegno y Cuezzo 1717; *General Lavalle* : Villa Muión, 1240 m alt., 30-I-1942, Meyer 4203; *General Roca* : Piedra Pintada, 17-I-1950, Palacios-Balegno-Cuezzo s. n.; *Pelagio B. Luna* : Chaqui, I-1942, Rojas s. n.

SAN JUAN : *Jachal* : Los Marayes, 13-XI-1945, Cuezzo 1020, and Pampa del Chañar, 15-XII-1945, 1946.

MENDOZA : *Godoy Cruz* : Parque, 19-I-1944, O'Donell 1315 and 1326; *Las Heras* : Potrerillos, 15-III-1942, Covas 757; *Luján* : Chacras de Coria, 21-I-1950, Acezél-Barkley 20Mz247; Chacras de Coria, 21-I-1950, Araque & Barkley 20Mz248 and Cacheuta, 21-I-1950, 20 Mz269; Chacras de Coria, 21-I-1950, Araque, Cuezzo & Balegno 1751; Cacheuta, 21-I-1950, Balegno & Barkley 20Mz270.

21. *Lycium ovalilobum* Hitchc.

Hitchc., *Ann. Mo. Bot. Gard.* 19 : 233. 1932.

Shrub with many light-colored spinose branches often bearing smaller spinose branches; branches short pilose and glandularly puberulent, very tardily glabrate but always appearing to the naked eye as glabrous; leaves obovate-spatulate, 1.3 mm wide, 1.5-8 mm long,

long attenuate at base, rarely acute at apex, usually obtuse, on older branches leaves often 8-10 mm wide, and 20-25 mm long, puberulent with glandular hairs, with very sparse pilosity, usually solitary but often clustered on the short-shoots; flowers solitary or rarely as many as 3 in a cluster; pedicels 3 (1-4) mm long, sparsely pilose and glandularly puberulent; calyx sparsely pilose with short simple hairs and densely to sparsely glandularly puberulent, tube 2 (1.5-3) mm long, lobes 3 (2-4) mm long and 1.5 mm wide, lobes lanceolate, acute or rarely subacute, in fruit tube 3 mm long, the lobes 4 mm long and 2.5 mm wide; corolla glabrous on outside (or minutely pilose on lobes), with pilose ring inside just above the insertion of the stamens, tube 5 (4.5-7) mm long, lobes 4 (3-5) mm long, 3 (1.8-3.5) mm broad, obtuse to subacute, ciliate or not; stamens exserted, attached 4 (2.5-5) mm from base of tube of corolla, anthers ovate, 1.5-2 mm long, filaments 5 (4-7) mm long, pilose from base for 1-1.5 (rarely 2) mm; style 6-11 mm long; fruit ovoid, dark red-black, 4 to 5 by 4 to 5 mm, seed many.

Type : Argentina : Catamarca : Andalgalá : 9-IX-1916, Jörgensen 976 in the herbarium of the Missouri Botanical Garden.

SANTA FE : *San Cristóbal* : Estancia La Guasuncha entre E. Rams y Ercilia, 28-XII-1944, Krapovickas 754.

JUJUY : *Humahuaca* : 21-XII-1906, Lillo 5262; *Tilcara* : Pukará, 2470 m alt., 21-XII-1925, Pereyra 79.

SALTA : *Cachi* : San José, 4-V-1947, Meyer 12297 and s. n., and Rancagüe, 6-V-1947, 12450; camino de Salta a Cafayate a km 65, 31-I-1947, O'Donell 4905; *Cafayate* : camino de Alemania a Cafayate, 11-I-1941, Villalón (LIL. 36754); *Metán* : Campo Alegre, 8-VI-1947, Luna 221; *Molinos* : Seclantás a Brealto, 6-V-1947, Meyer 12189 and Seclantás, 4-V-1947, 12324; Seclantás, 2360 m alt., 20-I-1947, Garolera & Romero s. n.

TUCUMÁN : *Tafí* : Amaicha, 19-XI-1943, Descole 1401; Colalao del Valle, 1880 m alt., I-1913, Dinelli 12900; *Trancas* : *Vipos*, 790 m alt., 24-I-1926, Schreiter s. n.

CATAMARCA : *Andalgalá* : Andalgalá, 9-IX-1915, Jörgensen 976; *Belén* : Hualfín, 2000 m alt., 10-V-1946, de Droghetti s. n.; *Santa María* : Santa María, 1800 m alt., 22-XI-1949, Araque & Barkley 19Ar333; quebrada La Balsa, 7-II-1948, Reales 852, Entre Ríos, 8-IV-1948, 1169; Chiñucan, 8-IV-1948, 1247; La Punta, 25-IV-1948, 1356 and 1358, and El Rasguñado, 3-II-1949, Reales 1567.

LA RIOJA : *General Lavalle* : Guandacol, 950 m alt., 3-II-1942, Me-

yer 4179; Los Palacios, 18-I-1950, Palacios-Balegno-Cuezzo 1683; *Independencia*: Guayapa 15 kms O. de Patquia, 500 m alt., 18/28-IV-1943, Hayward s. n.

SAN JUAN: Agua de la Zona, 19-V-1942, Covas 446; *Capital*: alrededores de la ciudad, 16-XII-1949, Araque 718 and Barkley 19 Ar718; *Iglesia*: Calangüil, 2-II-1950, Castellanos 16066 and entre Villa Corral y Villa Nueva, 27-I-1950, 16124; *Jachal*: Pampa de Chañar, 14-XII-1945, Cuezzo 1916, and Las Diaguitas, 17-XII-1945, 2026; Niquivil, 1020 m alt., XI-1941, Rodrigo 2953; *Sarmiento*: Media Agua, 28-I-1950, Borsini 1337; Cañada Honda, 28-XI-1945, Cuezzo 1590.

MENDOZA: *Las Heras*: alrededores del Parque Zoológico, 900 m alt., 23-XII-1949, Araque & Barkley 19Ar869 and Barkley 19Ar748; *Luján*: Cacheuta, 21-I-1950, Aczél & Barkley 20Mz268 and Araque 1260; Chacras de Coria, 21-I-1950, Balegno & Barkley 20Mz249; al borde del camino Los Cerrillos, 19-V-1935, Ruiz 3226 and Lulunta, 24-II-1936, Ruiz 3817; Chacras, 940 m alt., 9-II-1944, Semper 344; *Maipú*: General Gutiérrez, 4-IV-1938, Ruiz 5278 and Toma del Canal Naciente, 16-XI-1934, Ruiz 2641.

21a. *Lycium ovalilobum* var. *Sleumeri* Barkley, n. var.

Frutex spinosus; ramis pilosis glanduloso-puberulisque; foliis glanduloso-puberulis sparse pilosis, obovato-spathulatis, 2-8 mm longis vel raro 22 mm longis; calyce piloso glanduloso-puberuloque, tubo 2 mm longo, lobis 4 mm longis; corolla glabra vel lobis minute pilosis, annulo piloso supra locos insertionis staminum praedito; staminibus proiectibus; stylo 6-9 mm longo.

Shrub with many light colored spinose branches; branches long pilose and glandularly puberulent, very tardily glabrous; leaves glandularly puberulent with some long simple trichomes, obovate-spatulate, 1.3 mm wide, 1.5-8 mm long, long attenuate at base, or on main stem 5-13 mm broad and to 22 mm long and then subacute, solitary or as many as 3 at a node; pedicels 1-4 mm long, pilose and glandularly puberulent; calyx long pilose and densely to sparsely glandularly puberulent, tube 2 mm long, lobes 4 mm long and 1.5 mm wide, lobes acute, in fruit tube 3 mm long, lobes 4 mm long and 2.5 mm wide; corolla glabrous on outside or minutely pilose on lobes, with pilose ring inside just above insertion of stamens, tube 6 mm long, lobes 3.5 mm long, 4.0 mm wide, sparsely ciliate; stamens exserted,

attached 2.5-4 mm from base of tube of corolla, anthers ovate 1.5-2 mm long, filaments 4-5 mm long, pilose from 1-1.5 mm from base; style 6-9 mm long; fruit dark red to black, 4 by 4 mm, enclosed in calyx lobes, many seeded.

Type: Argentina: Santiago del Estero: Robles: Fernández, 26-IX-1946, Cuezzo 2287 in the herbarium of Fundación Miguel Lillo.

This variety typically is very distinctive from the typical variety but there are intermediates.

SANTIAGO DEL ESTERO: *Robles*: Fernández, 26-IX-1946, Cuezzo 2287.

CATAMARCA: *Belén*: Hualfín, 2000 m alt., 15-IV-1946, de Drogheotti s. n. and XI-1945, s. n.; *Fray Mam. Esquiú*; Pomancillo, 14-I-1940, Castellanos 33923; *Santa María*: Punta Balasto, 21-III-1947, O'Donell & Meyer 5170; Fuerte Quemado, 5-IV-1949, Reales 1110; *Santa Rosa*: entrada de la quebrada Concepción, 12-I-1909, Castillón 489; San Isidro, 11-IV-1944, Varela 106.

LA RIOJA: *Capital*: La Quebrada al km 9, 15-IV-1942, Alaniz 79; *Famatina*: Famatina, 1620 m alt., 8-II-1942, Meyer 4219.

SAN JUAN: *Caucete*: Pie de Palo, 14-XI-1945, Cuezzo 1090; *Desamparados*: Zonda, 18-XI-194, Cuezzo 1180 and 1188, and Chimbas, 16-XI-1945, 1270; *Jachal*: Jachal, 19-XII-1945, Cuezzo 2082; *Pocito*: Villa Krause, 27-XII-1945, Cuezzo 2203; *Riradaria*: La Bebida, 26-XI-1945, Cuezzo 1450 and Marquesado, 27-XI-1945, 1475; *Sarmiento*: Media Agua, 1-XII-1945, Cuezzo 1601.

MENDOZA: *Las Heras*: Challao, 19-IV-1842, Covas 403; Panqueluna, 710 m alt., 22-IV-1947, García 267.

22. *Lycium decipiens* U. Dammer

U. Dammer in *Engl. Bot. Jahrb.* 37: 168. 1905.

Low shrub with massive short branches; branches spinose tipped, at first grayish, later light brown, and later dark gray, the nodes close; leaves spatulate, the edges recurved so that the leaf appears linear, .5-.7 mm wide, 2-5 mm long, fascicled on prominent short-shoots; flowers solitary on the short-shoots; pedicels 1-2 mm long, shortly pilose; calyx shortly pilose with simple hairs, the tube 2 mm long, the lobes 4, rounded 1.5-2 mm long, in fruit the tube increasing to 3 mm long; corolla 6 mm long, the 4 lobes 2 mm long, 3 mm wide, corolla sparsely to densely pilose outside except at the base, glabrous within; stamens attached 1.2 mm from the base of the corolla tube,

anthers rectangular, 1.5 mm long, filaments 3 mm long, glabrous at very base but sparsely pilose above for about 1 mm; style 3.5 mm long; fruit orange red, spheroid, 3 by 3 mm, many seeded.

Type: hot, dry, rocky soil, Moceno, Jujuy, Argentina, 18-XI-1901, 3500 m alt., Fries 794 in the herbarium at Stockholm.

Distribution according to Hitchcock from Jujuy to Catamarca, but apparently extending to Mendoza in the higher drier mountain slopes.

CATAMARCA: *Autofagasta de la Sierra*: Incahuasi, cerrito de la Cruz, 3900 m alt., 3-II-1950, Hueck 497.

SAN JUAN: *Iglesia*: Pampa del Leoncito, 28-I-1950, Castellanos 16083 and Cordillera Calangüil entre Vaca Muerta y La Vacuñita, 4-II-1950, 16107.

MENDOZA: *Las Heras*: Estación La Polvareda, 1850 m alt., 24-I-1950, Araque 1328; Cuesta a Cruz del Paramillo, 3-I-1950, Araque-Barkley 20Mz023; Cruz de Paramillo, 3000 m alt., 3-I-1950, Barkley-Paci 274; Estación La Polvareda, 1850 m alt., Cuezzo & Balegno 1865 and Quebrada del Toro, 2000 m alt., 25-I-1950, Cuezzo & Balegno 2105; Cruz de Paramillo, 3000 m alt., 21-I-1944, O'Donell 1171; Estación La Polvareda, 1850 m alt., 24-I-1950, Palacios & Barkley 20Mz328; 2900-3000 m alt., 21-XI-1937, Ruiz 3477, Quebrada del Toro, 2200 m alt., 21-XI-1937, 3499; and entre Uspallata y Puesto San Alberto, 27-XII-1947, Ruiz 11137; Uspallata, 12-II-1910, Sanzin 731.

23. *Lycium tenuispinosum* Miers

Miers, Ann. & Mag. Nat. Hist. II, 14: 190. 1854; Hitchc., Ann. Mo. Bot. Gard. 19: 229. 1932.

Lycium floribundum Dunal in DC., Prodr. 131: 513. 1852.

Lycium spinulosum Miers, Ann. & Mag. Nat. Hist. II, 14: 191. 1854.

Lycium spinulosum Miers var. *parvifolium* Gill. ex Miers, Ann. & Mag. Nat. Hist. II, 14: 192. 1854.

Lycium microphyllum Philippi, Anal. Univ. Chil. 37: 197. 1870.

Lycium minutifolium Philippi, Anal. Univ. Chil. 91: 27. 1895.

Lycium chubutense Dusén, Svensk. Exped. Magell. 35: 250. 1900.

Lycium Philippianum Speg., Anal. Soc. Cient. Arg. 53: 171. 1902.

Lycium floribundum x *normale* Terrac., Malpighia 4: 530. 1891.

Lycium floribundum x *normale* var. *tenuispinosum* (Miers) Terrac., l. c. 531.

Much branched spreading shrub with pungent branches; branches at first short sparse pilose, whitish, bearing many lateral pungent shoots, later glabrate, brownish gray; leaves spatulate .5-1 mm broad,

2-10 mm long, fascicled, glandular and sparsely pilose; flowers solitary at the nodes; pedicels 3 (1-5) mm long, long pilose or glandular or both; calyx sparsely long pilose and glandular, tube 2 (1.5-2.5) mm long, lobes linear, 3 (1.5-6) mm long, .7 mm wide, in fruit tube 3 mm long, lobes 3 mm long; corolla glabrous outside or with a few hairs, but having a pilose ring inside about 1 mm above insertion of stamens, tube 6.5 (6-7) mm long, lobes 3.5 (2.5-4) mm long, 2.5 mm broad, obtuse; stamens inserted about 3 mm from base, anthers ovate, 1.5 mm long, filaments 5 (4-7) mm long, pilose for 1 mm above bases; style 8 mm long; fruit spherical, 2 by 2 mm, many seeded.

Specimens from Chubut have the branches and spines much more rigid and stout. Specimens from Río Negro and Mendoza often have corollas from 4 to 8 mm long on the same branch. The leaves of the ultimate (and flowering) branches are small, on the rare specimen showing the leaves of the main branches these leaves are often to 2 cm long and 5 mm wide and these larger leaves are more conspicuously pilose.

Type: Mendoza, Miers in the herbarium of the British Museum.

BUENOS AIRES: *Patagones*: Carmen de Patagones, 20-XI-1944, Meyer 6998.

CÓRDOBA: *Río 1º*: Obispo Trejo, 13-XII-1946, Balegno 1035.

SAN LUIS: *Chacabuco*: Concarán, 600 m alt., 2-II-1944, Varela 489.

EVA PERÓN (ex LA PAMPA): *Realicó*: Realicó, 9-I-1945, Schulz 5936.

MENDOZA: *Godoy Cruz*: Zanjón Frías en inmediaciones del Parque General San Martín, 1-2-II-1944, Ruiz 8368; *Junín*: La Ciénaga, 515 m alt., 4-II-1945, Lourteig 634; *La Paz*: Desaguadero inmediaciones del Paso de Las Tropas, 16-19-II-1944, Ruiz 8835; *Las Heras*: Uspallata, 1800 m alt., 20-XII-1949, Araque & Barkley 19Ar790 and Barkley 19Ar787, 17Ar793, Cerro La Gloria, 28-I-1950, Borsini 1073; *Luján*: Chaeras de Coria, 21-I-1944, O'Donell 1211; Potrerillos, 26-IX and Barkley 19Ar796; 2-XII-1942, Semper 8200; *San Rafael*: San Rafael, 21-II-1942, Covas 753; 30-I-1945, Schulz 6169; *Santa Rosa*: La Dormida, 22-IV-1943, Ruiz 8168.

RÍO NEGRO: *Pichi Mahuida*: Río Colorado, XI-1946, Hayward s. n.; *Valcheta*: Valcheta, 20-XII-1944, Meyer 7288.

CHUBUT: *Viedma*: Puerto Madryn, 24-X-1945, O'Donell 3229.

23a. *Lycium tenuispinosum* Miers var. *Friesii* (Dammer) Hitchc.

Hitchc., *Ann. Mo. Bot. Gard.* **19**: 231. 1932.

Lycium Friesii U. Dammer in *Engl. Bot. Jahrb.* **37**: 169. 1905.

Much branched shrub; branches moderately slender, pungent, and bearing lateral pungent branchlets, the branches at first minutely puberulent, whitish, soon glabrate and light brown to dark gray, short-shoots borne at the nodes of the larger branches; leaves glandular and often with long simple hairs, spatulate to linear-elliptic, obtuse to acute, thickish, .7-1.5 mm wide, 3-12 mm long, single or fascicled on the short-shoots but then smaller; flowers solitary in the axils of the leaves, pedicels 3-5 mm long, short (glandularly) pilose, rarely without some long simple hairs; calyx glandular puberulent but usually with a few long unbranched hairs, tube 3 mm long, lobes 3.5 mm long, .7-1 mm wide, in fruit tube 3 mm long, lobes 5 mm long, tube not splitting in fruit; corolla sparsely puberulent without, the tube 6 mm long, lobes 4 mm long, 2.5 mm wide; stamens attached about 3 mm from base of corolla tube, anthers rectangular, 2 mm long, filaments glabrous .7-1.5 mm from base, then pilose for 1-1.5 mm about 5 mm long; style 8 mm long; fruit globular, dark, 4 to 5 by 4 to 5 mm, seeds many.

Type: Argentina: Salta: Gólgota in Quebrada del Toro in declivibus montis, apries siccis, 2380 m alt., 11-XI-1901, Fries 664 in the herbarium at Stockholm.

This is very similar to the typical species except the leaves are much broader, the filaments are glabrous at the base. In some respects it resembles *L. ovalilobum*, *L. elongatum*, and *L. Venturii*. Ruiz 3109 is much more pilose than typical and the base of the filaments are pilose to base, and the corolla tube is pilose for 1 mm below the insertion of the stamens.

SANTIAGO DEL ESTERO: *Sumampa*: Sumampa, 22-XI-1944, Balleno 12; 28 de Marzo: Añatuya, 8-XI-1946, Ruiz 3109; Añatuya, 21-II-1947, Schulz 1350.

TUCUMÁN: *Amaicha*: El Molle, 2740 m alt., 28-XII-1912, Castillón 2449.

MENDOZA: *Godoy Cruz*: inmediaciones del Parque General San Martín, 12-III-1939, Ruiz 5735; Ripiera en Villa del Parque, 850 m alt., 29-X-1944, Semper 102; *Luján*: 24-II-1936, Carette & Ruiz 3812 and en cerritos áridos, 1200 m alt., 24-II-1936, 3817 and 3819; *Maipú*: Toma del Canal, 16-XI-1934, Ruiz 2655; *Rivadavia*: La Libertad, 15-VIII-1939, Ruiz 6154.

Section SELIDOPHORA C. L. Hitchcock

C. L. Hitchcock, *Ann. Mo. Bot. Gard.* **19**: 312. 1932.

Shrubs or subshrubs, with branches woody or subwoody, non-spinose or rarely spinose. The corolla tube usually with a pilose ring of hairs at the base of the corolla outside. The filaments of the stamens more or less enlarged at the base, pilose around an inner flat or concave surface which is more or less glandular. Fruit fleshy, many-seeded.

Of the Argentinian species of *Lycium* by far the largest number of specimens are of this section. In this section the delimitation of species and between the species and their varieties is by far the most difficult. A consistent treatment of them seems to the present author impossible, but by separating a number of additional species and varieties a possibly workable classification is arrived at.

24. *Lycium fimbriatum* Hitchc.

Hitchc., *Lilloa* **5**: 225. 1940.

Shrub, much branched, the branchlets subpungent; stems glabrous, knotty; leaves sparsely pilose and ciliate at least at first, mostly linear-spatulate and obtuse, 1.5 mm by 1 cm but a few are 3 mm wide, lance-elliptic and acute; pedicels 1.5 to 2 mm long, glabrous; calyx tube 1.5, glabrous, lobes .5-.7 mm long, densely ciliate; corolla glabrous, tube 2.5 mm long, lobes 2.5 mm long, subacute, not ciliate; stamens attached 1 mm from base of corolla tube, glandular for 1 mm of length, pilose around margin of gland, filaments 2.5 mm long, anthers .5 mm long; style 3 mm long; fruit ovoid 4 by 6 mm.

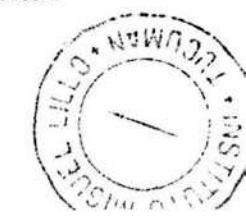
Type: Tucumán, Tafí: Río Churqui at 2000 m alt., 12-II-1908, Lillo (7637) in the University of Washington Herbarium.

TUCUMÁN: Tafí: Mesopotamia, XI-1908, Castillón 460 and Río Churqui, II-1908, Castillón 461; Río Churqui, alt. 2000 m, 12-II-1908, Lillo 7637 (*Isotype*).

25. *Lycium Comberi* Hitchc.

Hitchc., *Ann. Mo. Bot. Gard.* **19**: 313. 1932.

Intricately branched spinose shrub, the stems microscopically puberulent, and whitish at first, later tan-brown, short-shoots often



prominent; leaves linear-elliptic, glabrous or very sparsely puberulent, subacute, 4-20 mm long, 1-2 mm broad, single or 1-5 fascicled on prominent short-shoots; pedicels sparsely pilose, 3-5 mm long; calyx sparsely pilose, tube 1.5 mm long, lobes .5-1 mm long, in fruit tube 2 mm long, lobes 1 mm long; corolla almost glabrous at base outside, upper part of tube essentially glabrous, inside of the tube pilose with a tuft between the insertion of the stamens, tube 3 mm long, lobes lanceolate and obtuse or subacute, 3 mm long, ciliate on the margin; stamens attached 1 mm from base of corolla tube, gland about .5 mm long, filaments pilose for 1 mm at base except face of gland, anthers oval, 1.5 mm long, filaments 4 mm long; style 8 mm long; fruit ovoid, dark, 3.5 by 5 mm.

Type: Zapala, Terr. Neuquén, Andes of Argentina, 38°41'S, Aug. 11, 1925, Comber 127, in the Royal Botanic Garden Herbarium, Kew.

The type of this species has not been examined by the author, but the cited specimens seem to agree with the original description of the species.

Specimens examined:

NEUQUÉN: Zapala: 8-II-1947, de Barba 1864.

CHUBUT: Estancia «La Momosa», arbusto de 2 m alt., 20-XII-1945, Meyer 9397.

25a. *Lycium Comberi* var. *Donatii* Barkley, n. var.

Frutex; *ramulis rigidis, subpungentibus, albidis, glabris; foliis linearis-spathulatis, glabris; pedicellis glabris; calyce glabro, tubo 2 mm longo, lobis 1-1.5 mm longis, ciliatis; corolla glabra, tubo 3.5 mm longo, lobis 5 mm longis, non ciliatis; staminibus proicientibus.*

Much branched shrub; branchlets rigid, subpungent, whitish, glabrous; leaves linear-spatulate, glabrous, 1-1.5 mm broad, 6-10 mm long, obtuse to subacute; pedicels glabrous, 3-5 mm long; calyx glabrous, tube 2 mm long, lobes 1-1.5 mm long, ciliate; corolla glabrous, outside but with a pilose tuft between the insertion of the stamens inside of the tube, tube 3.5 mm long, lobes 5 mm long, subacute, not ciliate; stamens exserted, attached 1.5 mm from base of corolla tube, glands very narrow, 1.5 mm long, pilose on margins, filaments 5-6 mm long, anthers oval, 1 mm long; style 6 to 7 mm long.

Type: Santa Cruz: Tehuelches, alt. 200 m, 20-XII-1928, Donat 147.

It is known only from the type. The specimen looks almost as though it were intermediate between a plant of the general type of *L. ovalilobum* and of *L. chilense*.

26. *Lycium Hitchcockii* Barkley, n. sp.

Lycium cestroides × *L. argentinum* Hieron., Bol. Acad. Cienc. Córd. 2 : 43. 1876.

Lycium cestroides × *L. ciliatum* Hitchc., Ann. Mo. Bot. Gard. 19 : 217. 1932.

Fruticosum; ramis numerosis, glabris vel minute puberulis, albidis; foliis ellipticis, acutis, ciliolatis; calyce tubo 2-4 mm longo praedito, lobis 2-2.5 mm longis, subglabris sparse glandulosis vel minute pilosis; corolla ad basin extus dense pilosa fasciculoque piloso inter locos insertionis staminum praedita, tubo 8 mm longo, lobis late oratis, ciliolatis; staminibus 3-3.5 mm supra basin tubi corollae adhaesit; stylo 9 mm longo; bacca ovoidea.

Shrub, much branched, with a very few short spinose branches; branches glabrous to minutely puberulent, whitish; leaves elliptic, acute to obtuse, at first pruinose, ciliate, 5-15 mm wide, 1.8-4.5 cm long, base cuneate and decurrent on the petiole which is 1/5 to 1/3 the length of the lamina; pedicels minutely glandular, 3-6 mm long, increasing sometimes to 15 mm in fruit; calyx sparsely glandular subglabrous to minutely pilose, tube 2-4 mm long, lobes 2-2.5 mm long; corolla densely pilose outside at constriction of tube, very sparsely pilose above, tube 8 mm long, lobes very broadly ovate, margin ciliate, inside of corolla tube glabrous except with a pilose tuft .5 mm above and between the insertion of the stamens; stamens attached 3-3.5 mm from base of corolla tube, gland very narrow, 1.5 cm long, pilose around upper margin, anthers 2 mm long, narrow filaments 3-4 mm long; style 9 mm long; fruit ovoid, 2.5 by 4 to 5 by 6 mm, many seeded,

Type: Córdoba, 1-II-1918, Stuckert 889.

This group looks like a plant of *Lycium cestroides* with a flower intermediate between *L. cestroides* and *L. ciliatum*. Dr. Hitchcock followed Dr. Hieronymus in treating it as a hybrid, and it may very well be one. However, to the present writer it is sufficiently distinctive and common enough to need a name.

27. *Lycium ciliatum* Schlecht.

- Schlecht., *Linnaea* 7 : 69. 1832 ; Walp., *Rep. Bot. Syst.* 3 : 107. 1844 ; Hitchc., *Ann. Mo. Bot. Gard.* 19 : 322. 1932.
L. floribundum ? *ciliatum* (Schlecht.) Terrac., *Malpighia* 4 : 532. 1891.
L. floribundum ? *ciliatum* var. *Grisebachii* Terrac., *Malpighia* 4 : 532. 1891.
L. erosum Miers, *Ann. & Mag. Nat. Hist.* II, 14 : 343. 1854.
L. argentinum Hieron., *Bol. Acad. Cienc. Córd.* 2 : 39. 1876.
L. scoparium var. *argentinum* (Hieron.) Griseb., *Abhandl. König. Ges. Wiss. Gött.* 19 : 216. 1874.
L. scoparium ? *argentinum* (Hieron.) Terrac., *Malpighia* 4 : 532. 1891.
L. venosum Philippi, *Anal. Univ. Chil.* 91 : 22. 1895 ?
Salpichroa ciliata Miers, *Hook. Lond. Jour. Bot.* 4 : 329. 1845.

Shrub about 1.5 tall with many straight moderately slender branches (or sometimes curving or drooping branches, but then often rigid), often with short-shoots; young branches greenish white to tan, at first whitish pilose but sooner or later becoming glabrate, older branches white to gray-brown usually more or less prominently striate, scarcely pungent; leaves thinnish, broadly ovate to (rarely) lanceolate, acuminate or acute at apex or rarely obtuse, leaves (bracts) of the small flowering branches often reduced to 1/2 to 1/4 the size of the other leaves and commonly these more obtuse at apex, leaves 3 to 40 mm wide, 10 to 70 mm long, at first pilose (rarely glabrous) but often eventually glabrate, ciliate and minutely repand, petioles 1/6 to 1/3 as long as the lamina, the cuneate base of the lamina decurrent about half the length of the petiole, the leaves usually one at a node but rarely 2 to 4 fascicled at a node, the bracts usually persistently sparsely pilose; flowers borne 1 to 3 in the axils of the leaves or of bracts; pedicels 8 (3-12) mm long, often increasing to 15 or 20 mm in fruit, glabrous or very sparsely pilose or long pilose or even glandularly pilose; flowers white, fragrant, usually borne on small branchlets which have only bracts; calyx typically shortly pilose with much branched hairs but often glabrous or sparsely pilose with simple or branched trichomes or rarely sparsely glandularly puberulent, tube 1.8 (1.5-2) mm long, lobes 2.8 (2.5-4) mm long, lobes ciliate with hair similar to pilosity of the tube, the lobes in fruit much longer than the tube; corolla densely appressed pilose outside at constriction of the tube and above this glabrous to sparsely pilose, with pilose tufts inside the tube between the insertion of the stamens, tube 2.5 to 3.6 mm long, lobes 5 to 6 mm long, ciliate (usually with unbranched hairs); stamens usually long exserted,

inserted in the tube of the corolla about 1 mm above the base, anthers oval, 1.5-1.8 mm long, filaments unequal, 5-6(4-8) mm long, basal gland of filament narrowly triangular (rarely oblong triangular), 1-1.2 mm long and densely pilose around its margins; style 7-9 mm long; stigma broad; fruit dark red, usually spherical, about 5-6 by 6 mm, rarely ovoid 4 by 6 mm, many-seeded.

Dimorphism of the leaves may be seen especially well by Venturi 352. Monetti 14224 shows variation in leaf very well. Meyer 877 has an atypical inflorescence and is semilanose.

The variation in this species is much less than in *L. chilense*, however there is hardly a single characteristic of this species that does not have to be qualified as being usually present. There are four main variants in the species, the first two being the commoner. However, the intermediates between the groups are such that it hardly seems advisable to separate them into varieties. All four are found throughout the range of the species in Argentina. The four groups are : a) those having the calyx glabrous except for the ciliate margins of the lobes and having leaves glabrous except for their ciliate margins, including some specimens intermediate between this and *Lycium chilense*, b) those having the calyx more or less densely pubescent with long, little branched hairs, the leaves are usually pilose (at least at first), c) those having the calyx pubescent with short matted pubescence, the leaves pilose with long little-branched hairs (at least at first), and d) those having the calyx pubescent with short simple pubescence and the leaves sparsely glandular pubescent and puberulent with small branched hairs, this latter being reminiscent of *L. chilense* var. *scoparium*.

Type : « in Brasilia meridionali ad fluvium Rio Negro », Sello in the Herbarium at Berlin-Dahlem.

Brasil : Sello 2470 (1012) (Photo).

ARGENTINA : ENTRE RÍOS : Paraná : Paraná, « flores blancas, frutos rojo-anaranjados », 25-X-1946, Meyer 10000 ; Paraná, 12-XII-1944, Schulz 13 ; Victoria : Victoria, 10-XI-1946, Meyer 10151.

P. PERÓN (ex CHACO) : Napalpi : Avia Terai, orilla de bosque, 10-I-1945, Aguilar 174 ; Colonia José J. Marmol, 14-I-1947, Buratovich 672.

BUENOS AIRES : San Nicolás : San Nicolás, 12-X-1941, Cabrera 7196.

SANTIAGO DEL ESTERO : Avellaneda : Colonia Libanesa, 16-X-1940, Farhat 85 ; Capital : Río Dulce, 25-IX-1946, Cuezzo 2275 ;

Parque Aguirre, Gramajo s. n. ; Santiago del Estero, 185 m alt., 22-VII-1944, Martínez 7 ; *Carlos Pellegrini* : Río Horcones, La Fragua, 400 m alt., XII-1932, Peirano 8916 ; Cerro el Remate, 550 m alt., 21-XII-1927, Venturi 5689 ; *La Banda* : 24-I-1945, García 803 ; La Banda, 190 m alt., 14-X-1944, Ledesma 4 ; La Banda, 17-IV-1907, Lillo 6068 ; La Banda, 200 m alt., 15-IX-1944, Meyer 6481 ; *Ojo de Agua* : Las Horquetas, 30-XI-1944, Balegno 203 ; *Río Hondo* : Brapuñuna, 27-I-1949, Legname 194 ; *Robles* : Fernández, 26-IX-1946, Cuezzo 2288 ; Fernández, 10-I-1945, García 661 ; Colonia Jaimes, 18-XI-1948, Luna 1410.

CÓRDOBA : 16-VIII-1949, Bernal s. n. ; *Capital* : Córdoba, Curan 840 ; Altos Córdoba, 2-XI-1897, Stuckert 3594 ; *Colón* : Jesús María, 22-XII-1947, Balegno 1497 ; Jesús María, 530 m alt., 23-XII-1947, Meyer 13601 ; *Ischilin* : Villa Quilino, 16-XII-1947, Meyer 13724 ; *Punilla* : Camino a Capilla del Monte, 10-II-1950, Cuezzo y Balegno 2131 ; La Cumbre, 11-III-1944, O'Donell & Rodríguez 448 ; *Río 1º* : Río 1º, 9-XII-1946, Balegno 997 ; barrancas próximas a la margen derecha del Río 1º, 28-IX-1918, Castellanos 622 ; Río 1º, 3-XI-1899, Stuckert 7500 ; *Río 2º* : Manfredi, 20-X-1949, Krapovickas 6368 ; *San Justo* : San Francisco, 8-XII-1946, Balegno 956 ; *Santa María* : Alta Gracia, 600 m alt., 6-XII-1945, Hunziker 1255 ; *Tercero Abajo* : Tío Pujio, 8-IV-1950, Krapovickas 6641 ; *Tercero Arriba* : Ascasuki, 28-X-1949, Krapovickas 6381 ; *Totoral* : Las Peñas, 21-XII-1946, Balegno 1148 ; Ascochinga, 21-X-1935, Giardelli 106.

JUJUY : *Humahuaca* : Humahuaca, 14-V-1945, Herrera 447 ; *Tilcara* : Estación Volcán, alt., 2100 m, 20-I-1927, Castillón 285 ; Tilcara, Cerro Peña Alta, 3000 m alt., 8-II-1927, Venturi 4904 ; *Yavi* : Yavi Chico, 3420 m alt., 7-III-1940, Meyer 33400.

SALTA : *Anta* : Joaquín V. González, 27-I-1945, Agnilar 293 ; Vinal Pozo, 1-VI-1947, Luna 191 and 21-XI-1947, Luna 475 ; *Cafayate* : Los Nogales, 19-V-1944, Ruiz 623 ; *Capital* : 26-XI-1949, Araque & Barkley 19Ar393 ; « planta trepadora, semi-arbustiva », 2-VI-1934, Meyer 877 ; *Rosario de la Frontera* : Rosario de la Frontera margen Arroyo Salado, 900 m alt., 27-III-1905, Lillo 4415.

TUCUMÁN : *Burruyacu* : Salidas al Timbó, 500 m alt., 18-XII-1930, Schreiter 6529 ; Alta Gracia, 600 m alt., 19-XI-1921, Venturi 1439 ; *Capital* : El Bajo 420 m alt., « subtrepador muy ramoso », 17-IV-1905, Lillo 4457 ; La Aguadita, 12-X-1942, Meyer 4489 ; Barranca colorada, 600 m alt., 19-IX-1920, S. Venturi 903, and Duraznito, 550 m alt., 30-I-1922, 1681 ; *Chicligasta* : 300 m alt., 17-X-1913, Monetti 1294 ;

Graneros : La Madrid, 437 m alt., III-1919, Bailetti 301 and 320 ; *Leales* : El Dique del Río Salí, 5-XI-1903, Lillo 3267 ; Las Salinas, 6-VI-1917, Monetti 15224 ; Chañar, 300 m alt., VIII-1919, Venturi 352 ; *Tafí* : Colalao del Valle, 1800 m alt., I-1913, Dinelli 12894 ; Raco, 14-XI-1949, R. Rocha 1068 ; *Trancas* : Vipos, 1885, Lillo s. n. and Río Choromoro, 8-XII-1907, 7222 ; Vipos, 800 m, 22-X-1907, Lillo 7264 ; Tapia, 700 m, 18-VII-1911, Rodríguez 550 ; Tapia, 600 m, 19-IX-1920, Schreiter s. n., and 650 m, 26-V-1921, s. n. ; Vipos, 600 m, 29-XI-1918, 285, and 786 m, 30-X-1921, 1688, and Tapia, 600 m alt., 29-IX-1920, 9948 ; Vipos, 900 m alt., 30-X-1921, Venturi 1436 and Tapia, 800 m alt., 9-II-1922, 1702.

CATAMARCA : Castillón 1645 ; *Andagalá* : Belén a Andagalá, 1200 m alt., XII-1939, Schreiter 11360 ; Pilciao, 700 m alt., 8-III-1950, Vervoort 706 ; *Belén* : 2400 m alt., 20-IX-1915, Jørgensen 971 ; Barranca Larga, 2400 m alt., II-1937, Schreiter 10330 ; *Capayán* : Miraflores, 500 m alt., 16-IV-1947, Müller 160 and Capayán, 26-VII-1947, 179 ; *Capital* : alrededores de la ciudad, 500 m alt., 13-XII-1949, Barkley 19Ar675 ; 14-I-1940, Castellanos 33724 ; alrededores de Catamarca, 11-IX-1910, Castillón s. n., 15-IX-1908, 1038, 20-III-1908, 1039, 22-II-1909, 1042, 20-VII-1909, 1781, X-1910, 1998, and 25-VIII-1910, Castillón 14315 ; *Fray M. Esquiú* : Pomaniello, 8-IV-1947, Müller 76. Piedra Blanca, 600 m alt., 15-IV-1947, 101, and Piedra Blanca, 15-IV-1947, Müller 142 ; *La Paz* : Las Cejas, 8-II-1947, Brizuela 751 and Pampa Pozo, 9-II-1947, 893 ; *Santa María* : Santa María, 1800 m alt., 22-XI-1949, Araque y Barkley 19Ar291 ; Santa María, 20-X-1948, Meyer 14187 ; El Medanito, 19-II-1948, Reales 958, Palo Seco, 17-II-1948, 929, Entre Ríos, 8-IV-1949, 1175, Famatanca, 15-II-1949, 1679, and Pafanquillo, 26-II-1949, Reales 1718 ; Fuerte Quemado, 2000 m, XII-1917, Schreiter 362 ; *Tinogasta* : Tinogasta, 1200 m, 20-I-1930, Schreiter 6384.

LA RIOJA : Giacomelli 6012 ; *Capital* : alrededores, XI-14-1927, Giacomelli s. n. 1-VII-1947, Müller 215 ; *Independencia* : Establ. Sta. Rosa, Guayapa, 15 km O. de Patquía, 495-520 m alt., 18-28-IV-1943, Hayward s. n. ; *Pelagio B. Luna* : Chaqui, I-1942, Rojas s. n.

SAN JUAN : *Caucete* : Pie de Palo, 14-XI-1945, Cuezzo 1088 ; *Chacabuco* : Concarán, 603 m alt., 27-II-1944, Varela 584 b ; *Jachal* : Niquivil, 19-V-1942, G. Covas 402 ; Pampa del Chañar, 14-XII-1945, Cuezzo 1809 and 17-XII-1945, 1989 ; *Pocito* : Carpintería, 26-XII-1945, Cuezzo 2140 and 2140 b and 2168 ; *Sarmiento* : Los Berros, 4-XII-1945, Cuezzo 1689 and 1727.

MENDOZA : Las Heras : alrededores Parque Zoológico, 900 m alt., 23-XII-1949, Barkley 19Ar867; Parque Luna, 710 m, 22-IV-1947, García 276; Maipú : Ad Sepes et via pr. Gral. Gutiérrez, 3-X-1937, Ruiz 3367.

28. *Lycium Sparrei* n. sp.

Fruticosum prostratum ; ramis albis, breviter pilosis, follis elliptico-spathulatis, 3-13 mm longis, 1.5-3 mm latis, obtusis vel subacutis, sessilibus ; pedicellis 2-3 mm longis ; calyx tubo 2 mm longo praedito, lobis subacutis, 1-2 mm longis ; corolla extus breviter pilosa, tubo 4-4.5 mm longo, lobis 3-4 mm longis, ciliolatis ; staminibus incluens ; stylo 5 mm longo.

Prostrate shrub apparently rarely exceeding 10 cm in height, stems at first white, short pilose, later darker and glabrate; leaves one at a node, elliptic spatulate, 3-13 mm long, 1.5-3 mm wide, obtuse to subacute at apex, sessile; flowers solitary; pedicel 2-3 mm long, sparse pilose; calyx short pilose, tube 2 mm long, lobes subacute, 1-2 mm long; corolla short-pilose outside, with a few pilose hairs between the insertion of the stamens, tube 1 mm broad at base, 2.5 mm broad at apex, 4-4.5 mm long, lobes obovate, rounded obtuse, 2.5-3 mm broad, 3-4 mm long, ciliate; stamens included, anthers ovate, 1.8 mm long, filaments 2.5-3 mm long, inserted 1-1.2 mm above base of corolla tube, gland narrowly triangular, 1 mm long; style 5 mm long; fruit not seen.

Type : Argentina : Mendoza : Las Heras : Puente del Inca, moist sandy soil, 2800 m alt. 20-XII-1936, B. Sparre 1524.

This species has the form of *L. humile* and *L. repens*, but without any doubt belongs to the section *Selidophora*. The leaves of Ruiz 11121 are smaller and very glandular.

MENDOZA : Las Heras : Uspallata, 21-XII-1949, Araque 840; Uspallata, 1800 m alt., Araque y Barkley 19Ar841; Uspallata, 1800 m alt., 21-XII-1949, Barkley 19 Ar840 and 19Ar842; Ciéagas de Galguaroz, 27-XII-1947, Ruiz, 11,121; Puente del Inca, 2800 m alt., 20-XII-1946, Sparre 1524.

29. *Lycium Vergarae* Philippi

Philippi, Anal. Mus. Nac. Chil. Bot. 8 : 67. 1891; Johnst. Physis 9 : 319. 1929.

Plants low, 10-20 cm tall, compact, subpungent, branches at first finely pilose, gray, soon white, then black and glabrate; leaves with

blade 5 to 9 mm long, 1.5 to 4 mm wide, ovate, acute at apex and cuneate at base, gray, pilose, petiole 1 mm long, pilose; pedicels 4 mm long, pilose; calyx pilose and glandular-pubescent, tube cup-shaped, 1 mm long, lobes 4 mm long, acuminate; corolla whitish, densely white pubescent outside at base, pubescent above base glabrous within except a few hairs between the insertion of the stamens, tube 2 mm long, lobes 6 mm long, pubescent, ovate, acute; stamens attached about 1 mm from base of corolla tube, anthers 1.5 mm long, filaments 4 mm long, glabrous except ciliate for basal 1 mm at edge of gland; style 7 mm long; fruit globular, 4 mm by 5mm.

Type : Calalaste, Los Andes, alt. 3700 m, Philippi s. n. in Museo Nacional, Santiago, Chile.

The type has not been examined by the author but the following seems to belong here.

JUJUY : Humahuaca : Humahuaca, 3100 m alt., «planta de 30-60 em alt., flores blanquecinas», 22-I-1940, Schreiter 11195.

30. *Lycium chilense* Miers ex Bertero

Miers ex Bertero, Merc. Chil. 15 : 693. 1829; Hitchc., Ann. Mo. Bot. Gard. 19 : 314. 1832.

Lycium chilense var. *glaberrimum* Philippi, Linnaea 33 : 206. 1864.

Lycium chilense \times *normale* Terrac., Malpighia 4 : 528. 1891.

Lycium chilense \times *normale* var. *gracile* (Meyen) Terrac., l. c.

Lycium chilense \times *normale* f. *glaberrima* (Philippi) Terrac., l. c.

Lycium chilense β *rachidocladum* var. *capillare* subvar. *filifolium* (Gill.) Terrac., l. c. 529.

Lycium chilense β *rachidocladum* var. *capillare* subvar. *filifolium* f. *minutifolium* (Walp.) Terrac., l. c. 530.

Lycium chilense var. *ovatum* Philippi, Anal. Univ. Chil. 91 : 21. 1895.

Lycium chilense var. *petiolatum* Philippi, l. c.

Lycium chilense var. *tomentosulum* Philippi, l. c.

Lycium chilense var. *glabriuscula* Philippi, l. c. 22.

Lycium chilense subsp. *normale* Reiche, Anal. Univ. Chil. 123 : 393. 1908.

Lycium chilense subsp. *normale* var. *tomentosulum* (Phil.) Reiche, l. c. 394.

Lycium chilense subsp. *normale* var. *ovatum* (Philippi) Reiche, l. c. 394.

Lycium chilense subsp. *normale* var. *venosum* (Philippi) Reiche, l. c. 394.

Lycium chilense subsp. *normale* var. *glaberrima* (Philippi) Reiche, l. c. 394.

Lycium chilense subsp. *gracile* var. *gracile* Reiche, l. c. 395.

Lycium chilense subsp. *paraguariense* Hassler in Fedde, Rep. Spec. Nov. 15 : 240. 1918.

Lycium chilense var. *normale* Hassler, l. c.

Lycium nutans DC., 5me. Not. Pl. Rar. Nouv. Jard. Bot. Genève 24. 1833.

Lycium gracile Meyen, Reise um die Erde 1 : 380. 1834.

- Lycium canum* Gill. in Walp., *Rep. Bot. Syst.* 3 : 112. 1844, nomen.
Lycium gelidum Wedd., *Chlor. And.* 2 : 108. 1857.
Lycium sessiliiflorum Philippi, *Anal. Univ. Chil.* 91 : 22. 1895.
Lycium lasiopetalum Speg., *Anal. Soc. Cient. Arg.* 53 : 170. 1902.
Lycium pulverulentum Skottsb., *Kungl. Svensk. Vetens.-Akad. Handl.* 565 : 294. 1916.

Much branched spineless shrub about 1.2 m tall; branches straight, moderately slender to coarse, glabrous or minutely puberulent with glandular hairs or sparsely pilose with simple (or rarely little-branched) trichomes, white or whitish green, later glabrate and whitish-gray or tan or brown with white striae; leaves thickish, subsessile but long attenuate at base, elliptical or elliptic-lanceolate and acute or rotund, ovate-spatulate, oblanceolate, oblong-spatulate and obtuse, .7 to 7 mm broad, 5 to 15 mm long, dimorphic, one at a node or several and then often of two types intermixed, glabrous or minutely puberulent with simple or glandular hairs, often ciliate with simple hairs; pedicels 4 (2-10) mm long in flower, slightly longer in fruit, glabrous, pilose with simple hairs or puberulent with glandular hairs; calyx glabrous, sparsely short pilose or minutely puberulent with simple and glandular hairs, tube cup-shaped, 1.8 (1-2.5) mm long, lobes unequal, 1.7 mm long, ciliate, in fruit scarcely enlarged or tube 3 mm long and lobes to 5 mm long, the lobes reflexed in fruit; corolla densely appressed pilose outside on constriction of tube and glabrous or sparsely pilose above, with a pilose tuft inside between and slightly above the points of insertion of the stamens, tube 3.2 (1.5-4.5) mm long, lobes ovate or obovate, obtuse to subacute, 4 (2.5-5.5) mm long, ciliate to non-ciliate; stamens unequal, attached in the corolla tube 1.4 (.7-2) mm from the base, anthers oval 1.3 (.7-1.5) mm long, filaments 3.8 (2-6) mm long with a narrowly triangular gland at the basal portion .9 (.7-1.2) mm long, with a pilose margin; style 6.5 (5-9) mm long, stigma large; fruit usually globular 4 by 4 mm to 7 by 7 mm or sometime ovoid 2 by 4 mm or 4 by 5 mm, seed many.

As will be noted from the above description, variation within the typical variety is extreme between the various specimens, but dimorphism on the same plant is not unusual, with two types of leaves and flowers of two very different series of dimensions. The pilosity of the stamen gland in *Fortuna 11* is limited to the upper portion of the gland.

Within the species the variation is extreme, and while the variations merge between the various varieties it has seemed better to

separate the specimens into a series of more or less distinct varieties: the most characteristic specimens of each variety being very distinctive, but in each case with a series of intermediate connecting the various varieties.

Type: in sylvaticis montis la Leona, in rupestribus St. Jago XI-1828, *Bertero* 396.

Distributed throughout western Argentina and most of Chile.

BUENOS AIRES: *Tornquist*: Barranca del Arroyo Napostá Grande, 14-XI-1947, Borgman s. n.; Sierra de la Ventana, 250 m alt., 18-IV-1945, Hunziker 517; Arroyo de la Ventana al NE de Tornquist, 7-II-1947, Rossi y Bachman 787.

CÓRDOBA: *Calamuchita*: Villa Dolores, 25-III-1947, Terribile 684; *Capital*: Altos Sud, 17-XI-1898, Stuckert 5012 and 26-XI-1898, 5096; *Colón*: Río Ceballos, 5-XII-1948, Legname y Montenegro 194; *Cruz del Eje*: Cruz del Eje, 470 m alt., 20-XII-1947, Meyer 12852 and 12853; Río Cruz del Eje, 19-I-1947, O'Donell 4951; Cruz del Eje, 27-III-1944, O'Donell y Rodríguez 618; Cruz del Eje, 30-XII-1946, Villafañe 209; *Ischilín*: Dean Funes, 5-XI-1945, Cuezzo 854; *San Alberto*: Achala, 1-I-1899, Stuckert 5973.

SAN LUIS: *Capital*: Alto Pencoso, 28-III-1944, Semper s. n.; Alto Pencoso, 27-III-1947. Terribile 769; 26-I-1939, Troncoso 6026; *Chacabuco*: Concoran, 600 m alt., 2-II-1944, Varela 485 and 11-XI-1944, 485.

EVA PERÓN (ex LA PAMPA): *Catriló*: Uriburu, 17-XII-1944, Fortuna 11.

JUJUY: *Humahuaca*: Caspala, 3000 m alt., 23-III-1929, Venturi 8593..

SALTA: *Cafayate*: San Isidro, 17-I-1941, Villalón s. n.; *Capital*: 26-XI-1949, Araque & Barkley 19Ar278.

TUCUMAN: *Tafí*: Playas del Río Churqui, 24-XII-1907, Castillón 211 (8282) and Molle-valle de Tafí, 2740 m alt., 28-XII-1912, 2449c, and La Banda, 13-XII-1907, 8326.

CATAMARCA: *Andagalá*: Camino a las Minas, 16-IV-1917, Jörgenssen 1864; El Alamito, 1400 m alt., 13-II-1949, Meyer 14648; Río Alamito, 22-X-1933, Peirano 9894; *Capital*: Colón, 6-V-1910, Castillón s. n. and 1-IX-1910, s. n. and 10-VIII-1909, 1782; Barrio Observatorio, 400 m alt., 1-V-1947, Gutiérrez 176; *Santa María*: Loro Huasi, 6-II-1948, Reales 837.

LA RIOJA: *General Roca*: Chepes, 10-XI-1945, Cuezzo 1005; *Gobernador Gordillo*: Los Llanos, La Zanja, 13-II-1940, Castellanos

33933; *Sarmiento*: Entre Jagüel y Vinchina, 25-II-1941, Covas 1197.
 SAN JUAN : *Albardón* : Termas Las Lajas, 23-XI-1945, Cuezzo 1406; *Capital* : alrededores de la ciudad, 16-XII-1949, Araque 726; alrededores de la ciudad, 16-XII-1949, Barkley 19Ar726; *Caucete* : Pie de Palo, 14-XI-1945, Cuezzo 1052 and 1053; *Desamparados* : Zonda, 18-XI-1945, Cuezzo 1196 and Chimbas, 16-XI-1945, 1269; *Iglesia* : El Rodeo, 13-XII-1945, Cuezzo 1884; *Rivadavia* : La Bebida, 26-XI-1945, Cuezzo 1425; *Trinidad* : Trinidad, 20-XI-1945, Cuezzo 1314; *25 de Mayo* : Las Casuarinas, 8-XII-1945, Cuezzo 1802.

MENDOZA : *Capital* : Inmediaciones de la ciudad de Mendoza, 28-I-1933, Ruiz 1012; *Godoy Cruz* : La Ripiera, 10-IV-1939, Ruiz 5773, Godoy Cruz, 12-I-1941, 7079, and en cercos de Calle Tapón de Sevilla, 1/2-II-1944, Ruiz 8371; 1/2-II-1944, Semper s. n., and 700 m alt., 29-X-1944, Semper 106; *Guaymallén* : El Sauce, 23-IV-1944, Ruiz 9208; El Sauce, 23-IV-1944, Semper s. n.; *Junín* : Rodríguez Peña, 1600 m alt., 19-III-1931, Carette y Ruiz 3857; Finca San José, 550 m alt., 4-II-1945, Lourteig 1015; *La Paz* : Desaguadero, 22/29-I-1944, Semper s. n.; *Las Heras* : Uspallata, 1800 m alt., 20-XII-1949, Araque 769; 1800 m alt., 20-XII-1949, Barkley 19Ar769, 1800 m alt., 20-XII-1949, 19Ar773, 20-XII-1949, 19Ar782, 20-XII-1949, 19Ar784, 20-XII-1949, 19Ar785, 20-XII-1949, 19Ar786, alrededores del Parque Zoológico, 900 m alt., 23-XII-1949, 19Ar868 and Villavicencio, 2000 m alt., 25-XII-1949, Barkley 19Ar922; Cruz de Paramillo, 2900 m alt., 24-I-1950, Cuezzo y Balegno 1897 and Quebrada del Toro, 2000 m alt., 25-I-1950, Cuezzo y Balegno 2016; Uspallata, 1700 m alt., 19-XII-1944, Marsoner 18 and 19; Challao, 1000 m alt., 24-XII-1949, Melis, Araque y Barkley s. n.; Quebrada de la Casa de Piedra, 16-I-1938, Ruiz 4759; Uspallata, 2000 m alt., 5-XII-1945, Ruiz 10530; Punta de Las Lajas, 850 m alt., 8-XII-1944, Semper 187; Uspallata, 2000 m alt., 9-III-1945, 430 and Uspallata, 2000 m alt., 8-IV-1945, Semper 545; Villavicencio, 2100 m alt., 25-XII-1949, Sleumer 481; *Luján* : Lunlunita, 1200 m alt., 24-II-1934, Carette y Ruiz 3822; El Salto, 1750 m alt., 13-I-1944, Covas 2454; Carrodilla, 800 m alt., 25-III-1947, García 60; Chacras de Coria, 25-II-1949, Ruiz 11897; *San Carlos* : El Papagallo, 1600 m alt., 27-I-1950, Araque 1504; El Papagallo, 1600 m alt., 27-I-1950, Balegno y Palacios 4369; Borde acequia, 5-II-1945, Schulz 6231; *San Martín* : Buen Orden, 500 m alt., 5-II-1945, Lourteig 649; en cercos rurales, 20-IV-1938, Ruiz 5126; *San Rafael* : Río Diamante, 20-XI-1949, Reales 1969 and El Cerrito, 13-XII-1949, Reales 2038; *Tunuyán* : Arroyo

la Estacada, 1300 m alt., 15-I-1950, Melis y Barkley 20Mz163; Quebrada Cap. Lemos, 1-II-1950, Palacios y Cuezzo 451 and 1-II-1950, 2300 m alt., Palacios y Cuezzo 4476; Tunuyán, 10-II-1945, Schulz 6265; *Tupungato* : Santa Clara, 2-II-1950, Palacios y Balegno 2048.

NEUQUÉN : *Arenal* : Plaza Huineul, 13-I-1950, Kusnezov s. n.

RÍO NEGRO : *Avellaneda* : Choele-choel, 150 m alt., 28-XI-1944, O'Donell 1802; *General Roca* : Cipolletti, 3-XII-1944, O'Donell 1912.

30a. *Lycium chilense* var. *confertifolium* (Miers) Barkley, n. comb.

Lycium Grevilleanum Gill. ex Miers, *Ann. & Mag. Nat. Hist.* II, 14 : 342. 1854.

Lycium scoparium Miers, l. c. 340.

Lycium scoparium α *normale* Terrac., *Malpighia* 4 : 532. 1891.

Lycium scoparium var. *lineare* Miers, l. c. 341.

Lycium scoparium α *normale lusus lineare* (Miers) Terrac., l. c.

Lycium scoparium var. *confertifolium* Miers, l. c. 341.

Lycium scoparium α *normale lusus confertiflorum* (Miers) Terrac., l. c.

Lycium scoparium var. *divaricatum* Miers, l. c. 341.

Lycium scoparium α *normale lusus divaricatum* (Miers) Terrac., l. c.

Lycium scoparium var. *affine* Miers, l. c. 342.

Lycium scoparium α *normale lusus affine* (Miers) Terrac., l. c.

Lycium scoparium var. *calycinum* Griseb., *Abhandl. Kön. Ges. Wiss. Gött.*

24 : 246. 1879.

Lycium scoparium α *normale lusus calycinum* (Griseb.) Terrac., l. c.

Lycium scoparium α *normale lusus Grevilleanum* (Gill.) Terrac., l. c.

Shrub 1.5 meters tall, little to much branched; branchlets slender, subpungent, usually straight, tan, gray, whitish gray or whitish green and sparsely to densely pilose with branched trichomes (rarely with simple or glandular hairs) at first, later gray-tan, gray-brown or brown and glabrate; leaves thinning, sessile, spatulate, spatulate-obovate, oblanceolate to lanceolate, 2(1-3) mm wide, 10(4-30) mm long, with branched hairs (rarely simple or glandular hairs), one at a node or several fascicled at a node (and then one usually much larger); pedicels 4 mm long, pilose with branched hairs (or rarely with glandular hairs) calyx pilose with branched (rarely glandular) hairs, tube 1.8 (1-2.5) mm long, lobes 1.8 (1-3.2) mm long, in fruit tube slightly larger and often the lobes 4 mm long; corolla densely pubescent at constriction on the outside, glabrous, sparsely pilose or rarely densely pilose above constriction, tube 3.2 (2.8-5) mm long, lobes ovate to orbicular, 3.7 (2-6) mm long, usually obtuse but rarely subacute, often ciliate, with a tuft of pilosity between insertion of

stamens; stamens rarely exserted, inserted in corolla tube 1 mm (rarely 2 mm) from base, anther 1.5 mm long, oval, filaments 4(3-5.5) mm long, usually unequal, filament glandular at base for 1 (.8-1.2) mm with a fringe of pilose hairs around its margins; style 7 mm (5-9 mm) long; fruit usually globular, 4 (3-6) by 4 (3-7) mm, rarely ovoid, 2.5 by 5 mm, many seeded.

This is a widespread and common variant of *Lycium chilense*, and intermediate between the typical variety and some of the variants of *Lycium ciliatum* in both leaf and flower characteristics. Like the typical variety there is a great deal of variation in both leaf and flower form and pubescence.

Type: Dr. Gillies from Mendoza, in the herbarium (of Sir Wm. Hooker) at Kew.

CÓRDOBA: *Capital*: 17-XI-1945, Hunziker 6098; *San Alberto*: Mina Clavero, 900 m alt., 27-I-1948, Meyer 13909; *Sobremonte*: San Francisco del Chañar, 7-XII-1944, Balegno 323.

JUJUY: *Tilcara*: Cerro Peña, 3000 m alt., 8-II-1927, Venturi 4904.

TUCUMÁN: *Trancas*: Valle Amaicha, 2740 m alt., 20-XII-1912, Castillón 2312; Tapia, 850 m alt., 19-IX-1920, Venturi 1245.

CATAMARCA: *Capayán*: Cerrillos, III-1944, Meyer 6874.

LA RIOJA: *San Martín*: Ulapes, 1-III-1907, Stuckert 17045.

SAN JUAN: *Pocitos*: Carpintería, 26-XII-1945, Cuezzo s. n.

MENDOZA: *Godoy Cruz*: Villa Hipódromo, 17-II-1939, Ruiz 5700 and Villa Hipódromo, 9-X-1939, Ruiz 6241; *La Paz*: 16-19-IV-1944, Ruiz 8836; Desaguadero, inmediaciones del paso de las Tropas, 7/9-IV-1944, Ruiz 9185; Desaguadero, 14/18-II-1944, Semper s. n.; *Las Heras*: Uspallata, 1800 m alt., 20-XII-1949, Araque y Barkley 19Ar779, Uspallata, 1800 m alt., 20-XII-1949, 19Ar791 and 19Ar792; Garganta del Diablo, 2000 m alt., 21-XII-1949, Araque y Barkley 19Ar862; alrededores del Parque Zoológico, 900 m alt., Araque y Barkley 19Ar889; Los Hornillos, 2600 m alt., 3-I-1950, Araque y Barkley 20Mz060; Uspallata, 1800 m alt., 20-XII-1949, Barkley 19Ar794 and 19Ar798; Cuesta a Cruz de Paramillo, 2900 m alt., 3-I-1950, Barkley 20Mz022; Uspallata, 5-IV-1947, García 155; Agua de los Chilenos, 1500 m alt., 12-XII-1949, Melis, Cherubini y Paci 422; Villavicencio, 2000 m alt., 12-II-1933, Ruiz 1048, Quebrada del Toro, 2000 m alt., 21-XI-1937, 3504 and 7-III-1937, Ruiz 4398; Uspallata a Las Lomas, 2050 m alt., 17-III-1945, Semper 437; Villavicencio, Los Hornillos, 2640 m alt., 3-I-1950, Sleumer 712; *Luján*:

Achoris, 8-I-1944, Covas 2456; *Rivadavia*: La Libertad, 15-VIII-1939, Ruiz 6155; *San Carlos*: El Papagallo, 1900 m alt., 27-I-1950, Balegno y Palacios 4374; Refugio Gral. Alvarado, 2200 m alt., 27-I-1950, Cuezzo y Barkley 20Mz458 and 20Mz466; El Papagallo, 1900 m alt., 27-I-1950, Cuezzo y Barkley 20Mz510; Eugenio Bustos, 850 m alt., 1-X-1944, Ruiz 9413; *San Martín*: Buen Orden, 500 m alt., 5-II-1945, Lourente 928; *San Rafael*: Cerros al sur de Malargüe, 11-II-1942, Burkart, Troncoso y Nicora 14299; Fortín Malargüe, 12-II-1942, Covas 758; Puesto Alvarado, 1-X-1944, Covas 2939; Bondes Blancas, 27-I-1941, Ruiz 7435; *Tunuyán*: Arroyo La Estacada, 1300 m alt., 15-I-1950, Araque 1163; 25 kms al sudoeste de Campo de los Andes, 1800 m alt., 15-I-1950, Araque y Barkley 20Mz132; 10 kms al oeste de Campo de los Andes, 1500 m alt., 15-I-1950, Barkley 20Mz174; 20 kms al sudoeste de Campo de los Andes, 1600 m alt., 15-I-1950, Barkley 20Mz206; 25 kms al sudoeste de Campo de los Andes, 1800 m alt., Melis y Barkley 28Mz127; Pascordilleras, Ruiz 1184; Los Arboles, 17-X-1934, Ruiz 2306; Barranca Río Tunuyán, 10-II-1945, Schulz 6268; *Tupungato*: camino a Estancia Silva, 1500 m, 2-XII-1949, Cáceres 7; *Tupungato*, 3-II-1945, Paci 816; 18-X-1934, Ruiz 2227.

30b. *Lycium chilense* var. *O'Donellii* n. var.

Frutex; *ramis pungentibus*, *albis*, *dense ramosis*; *soliis lineatis* vel *lineari-spathulatis*, *crassis*, *puberulis*; *pedicellis sparse glandulosopuberulis*; *calyce sparse glandulosopuberulis*; *corolla tubo piloso ad basin praedita*; *stylo 6 mm longo*; *bacca ovoidea*.

Shrub, much branched, the branchlets pungent; stems at first whitish, later tan and glabrate, or brownish-black, eventually prominently striate with white and dark gray striae; leaves sessile, linear or linear-spatulate, subacute, puberulent, 1-1.5 mm broad, 10-15 mm long; pedicels very sparsely glandular puberulent, 3-4 mm long; calyx sparsely glandular puberulent, tube 1.2 mm long, lobes 1 mm long, in fruit the tube 2 mm long, lobes 2 mm long and recurved; lower mm of corolla tube pilose on the outside, glabrous above, inside the tube with a tuft of pilosity between the attachment of stamens, tube 3 mm long, lobes lanceolate, obtuse, 3.5 mm long, scarcely ciliate; stamens attached 1 mm from base of corolla tube, lower 1 mm of filament pilose around the border of the glands,

anthers 1 mm long, filaments 4 mm long; style 6 mm long; fruit red to black, ovoid, 3.4 by 4 mm.

Type: Chubut, Comodoro Rivadavia, 13-XI-1945, C. A. O'Donell 3557.

Except for the pubescence at the constriction of the tube, this would pass very nicely for plant of *L. Comberi*. In the complex of varieties of *L. chilense* this has the most rigid and most pungent branches.

BUENOS AIRES : La Pantanosa, 13-IV-1945, Hunziker 358; *Bahía Blanca* : Vitícola, 30-XI-1944, Descole 2087.

MENDOZA : *Tupungato* : 25-XI-1942, Ruiz 8120.

NEUQUÉN : *Zapala* : Zapala, 14-XII-1944, O'Donell 2003.

RÍO NEGRO : *Avellaneda* : Choele-Choel, 150 m alt., 27-XI-1944, O'Donell 1817; *Pileaniyu* : entre Comallo y Neneo-Rucá, 5-I-1945, Meyer 7941.

CHUBUT : Piedra Parada, Río Chubut, 16-II-1945, Castellanos s. n.; Astra, 10-XI-1945, O'Donell s. n.; *Biedma* : Puerto Madryn, 24-X-1945, O'Donell 3226; *Escalante* : Comodoro Rivadavia, 13-XI-1945, O'Donell 3557 (*Type*); *Languiñe* : Los Menucos, 8-II-1945, Castellanos (359).

30c. *Lycium chilense* var. *Descolei* n. var.

Fruticosum; *ramis numerosis, glabris, albidis, flexuosis, subspinosis*; *foliis spatulato-linearibus, crassis, subacutis, glabris vel subglabris*; *pedicellis, 2 cm longis, glabris*; *calyce glabro, tubo 2 mm longo, lobis .5-1 mm longis, ciliolatis*; *corolla tubo 5 mm longo praedita, lobis 4 mm longis*; *staminibus 2 mm supra basin tubi corollae adhaesis*; *stylo 5 mm longo*; *bacca ovoidea*.

Much branched shrub; stems many, glabrous, whitish, slender but rigid, subpungent; leaves linear-spatulate, .6 to 1.5 mm broad, 6 to 18 mm long, subacute, glabrous or with a few simple hairs; pedicels 2 mm long, glabrous; calyx glabrous, tube 2 mm long, lobes .5-1 mm long, ciliate; corolla tube 5 mm long, lobes 4 mm long, ovate, subacute, glabrous outside except at base, with a tuft of pilosity inside between and .5 mm above the insertion of the stamens; stamens inserted in tube of corolla 2 mm above base, gland 1.2 mm long, pilose on the upper margins, filaments 3-4 mm long, anthers 1.5 mm long; style 5 mm long; fruit ovoid, 3 by 6 mm.

Type: Santa Cruz : Puerto Deseado, 16/17-XI-1945, O'Donell 3582. This more or less distinctive variety is similar to *L. chilense* var.

O'Donellii and merges into some forms of the typical variety of Neuquén and Mendoza.

BUENOS AIRES : *Bahía Blanca* : Grünbein, 15-XI-1944, Meyer 6916 and O'Donell 1455; *Patagones* : Carmen de Patagones, 19-XI-1944, Meyer 6973 and 6974.

EVA PERÓN (ex LA PAMPA) : *Caleu-Caleu* : Anzoátegui, 24-XI-1944, O'Donell 1772.

RÍO NEGRO : *Conesa* : General Conesa, 28-XI-1944, Meyer 7086; *Pichi-Mahuida* : Río Colorado, 79 m alt., 20-XI-1944, O'Donell 1550 and Pichi-Mahuida, 108 m alt., 23-XI-1944, 1715; *Valcheta* : entre Nahuel Niyeu a Valcheta, 15-XII-1944, Meyer 7302.

CHUBUT : *Rawson* : Trelew, 28-X-1945, O'Donell 3293; *Comodoro Rivadavia* : 11-I-1951, Sleumer 1470.

SANTA CRUZ : *Deseado* : Puerto Deseado, 16/17-XI-1945, O'Donell 3582 (*Type*); *Río Chico* : Cañadón León, 13-I-1950, Kusnezov s. n.; *Valcheta* : Nahuel Niyeu, XII-1944, Meyer 7181.

30d. *Lycium chilense* var. *minutifolium* (Miers) n. comb.

Lycium filifolium Gill. ex Miers, *Ann. & Mag. Nat. Hist.* II, 14 : 336. 1854.

Lycium filifolium var. *minutifolium* Miers. *l. c.* 337.

Lycium patagonicum Miers, *l. c.* 340.

Lycium patagonicum \times *normale* Terrac., *Malpighia* 4 : 533. 1891.

Shrub, intricately many branched, branches very slender, flexuous, glabrous, greenish white, pungent, later tan gray, smooth; leaves thinnish, sessile, glabrous except for a few basal short simple hairs, one at a node, linear, acuminate, .5-1 mm broad, 6-13 mm long, or fascicled and then linear, obtuse to subacute, .6-1 mm broad, 3-8 mm long; pedicels glabrous, 2 mm long; calyx glabrous, tube 1.5 mm long, lobes .7-1.2 mm long, sparsely ciliate with simple hairs; corolla tube 2.0 mm long, lobes ovate, 3.5 mm long, ciliate at the apex, tube with a densely appressed pilose ring 1 mm wide outside at constriction; stamens attached 1.5 mm from base of corolla tube, filaments unequal 2.5-3.5 mm long, glandular for .8-1 mm from base, gland more or less lenticular (i.e. wider above the base than at the base), the base of gland glabrous on the margin but above this long pilose; style 4 mm long; fruit ovoid, about 2 by 3 mm.

Type: south of Prov. of Buenos Aires, «Patagonia», J. Tweedie in the Herbarium at Kew.

BUENOS AIRES : *Bahía Blanca* : Argerich, 29-XI-1944, Descole 2004.

CÓRDOBA: General Roca: Cañada Verde, 15-I-1945, Schulz 6027.
EVA PERÓN (ex LA PAMPA): 4-I-1945, Schulz 5841; Realicó: 7-I-1945, 5856.

SAN LUIS: Gral. Pedernera: Fraga, 7-IV-1942, Covas 404; Chacabuco: Tilisarao, 750 m alt., 15-XI-1944; General Alvear: Colonia Alvear, 22-I-1945, Schulz 6101; General Laralle: Costa de Araujo, 600 m, 15-X-1944.

MENDOZA: Guaymallén: Bermeno, 700 m alt., 19-IV-1947, García 260; La Paz: entre Villa La Paz y Desaguadero, 27-II-1944, Ruiz 8487; Las Heras: Algarrobal de Abajo, 650 m alt., 14-I-1945, Semper 301; San Martín: Palmira, 650 m alt., 3-IV-1947, García 119; Palmira, 650 m alt., 26-XI-1944, Semper 172; San Rafael: (Cuadro Nacional) Colonia Bombal-Tabanera, 24-IX-1948, Magni 11632; San Rafael, X-1911, Venturi 16936; Tunuyán: Arroyo La Estacada, 1300 m alt., 15-I-1950, Paci y Barkley 20Mz164; Tupungato: entre Tupungato y Tunuyán, 20-II-1933, Ruiz 1224.

30e. *Lycium chilense* var. *Meyeri* Barkley, n. var.

Frutex parvus; ramis non spinosis, subcassis, pilosis; foliis obovato-spathulatis, acutis vel subacutis, pilosis; pedicellis 2 mm longis, albi-pilosus; calyce piloso-puberulo, tubo 1.5-2 mm longo, lobis 2.5-3 mm longis; staminibus proicientibus; stylo 6-8 mm longo.

Shrub about 40 cm tall; branches straight, moderately heavy, branchlets few, pilose, white, later tan-gray lined with dark brown; leaves obovate-spatulate, 1.5-4 mm wide, 1-1.4 cm long, pilose with mostly unbranched hairs, margins entire to plicate-irregular; pedicels 2 mm long, white pilose; calyx pilose-puberulent, tube 1.5-2 mm lobes 2.5-2 mm long, lanceolate, scarcely reflexed; corolla pilose outside at constriction of tube and above, with a few hairs inside between bases of stamens, tube 2.5-3.5 mm long, lobes, ovate, obtuse, 6-7 mm long, sparsely ciliate; stamens long exserted, attached 1 mm from base of tube, glands 1 mm long, pilose around the borders of the glands, filaments 8 mm long, anthers oval, 1.5 mm long; style 6-8 mm long.

Type: La Rioja: General Lavalle: Guandacol, 950 m alt., 3-II-1942, T. Meyer 4230.

This species is reminiscent of *L. Vergarae* and somewhat like some specimens of *L. ciliatum* and of *L. chilense* var. *scoparium*.

CÓRDOBA: Capital: Alta Córdoba, 11-IV-1944, Ruiz 467.

LA RIOJA: General Lavalle: Villa Unión, 1240 m alt., 1-II-1942, Meyer 4168 and Guandacol, 950 m alt., 3-II-1942, 4230.
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