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SANCHEZIA AND RELATED AMERICAN ACANTHACEAE

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At the time of his retirement, the senior author was engaged in writing treatments of the Acanthaceae for several different floras and had discovered a number of new species in the process. Now that he is unable to continue his research as planned, it is desirable to finish and place on record as much of his work as possible. The junior author does not profess to be a specialist on Acanthaceae, but hopes to earn his title to the paper by verification and by additions to the original manuscript in data and illustrations.

The present paper is concerned principally with discoveries made in the preparation of the first part of the Acanthaceae for the "Flora of Peru" and is composed largely of novelties in *Sanchezia*. The original plan was to show the relationship of the new species by a key to all the Peruvian ones, but such a large proportion was covered in this way that it was decided to expand a little and write a synopsis of the whole genus.

Sanchezia Ruiz & Pavón

Fl. Peruv. Chil. Prodr. 5, *pl.* 32. 1794; Fl. Peruv. Chil. 1: 7, *pl.* 8, *fig. b*, *c.* 1798.

Ancylogyne Nees in Mart. Fl. Bras. 9: 63, *pl.* 7. 1847.

Steirosanchezia Lindau, Bull. Herb. Boiss. II. 4: 316. 1904.

Erect or climbing herbs or shrubs, stems usually glabrous; flowers solitary or more often fascicled, usually large and conspicuous, yellow, orange, red, or purple, borne in heads, spikes, or racemes, the flower clusters subtended by small or large, rarely partly connate bracts,

these sometimes colored; calyx 5-parted; corolla tube subcylindric, the limb 5-lobed, the lobes equal; stamens 2, usually exserted; anthers normally 2-celled, longitudinally ciliate, mucronulate at base; staminodes 2; capsule oblong, 6-8-seeded; seeds orbicular.

1. Bracts at least 1 cm. wide, mostly 2-4.5 cm. long, ovate to oblong.
2. Inflorescence capitate; leaves repand-crenate. Peru.
 3. Bracts ovate or lanceolate; leaves acuminate; corolla pink, pubescent 1. *S. leucerythra*.
 3. Bracts oblong; leaves acute; corolla red 2. *S. capitata*.
2. Inflorescence spicate or paniculate.
 4. Bracts connate at least to the middle; corolla glabrous, yellow.
 5. Leaf blades with lateral nerves 15-17 to a side; corolla lobes 5 mm. long. Peru 3. *S. cyathibractea*.
 5. Leaf blades with lateral nerves 9-12 to a side; corolla lobes 3 mm. long. Panama, Venezuela, Colombia, Peru 4. *S. pennellii*.
 4. Bracts free.
 6. Leaf blades pubescent, at least beneath.
 7. Stem and rachis densely vestite.
 8. Calyx segments oblong-lanceolate, long-acuminate. Peru. 5. *S. dasia*.
 8. Calyx segments subligulate, broadly acute or rounded. Colombia 6. *S. thinophila*.
 7. Stem and rachis glabrous or minutely hirtellous at the nodes alone. Peru.
 9. Corolla yellow; blades distinctly petiolate 7. *S. ovata*.
 9. Corolla crimson with yellow tip; blades sessile, decurrent the whole length of the petiole 8. *S. bicolor*.
 6. Leaf blades wholly glabrous.
 10. Leaf blades rounded or subtruncate at base; petiole naked; corolla yellow.
 11. Bracts to 4 cm. long; leaf blades rounded at base, entire or undulate. Peru 9. *S. stenantha*.
 11. Bracts scarcely more than 2 cm. long; leaf blades subtruncate at base, coarsely and prominently dentate. Ecuador. 10. *S. coleifolia*.
 10. Leaf blades narrowed at base.
 12. Petioles all winged.
 13. Corolla pubescent.
 14. Corolla red or rose-lilac.
 15. Bracts all triangular-cuspidate; basal fascicles of flowers pedunculate. Bolivia. (Specimens of *Suessenguthia trochilophila* with incomplete flowers may be sought here).
 15. Bracts of all but the lowest fascicles of flowers broadly rounded; fascicles all sessile in elongate spikes. Peru. 11. *S. megalia*.

- 14. Corolla yellow.
 - 16. Bracts hirsute. Peru 12. *S. oblonga*.
 - 16. Bracts glabrous or slightly vestite at base.
 - 17. Corolla tube finely and laxly appressed-pubescent outside; leaf blades subentire to shallowly undulate-dentate. Peru 13. *S. peruviana*.
 - 17. Corolla tube densely and conspicuously white-sericeous outside.
 - 18. Leaf blades oblong-obovate, coarsely undulate-dentate, the lateral nerves 15-20 to a side. Ecuador. 14. *S. sericea*.
 - 18. Leaf blades lanceolate, obscurely undulate, the lateral nerves 14-15 to a side. Colombia. 6. *S. thinophila*.
- 13. Corolla glabrous, yellow.
 - 19. Staminodes ca. 5 mm. long; leaf blades broadest near the apex. Ecuador. 15. *S. nobilis*.
 - 19. Staminodes 20-25 mm. long; leaf blades mostly broadest near the middle.
 - 20. Calyx segments 15-18 mm. long. From cultivation (Peru or Ecuador?) 16. *S. speciosa*.
 - 20. Calyx segments 20-25 mm. long. Peru. 17. *S. flava*.
- 12. Petioles naked when fully developed.
 - 21. Corolla red or orange-red.
 - 22. Leaf blades obovate, to 16 cm. wide, coarsely crenate-dentate; lowest bracts subfoliaceous; calyx segments 14 mm. long; subligneous herb to 1.3 m. high; staminodes 3-4 mm. long. Peru. 18. *S. pulchra*.
 - 22. Leaf blades elliptic, narrower, entire or subentire.
 - 23. Bracts ample, covering most or all of the calyces at anthesis. Brazil. 19. *S. munita*.
 - 23. Bracts narrower, exposing most of the calyces at anthesis. Peru.
 - 24. Upper bracts rounded 20. *S. rubriflora*.
 - 24. Upper bracts acute 37. *S. rosea*.
 - 21. Corolla yellow.
 - 25. Corolla tube definitely vestite outside toward the apex; bracts uniformly suborbicular with broadly rounded apices. Ecuador. 21. *S. helophila*.
 - 25. Corolla tube glabrous. Peru.
 - 26. Calyx segments cuneate, subtruncate, subequal; leaf blades elliptic, to 14.5 cm. wide 22. *S. xantha*.
 - 26. Calyx segments oblong or oblanceolate, obtuse; leaf blades oblong-elliptic, 7-8 cm. wide.

- 27. Upper bracts 4 cm. long, covering the calyces at anthesis. 23. *S. habra*.
- 27. Upper bracts 2 cm. long, exposing most of the calyces at anthesis 24. *S. killipii*.
- 1. Bracts less than 10 mm. wide, linear to ovate.
- 29. Bracteoles (as well as bracts and calyx segments) ending in long filiform tips, linear-lanceolate, densely pilose; petioles naked. Peru.
- 30. Leaf blades rounded at base.
- 31. Lower surface of leaf blades glabrous except the hirsute costa and veins; spikes 5-7 cm. long with fascicles densely imbricate and indistinguishable 25. *S. sanmartinensis*.
- 31. Lower surface of leaf blades evenly villous; spikes ca. 17 cm. long, the fascicles distinct 26. *S. villosa*.
- 30. Leaf blades narrowed at base.
- 32. Stems curved; plants scandent; corollas orange 27. *S. aurea*.
- 32. Stems straight; shrubs; corollas not orange.
- 33. Corollas garnet and yellow; bracts to 9 cm. long. 28. *S. stenomacra*.
- 33. Corollas unicolorous; bracts to 7 cm. long. (Specimens of *Trichosanchezia* with incomplete flowers may be sought here, but are distinguishable by bracts not over 4 cm. long and yellow corollas).
- 34. Corollas purple; leaf blades only about twice as long as wide; inflorescence shorter than the leaves. 29. *S. filamentosa*.
- 34. Corollas rose; leaf blades at least three times as long as wide; inflorescence pedunculate, exceeding the leaves. 30. *S. rhodochroa*.
- 29. Bracteoles rounded to acuminate but not filamentous-tipped, if finely acuminate (*S. klugii*) then not densely pilose.
- 35. Calyx segments acuminate.
- 36. Corolla pubescent. Peru.
- 37. Hairs of the corolla 0.5 mm. long or less.
- 38. Stamens exserted; hairs of the corolla slender.
- 39. Flowers fascicled at each node of the spike; corolla orange. 31. *S. aurantiaca*.
- 39. Flowers solitary at each node of the spike; corolla red or rose 32. *S. klugii*.
- 38. Stamens included; hairs of the corolla subconical with enlarged bases; corolla probably red .. 33. *S. williamsii*.
- 37. Hairs of the corolla 0.5-2 mm. long.
- 40. Bracts 12-15 mm. long, 6-8 mm. wide; larger leaves over 3 times as long as broad 34. *S. coccinea*.
- 40. Bracts 7-8 mm. long, 2.5-4 mm. wide, sometimes decidu-

- ous; larger leaves 2.5 to less than 2 times as long as broad.
41. Stamens included, the filaments shorter than the corolla tube; leaves caudate-acuminate; inflorescence lax. 35. *S. punicea*.
41. Stamens exerted or the filaments longer than the corolla tube but curved inside it; leaves short-acuminate; inflorescence dense 36. *S. woytkowskii*.
36. Corolla glabrous.
42. Bracts to 25 mm. long and 6-11 mm. wide; spikes lax. Peru. 37. *S. rosea*.
42. Bracts not more than 15 mm. long and 5 mm. wide.
43. Spikes 1-3, lax; leaf blades to 4.5 cm. wide. Peru. 38. *S. sprucei*.
43. Spikes 4 or more, dense; leaf blades to 11 cm. wide.
44. Flowers 2 at each node, not secund. Ecuador. 39. *S. lampra*.
44. Flowers 1 at each node and always on the same side of the rachis, thus secund.
45. Corolla purple. Ecuador. 40. *S. longiflora*.
45. Corolla carmine. Peru. 41. *S. oxysepala*.
35. Calyx segments acute or obtuse, often apiculate.
46. Flowers on slender pedicels up to 1 cm. long. Peru. 42. *S. pedicellata*.
46. Flowers sessile or subsessile.
47. Inflorescence compact, ovoid. Peru. 43. *S. conferta*.
47. Inflorescence open or simple.
48. Bracts densely tomentose, to 10 mm. long. Peru. 44. *S. lasia*.
48. Bracts glabrous, ciliolate, or minutely puberulent.
49. Leaf blades broadly ovate, subtruncate at base; calyx 25 mm. long; corolla yellow. Ecuador. 10. *S. coleifolia*.
49. Leaf blades elliptic or lanceolate, regularly attenuate at base.
50. Flowers all solitary; bracts 3-8 mm. long. Peru.
51. Plants scandent; leaf blades to 5 cm. wide; corolla glabrous 45. *S. scandens*.
51. Plants erect, herbs, shrubs, or small trees.
52. Leaf blades to 10 cm. wide, less than twice as long as wide 46. *S. sylvestris*.
52. Leaf blades not over 4 cm. wide, more than 3 times as long as wide.
53. Bracts to 7 mm. long; flowers imbricate. 47. *S. ferreyrae*.
53. Bracts not over 4 mm. long.

- 54. Calyx segments to 15 mm. long; flowers lax; tree 4 m. high 48. *S. arborea*.
- 54. Calyx segments 12 mm. long; flowers imbricate; shrub 2 m. high .. 49. *S. decora*.
- 50. Flowers 2 or more at each node, rarely a single flower at some nodes.
- 55. Largest calyx segments 12-13 mm. long.
- 56. Corolla glabrous. Peru. 50. *S. lispa*.
- 56. Corolla pubescent toward apex. Colombia. 51. *S. putumayensis*.
- 55. Largest calyx segments 15-22 mm. long.
- 57. Corolla red or if unknown (*S. tigrina*) then the largest calyx segments not over 17 mm. long and the bracts minutely puberulent.
- 58. Bracts minutely puberulent and ciliolate; calyx segments 15-17 mm. long. Peru. 52. *S. tigrina*.
- 58. Bracts glabrous.
- 59. Stamens included; corolla 3 cm. long. Ecuador. 53. *S. parviflora*.
- 59. Stamens exerted; corolla 4 cm. long.
- 60. Calyx segments acute; flowers 2 at each node. Colombia. 54. *S. lutea*.
- 60. Calyx segments rounded; flowers (1-) 2-6 at each node.
- 61. Bracts ovate, 15-16 mm. long; flowers 4-6 at each node. Peru. 55. *S. loranthifolia*.
- 61. Bracts linear, 8 mm. long; flowers (1-) 2-4 at each node. Ecuador. 56. *S. skutchii*.
- 57. Corolla yellow; largest calyx segments 20 mm. long.
- 62. Largest bracts 20 mm. long; corolla 4 cm. long. Peru. 57. *S. tarapotensis*.
- 62. Largest bracts 10-16 mm. long.
- 63. Corolla 5-5.5 cm. long; stamens exerted 5 cm. Mexico, Central America, Colombia. 58. *S. parvibracteata*.
- 63. Corolla 4.5 cm. long; stamens slightly exerted. Ecuador. 59. *S. ecuadorensis*.

1. *Sanchezia leucerythra*, sp. nov.

Frutex 2-3 m. altus, caulibus quadrangularibus, glabris, sulcatis; foliorum lamina lanceolata, usque ad 18 cm. longa et 5 cm. lata, acuminata, apice ipso obtuso, supra glabra, minute papillosa, cystolithis multis, 0.25 mm. longis, subtus in costa et venis lateralibus

pilosa, pilis appressis, firma, marginibus leviter repando-crenatis, costa et venis 16 conspicuis; petioli usque ad 2 cm. longi, appresso-pilosi; inflorescentia capitata, 3.5 cm. longa, 3 cm. lata; bracteae infimae lanceolatae, usque ad 4.5 cm. longae, 1.5 cm. latae, acuminatae, pilosae, pilis appressis, 0.5 mm. longis, brunneis, bracteae aliae ovatae, usque ad 3 cm. longae, 1.3 cm. latae, acuminatae, acutae, sericeae, pilis appressis, ca. 5 mm. longis, sursum roseae, basi albae, bracteolae 3 cm. longae, 1 cm. latae, acuminatae, sericeae, pilis appressis, 0.5 mm. longis, brunneis; calycis segmenta 27-30 mm. longa, subaequalia, 2-5 mm. lata, lineari-lanceolata, gracili-acuminata, sericea; corolla pallide rubra, basi alba, 4 cm. longa, basi 3 mm. lata, sursum 10 mm. lata, minute pubescentia, pilis recurvatis, lobis ca. 10 mm. longis, late rotundatis et leviter emarginatis, erectis, dense retrorseque pubescentibus; stamina (juvenilia?) inclusa, gilva; ovarium pilosum. (Name from the Greek, *leukerythros*, pink). Fig. 1, A, B.

PERU: JUNÍN: Dense forest near Perene Bridge, Río Paucartambo Valley, 700 m, June 19, 1929, *Killip & A. C. Smith 25271* (NY, type). Open place in forest, Río Negro, 800 m, August 14, 1960, *Woytkowski 5794* (US).

2. *Sanchezia capitata* (Nees) Lindau, Bull. Herb. Boiss. II, 4: 315. 1904.

Ancylogyne capitata Nees in DC. Prodr. 11: 222. 1847.

PERU: JUNÍN: Pangoa, *Mathews 1230* (K, type).

3. *Sanchezia cyathibractea* Mildbr. Notizbl. Bot. Gart. Berlin 9: 267. 1925.

PERU: AMAZONAS: Rainforest of Yarina Cocha on the Río Blanco, at the mouth of the Río Capanahua, 125 m, July 1923, *Tessmann 3134* (B, type). Same, alt. 155 m, October 2, 1925, *Tessmann 5423* (B, F photo 5888).

4. *Sanchezia pennellii* Leonard, Journ. Washington Acad. Sci. 16: 488. 1926.

PANAMA: DARIEN: *P. H. Allen 269* (MO, US); *4300* (MO, US). *H. Pittier 6527* (US). *R. S. Williams 659* (NY, US).

VENEZUELA: DELTA AMACURO: Rainforest, Curiapo, 0 m, December 1952, *Gines 4919* (US).

COLOMBIA: ANTIOQUIA: Sandy loam forest along the Magdalena River at Vuelta de Acuña, 125-130 m, January 14, 1918, *Pennell 3798* (US, type). General, cf. Leonard, Contrib. U. S. Nat. Herb. 31: 51. 1951.

PERU: LORETO: Dense forest, Yurimaguas, lower Río Huallaga, 135 m, August-September 1929, *Killip & A. C. Smith 27993* (F, NY, US). Clearing of dense forest, Santa Rosa, lower Río Huallaga, below Yurimaguas, 135 m, September 1929, *Killip & A. C. Smith 28829* (US).

5. *Sanchezia dasia*, sp. nov.

Frutex, caulibus tetragonis, sulcatis, pilosis, pilis usque ad 1.5 mm. longis, patulis, brunneis; foliorum lamina oblongo-elliptica, usque ad 28 cm. longa, 9 cm. lata, breviter acuminata, basi angustata, supra pilosa, cystolithis 0.25 mm. longis, multis, conspicuis, minute papillosa, subtus pilosa, pilis patulis vel ascendentibus, usque ad 2 mm. longis, plerumque in costa et venis (12-14) dispositis, firma, marginibus integris vel leviter crenatis; petioli 3 cm. longi, pilosi; spicae terminales, laxae, internodiis 3-4 cm. longis, dense pilosis, pilis 2.5 mm. longis, patulis, rachibus tetragonis, sulcatis; flores plures in fasciculis aggregati; bracteae lanceolatae, 3.5-6 cm. longae, 15-18 mm. latae, acutae, infima foliacea, aliae 5-nervatae, omnes pilosae; bracteolae lanceolatae, 32 mm. longae, 7 mm. latae, acutae, pilosae; calycis segmenta oblongo-lanceolata, 30-35 mm. longa, 2-4 mm. lata, gracili-acuminata, pilosa; corolla aurea, ca. 4 cm. longa, minute pubescens, pilis recurvis, lobis ovatis, ca. 4 mm. longis, 3 mm. latis, recurvatis; stamina inclusa; ovarium sparse minuteque pubescens. (Name from the Greek, *dasya*, *hairy*). Fig. 1, C, D.

PERU: HUANUCO: Tropical woods at La Merced, between Situlli and Santa Cruz, 500-600 m, August 3, 1948, *Ferreya* 4391 (US, type).

6. *Sanchezia thinophila* Leonard, Bot. Mus. Leaflet. Harvard Univ. 16: 94, pl. 16. 1953.

6a. Forma *thinophila*.

COLOMBIA: AMAZONAS: Along Río Loretoyacu, Trapecio Amazónico, 100 m, October 20-30, 1945, *R. E. Schultes* 6607 (US, type).

6b. Forma *glabra* Leonard, Contrib. U. S. Nat. Herb. 31: 680. 1958.

COLOMBIA: AMAZONAS: Along Río Loretoyacu, Trapecio Amazónico, 100 m, November 1945, *R. E. Schultes* 6937 (US, type).

7. *Sanchezia ovata* R. & P. Fl. Peruv. Chil. 1: 7, pl. 8, fig. c. 1798. *Sanchezia glabra* Pers. Syn. 1: 24. 1805.

PERU: HUÁNUCO: Reported from Cuchero, Pozuzo, and Pillao, by *Ruiz* and *Pavón*.

8. *Sanchezia bicolor*, sp. nov.

Frutex, caulibus quadrangularibus, glabris vel in nodis minute hirtellis; foliorum lamina asymmetrica, oblongo-elliptica vel oblongo-ovata, usque ad 30 cm. longa et 13 cm. lata, breviter acuminata, basi in petiolum decurrens, leviter crenata, supra glabra, minute papillosa, costa et venis prominentibus, subtus mediocriter hirtella, cystolithis obscuris; petioli usque ad 1 mm longi, dense hirtelli; spicae terminales, glabrae; bracteae lanceolatae vel ovatae, 3-4 cm. longae, 2 cm. latae, acutae; bracteolae bracteis similes sed minores; calycis segmenta (immatura) glabra, lanceolata, apice rotundata, 15-18 mm. longa, 1.5-4 mm. lata; corolla coccinea, apice lutea, sursum puberulenta.

PERU: SAN MARTÍN: Abandoned rock tunnel at Boquerón Pass,

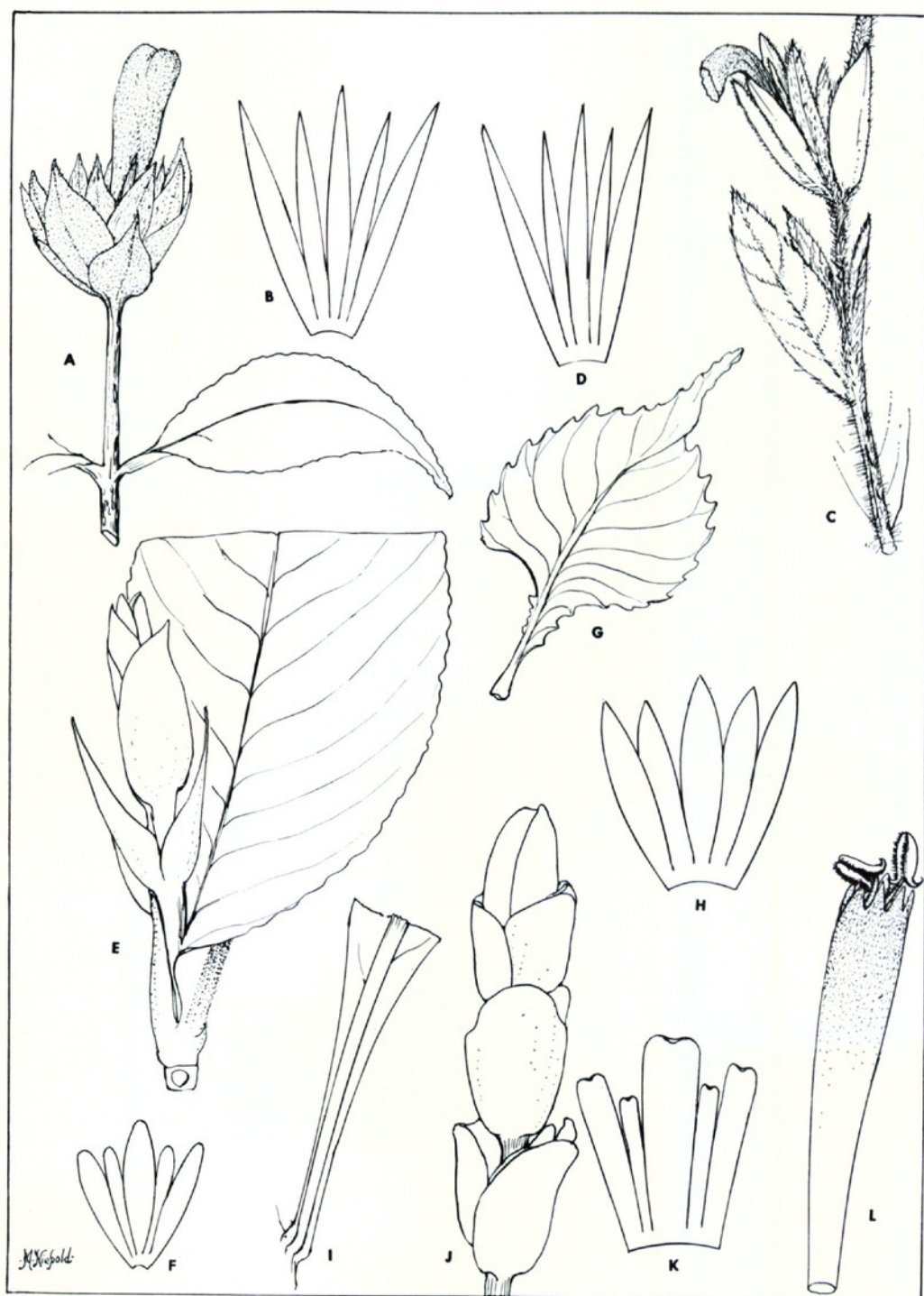


Figure (1)

A: *Sanchezia leucerythra*, inflorescence $\times \frac{1}{2}$; B: calyx $\times 1$; C: *S. dasia*, base of inflorescence $\times \frac{1}{2}$; D: calyx $\times 1$; E: *S. bicolor*, inflorescence $\times \frac{1}{2}$; F: calyx $\times 1$; G: *S. coleifolia*, leaf $\times \frac{1}{2}$; H: calyx $\times 1$; I: *S. megalia*, base of leaf $\times \frac{1}{2}$; J: inflorescence $\times \frac{1}{2}$; K: calyx $\times 1$; L: corolla $\times 1$.

between Tingo María and Pucallpa, 410 m, December 16, 1949, *Allard 21711* (US, type). Fig. 1, E, F.

9. *Sanchezia stenantha* Leonard, Journ. Washington Acad. Sci. **16**: 489. 1926.

PERU: HUÁNUCO: At Cuchero, Pozuzo, or Pillao, *Ruiz & Pavon* (BM, NY photo 757; M, F photo 29190). In dense green woods at Cayumba, Prov. Huánuco, 800-900 m, July 15, 1948, *Ferreyra 4211* (US). Tropical woods at La Merced, Prov. Pachitea, 500-600 m, August 3, 1948, *Ferreyra 5156* (US). In stream at Pozuzo, 650 m, January 1923, *Macbride 4634* (F, type, NY photo; US). Forest at Tingo Maria, *Asplund 12086* (S). JUNÍN: Meriatiriani, 500 m, June-July 1929, *Killip & A. C. Smith 26207* (NY, US). Dense forest at Perene Bridge, on the Río Paucartambo, 700 m, June 19, 1929, *Killip & A. C. Smith 25287* (NY, US). Dense forest at Yapas, 1350-1600 m, June 28, 1929, *Killip & A. C. Smith 25472* (NY, US). Lima: Jardín Botánico, Lima, *Velarde 4816* (US).

10. *Sanchezia coleifolia*, sp. nov.

Herba 1.5 m. alta, caulibus quadrangularibus, leviter sulcatis, glabris; foliorum lamina late ovata, ad 9 cm. longa et 7 cm. lata, basi late subtruncata dein paulo decurrens, apice caudato-acuminata, firma, marginibus grosse dentata, costa et venis lateralibus 8-10 paribus subtus prominentibus, utrinque glabra, cystolithis densis, 0.2-0.6 mm. longis; petioli ca. 1 cm. longi, nudi; inflorescentia terminalis, pauciramosa, floribus paucis in fasciculis congestis, fasciculis secundis; bracteae late ovatae, ad 22 mm. longae, 8-12 mm. latae, triangulari-acutae, glabrae, aurantiacae, cystolithis multis, parallelis; bracteolae oblongo-ovatae, 10-12 mm. longae, apice late rotundatae et pubescentes; calycis segmenta oblonga, late acuta, longitudine subaequalia, 25 mm. longa, segmentum posterius 5 mm. latum, segmenta anteriora 5-6 mm. lata, segmenta lateralalia 3 mm. lata, omnia apice pubescentes; corolla flava (! Steyermark), corolla staminibusque non visis. Fig. 1, G, H.

ECUADOR: ORO: Cultivated, between Río Minas Nuevas north-west to above Paccha, 2135-2740 m, August 25, 1943, *Steyermark 54127* (US, type).

11. *Sanchezia megalia*, sp. nov.

Frutex, 2-3 m. altus, glaber, caulibus quadrangularibus, leviter sulcatis; foliorum lamina oblongo-ovata, usque ad 40 cm. longa et 15.5 cm. lata, breviter acuminata, basi angustata, in petiolum decurrens, firma, crenato-dentata, costa et venis lateralibus circa 12 prominentibus, cystolithis 0.25-0.5 mm. longis, obscuris; petioli 2-3 cm. longi, canaliculati; spicae terminales et interdum basi spica parva secundaria, floribus in fasciculis congestis; bracteae infimae foliaceae, lanceolatae, 4-6 cm. longae, ca. 2 cm. latae, acuminatae, bracteae

aliae ovatae, 3.5 cm. longae, 3 cm. latae, obtusae vel rotundatae, cystolithis pluribus, parallelis; bracteolae obovatae, 2.5 cm. longae, 1 cm. latae, apice rotundatae, leviter emarginatae; calycis segmenta inaequalia, segmentum posterius oblanceolatum, 30 mm. longum, 7 mm. latum, segmenta anteriora 25 mm. longa, 3 mm. lata, linearia, segmenta lateralia linearia, 20 mm. longa, 1.5-2 mm. lata, omnia emarginata, venosa, marginibus subhyalinis; corolla ignea, tubo 45 mm. longo, basi 4 mm. lato, sursum 10 mm. lato, deorsum glabro, sursum minute pubescens, pilis ca. 0.25 mm. longis, retrorsis, lobis ovatis, 6 mm. longis, ca. 4 mm. latis, obtusis; stamina vix exserta, filamentis pilosis, antheris 6 mm. longis, ventre minute hirsuta, basi calcarata; staminodia ca. 3 cm. longa. (From the Greek, *megaleios*, *magnificent*). Fig. 1, I, J, K, L.

PERU: JUNÍN: Wooded valley at La Merced, 700 m, May 29-June 4, 1929, Killip & A. C. Smith 24080 (US, type; F, NY).

12. *Sanchezia oblonga* R. & P. Fl. Peruv. Chil. 1: 7, pl. 8, fig. b. 1798.

Sanchezia hirsuta Pers. Syn. Pl. 1: 24. 1805.

PERU: HUÁNUCO: Reported from Cuchero, Pozuzo, and Pillao, by Ruiz and Pavón.

13. *Sanchezia peruviana* (Nees) Rusby, Mem. Torrey Bot. Club 6: 103. 1896.

Ancylogyne peruviana Nees in DC. Prodr. 11: 222. 1847.

Sanchezia macbridei Leonard, Journ. Washington Acad. Sci. 16: 487. 1926.

PERU: AYACUCHO: Densely forested valley at Cacarrapa, 1500 m, May 1929, Killip & A. C. Smith 23205 (NY, US). Dense forest near Kimpitiriki, 400 m, May 10, 1929, Killip & A. C. Smith 22954 (F, NY, US). CUZCO: Encuentro, Convención, January 1938, Soukup 819 (F). Along stream, Machu Picchu, 2000 m, February 3, 1939, Stork, Horton & Vargas 10492 (F); Vargas 2131 (F). Potrero, 1250 m, March 2, 1943, Vargas 3240 (GH). HUÁNUCO: Sunny mountain at Pampayacu, 1200 m, July 1923, Macbride 5056 (F, type of *Sanchezia macbridei* Leonard; US). Cueva de las Pavas, February 25, 1947, Ferreyra 1612 (GH). Green woods at Cayumba, between Huánuco and Tingo Maria, 800-900 m, July 15, 1948, Ferreyra 4220 (US). Forest at Tingo Maria, Asplund 12081 (S); February 1944, Soukup 2282 (F). Forest west of Divisoria, Asplund 12587 (S). JUNÍN: Pangoa, Mathews 1221 (K, Herb. Hooker). Casapi, Mathews 2013 (K, Herb. Hooker, lectotype, also Herb. Bentham). Sesuya, Chachapoyas, Mathews 3168 (K, Herb. Hooker, not 3108 as printed in DC. Prodr.). Thickets at La Merced, 700 m, May - June 1929, Killip & A. C. Smith 23411 (F, NY, US). Chanchanmayo Valley, 1500 m, August 1930, Schunke 1758 (F). Villarica, August 1955, Soukup 4376 (US, immature). Montaña, San Luis de Shuaro, Ahanchamayo, 750 m, June 5, 1959, Diers 1227 (Köln). LORETO: Vicinity of Iquitos, on the Río Itaya, Melin 349

(s). Pebas on the Amazon River, July 1929, *L. Williams 1906* (F). Soledad on Río Itaya, 100 m, September 1929, *Killip & A. C. Smith 29549* (F, NY, US). Forest at Mishuyacu near Iquitos, 100 m, December 1929, *Klug 667* (F, NY, US). SAN MARTIN: Forest, San Roque, *Melin 368* (s); *L. Williams 6933* (F, US). Zepelacio, 1200-1600 m, January 1934, *Klug 3478* (AAH, F, GH, NY, US). Tingo Maria, *Allard 21883* (US). Divisoria, between Tingo Maria and Pucallpa, 1600 m, November 1949 - January 1950, *Allard 22183* (US); *Ferreyra 1664* (US). Along the Río Huallaga near Tingo Maria, *Allard 22432* (US).

BOLIVIA: LA PAZ: Mapiri, July - August 1892, *Bang 1473* (GH, US).

Mr. N. Y. Sandwith has kindly supplied us with sketches and detailed information on the Mathews collections at Kew and we are happy to follow this suggestion from his letter: "The best of the three syntypes, from the point of view of inflorescence and corollas, is undoubtedly no. 2013 (Casapi) in Herb. Hook., and this has the advantage of being duplicated in Herb. Benth. You would be well advised to select it as the lectotype."

14. *Sanchezia sericea* Leonard, Journ. Washington Acad. Sci. 16: 486. 1926.

ECUADOR: TUNGURAHUA: Moist banks of the Pastaza River between Baños and Cashurco, 1300-1800 m, September 25, 1923, *Hitchcock 21801* (US, type).

15. *Sanchezia nobilis* Hook. Bot. Mag. 92: pl. 5594. 1866.

? *Sanchezia glaucophylla* Hort. Gard. Chron. 587. 1869.

ECUADOR: PEARCE (K, type).

16. *Sanchezia speciosa* Leonard, Journ. Washington Acad. Sci. 16: 490. 1926.

CUBA: Cultivated, Botanical Garden of Havana, January 1905, *A. H. Curtiss 622* (US, type). Same, March 14, 1906, *Van Hermann 2700* (US).

HAITI: Cultivated, Massif de la Selle, Pétionville, October 19, 1924, *Ekman H-2204* (US).

DOMINICAN REPUBLIC: Cultivated, Santiago City, August 25, 1955, *Jiménez 3049* (US).

MARTINIQUE: *Duss 835* (NY).

GRENADA: Wayside, Belvedere, October 5, 1945, *P. Beard 1274* (US). Moist region at Good Hope, September 30, 1949, *Vélez 3230* (US).

17. *Sanchezia flava* Leonard, Journ. Washington Acad. Sci. 22: 134. 1932.

PERU: JUNÍN: Dense forest, Schunke Hacienda, above San Ramón, 1400-1700 m, June 8, 1929, *Killip & A. C. Smith 24640* (US, type; F, NY).

18. *Sanchezia pulchra* Leonard, Journ. Washington Acad. Sci. **22**: 135. 1932.

PERU: JUNÍN: Dense forest, Puerto Bermudez, 375 m, July 1929, Killip & A. C. Smith 26447 (NY, US). LORETO: Dense forest, Puerto Arturo, lower Río Huallaga below Yurimaguas, 135 m, August 24, 1929, Killip & A. C. Smith 27842 (US, type; F, NY). Edge of forest, Hacienda Soledad, Río Itaya, Asplund 14448 (S). DEPARTMENT (?): Rodriguez (F).

19. *Sanchezia munita* (Nees) Planch. Fl. des Serres **23**: 257. 1880.

Ancylogyne munita Nees in Mart. Fl. Bras. **9**: 63, pl. 7. 1847.

BRAZIL: AMAZONAS: Woods along Rio Madeira, Martius s. n. (M, type; F photo 20539). PARÁ: Swampy jungle, Breves, Amazon estuary, October 23, 1929, Killip & A. C. Smith 30208 (US).

20. *Sanchezia rubriflora* Leonard, Journ. Washington Acad. Sci. **22**: 135. 1932.

PERU: LORETO: In deep jungle, Río Nanay, L. Williams 380 (F). La Victoria on the Amazon River, August-September 1929, L. Williams 2880 (F, US). Forest at Puerto Arturo, lower Río Huallaga, 155-210 m, October-November 1929, L. Williams 5143 (F, US). HUÁNUCO: Pozuzo, June 1923, Macbride 4665 (F). JUNÍN: Dense forest at Cahuapanas, on the Río Pichis, 340 m, July 20, 1929, Killip & A. C. Smith 26768 (US, type; NY).

21. *Sanchezia helophila*, sp. nov.

Frutex 2 m. altus, caulibus quadrangularibus, glabris, sulcatis, angulis rotundatis; foliorum lamina elliptica vel obovata, usque ad 23 cm. longa et 9.5 cm. lata, acuminata, basi acuta, firma, grosse crenatodentata, utrinque glabra, supra minute papillosa, costa et venis lateralibus 12 paribus prominentibus, cystolithis 0.2-0.3 mm. longis; petioli adulti nudi, usque ad 6 cm. longi, glabri, canaliculati; inflorescentiae terminales, 3-ramosae, floribus pluribus in fasciculis subglobosis congestis, spicarum pedunculis 7-9 cm. longis, internodiis 2.5-3.5 cm. longis, minutissime obscureque albido-pubescentibus, sulcatis; bracteae liberae, suborbiculares, 3 cm. longae, late rotundatae, rubrae, glabrae, cystolithis pluribus, parallelis; bracteolae obovatae, bracteas subaequantes, apice minutissime pubescentes; calycis segmenta anguste spathulata, subaequalia, ca. 24 mm. longa, rotundata, segmentum posterius 5 mm. latum, alia angustiora; corolla aurea, 4.5 cm. longa, sursum 7 mm. lata, minute pubescentia, pilis recurvatis, lobis late ovatis, 3 mm. longis, emarginatis; stamina 15 mm. exserta. (From the Greek, *helos*, marsh, and *philos*, loving). Fig. 2, A, B.

ECUADOR: NAPO-PASTAZA: In marsh, vicinity of Puyo, eastern foot-hills of the Andes, 750-1000 m, September 1939, Skutch 4498 (US, type).



Figure (2)

A: *Sanchezia helophila*, inflorescence $\times \frac{1}{2}$; B: calyx segment $\times 1$; C: *S. xantha*, base of leaf $\times \frac{1}{2}$; D: flower $\times 1$; E: calyx segment $\times 1$; F: *S. habra*, inflorescence $\times \frac{1}{2}$; G: flower $\times 1$; H: *S. sanmartinensis*, inflorescence $\times \frac{1}{2}$; I: calyx segment $\times 1$.

22. *Sanchezia xantha*, sp. nov.

Herba (! *Ferreyra*), caulibus quadrangularibus, glabris, sulcatis, angulis rotundatis; foliorum lamina elliptica, usque ad 30 cm. longa et 14.5 cm. lata, breviter acuminata (apice ipso acuto), basi acuta, firma, integra vel leviter crenata, utrinque glabra, supra minute papillosa, costa et venis lateralibus 15 paribus prominentibus, cystolithis 0.25-0.5 mm. longis, obscuris; petioli adulti nudi, usque ad 4 cm. longi, glabri, canaliculati; spicae terminales, glabrae, pedunculis 7 cm. longis, internodiis 1-2 cm. longis, glabris, sulcatis; bracteae ovatae, 2 cm. longae, ca. 15 mm. latae, acutae, rubrae; bracteolae bracteis similes sed minores; calycis segmenta longitudine subaequalia, 15-20 mm. longa, subtruncato-rotundata, segmentum posterius cuneatum, apice 9 mm. latum, segmenta anteriora anguste cuneata, apice fere 5 mm. lata, segmenta lateralia anguste cuneata, apice fere 3 mm. lata; corolla 4.5 cm. longa, basi 3 mm. lata, sursum 7 mm. lata, glabra, lutea, lobis ca. 3 mm. longis et latis, rotundatis, recurvatis; stamina 1 cm. exserta, antheris 5 mm. longis, ventre minute hirsutis, basi calcaratis. (From the Greek, *xanthos*, *yellow*). Fig. 2, C, D, E.

PERU: LORETO: High evergreen forest, below Divisoria, near Sinchono, Prov. Coronel Portillo, 1200-1300 m, July 21, 1948, *Ferreyra* 4275 (US, type).

23. *Sanchezia habra*, sp. nov.

Frutex 2 m. altus, caulibus quadrangularibus, glabris, sulcatis, angulis rotundatis; foliorum lamina oblango-elliptica vel obovata, usque ad 27 cm. longa, 8 cm. latae, apice breviter acuminata, aliquando curvata, basi acuta, utrinque glabra, costa et venis lateralibus 9-12 paribus prominentibus, cystolithis multis, 0.25-0.5 mm. longis, obscuris; petioli adulti nudi, usque ad 3 cm. longi, glabri, canaliculati; inflorescentiae tripartitae, floribus pluribus in fasciculis congestis; bracteae infimae ovatae, usque ad 6 cm. longae, 4 cm. latae, triangulari-acutae, bracteae aliae minores, 3.5-4 cm. longae, 2 cm. latae, acutae, omnes glabrae, cystolithis pluribus, parallelis; bracteolae oblango-lanceolatae, 2-2.5 cm. longae, 3-5 mm. latae, acutae, glabrae; calycis segmenta oblanceolata, inaequalia, 15-18 mm. longa, 2-3 mm. lata, obtusa, glabra; corolla aurea, glabra, 4.5 cm. longa, basi 4 mm. lata, sursum 8 mm. lata, fauce leviter constricta, lobis ca. 4 mm. longis, 3 mm. latis, rotundatis, revolutis; filamenta ad 10 mm. exserta, pilosa, pilis ca. 1 mm. longis; antherae 5 mm. longae, ventre minute hirsutae, basi calcaratae. (Name from the Greek, *habros*, *graceful*). Fig. 2, F, G.

PERU: SAN MARTIN: Forest, Pongo de Cainarachi, Río Cainarachi, 230 m, September - October 1932, *Klug* 2671 (US, type; F, GH, NY).

24. *Sanchezia killipii* Leonard, Journ. Washington Acad. Sci. 22: 137. 1932.

PERU: LORETO: Dense forest, Santa Rosa, lower Río Huallaga

below Yurimaguas, 135 m, September 4, 1929, *Killip & A. C. Smith* 28967 (US, type; NY).

25. *Sanchezia sanmartinensis*, sp. nov.

Frutex, caulibus quadrangularibus, sulcatis, angulis rotundatis, hirsutis, pilis usque ad 1.5 mm. longis, patulis vel ascendentibus, brunneis; foliorum lamina ovata vel oblongo-ovata, apice breviter acuminata, apice ipso obtuso, basi rotundata vel leviter cordata, aliquando inaequaliter in petiolum annectens, usque ad 21 cm. longa et 14 cm. lata, firma, integra vel leviter crenata, supra glabra, cystolithis conspicuis, multis, 0.25-0.5 mm. longis, subtus glabra, costa et venis 8-10 paribus pilosis, pilis 1-1.5 mm. longis; petioli 1.5-5 cm. longi, pilosi, pilis 1-1.5 mm. longis, appressis vel ascendentibus, canaliculati; inflorescentiae terminales, simplices vel parce ramosae, dense pilosae, pilis brunneis, patulis vel ascendentibus, usque ad 2 mm. longis, floribus secundis, densis; bracteae lanceolatae, usque ad 6 cm. longae, basi 5-10 mm. latae, apice longe filiformes, dense pilosae, pilis 1-3 mm. longis, brunneis; bracteolae bracteis similes sed minores, calycis segmenta anguste lanceolata, segmentum posterius et segmenta anteriora 3.5 cm. longa, 3 mm. lata, segmenta lateralina 2 cm. longa, 1.5 mm. lata, omnia filiformia, pilosa, pilis 1.5-4 mm. longis, brunneis; corolla rubra (?) 3 cm. longa, basi 2-3 mm. lata, sursum 8 mm. lata, tubo sursum minute pubescente, lobis ca. 3 mm. longis, 2.5 mm. latis, rotundatis; stamina 7 mm. exserta, filamentis parce pilosis; antherae 4 mm. longae, ventre minute pilosae, basi calcaratae. Fig. 2, H, I.

PERU: SAN MARTÍN: Tarapoto, 750 m, December 1929, *L. Williams* 6018 (US, type; F).

26. *Sanchezia villosa*, sp. nov.

Frutex 2-3 m. altus, caulibus quadrangularibus, sulcatis, angulis rotundatis, dense pilosis, pilis 2.5 mm. longis, patulis; foliorum lamina lanceolata, usque ad 20 cm. longa et 8 cm. lata, acuminata, basi angustata, basi ipsa cordata, firma, leviter crenata, supra subglabra, cystolithis conspicuis, 0.25-0.5 mm. longis, subtus costa et venis 14 paribus dense et alibi sparse pilosis, pilis ad 2.5 mm. longis, patulis vel ascendentibus, brunneis; petioli 4.5 cm. longi, dense pilosi, pilis brunneis, usque ad 2 mm. longis; spicae terminales et axillares, 12-18 cm. longae, floribus pluribus in fasciculis congestis, secundis; rhachis dense pilosae, pilis 2-3 mm. longis, brunneis, patulis vel ascendentibus; pedunculis 6 cm. longis, pilosis; bracteae lanceolatae, 2-5 cm. longae, basi 3-4 mm. latae, graciliter acuminatae, minute pilosae, plus minusve recurvatae; bracteolae usque ad 4 cm. longae, 2-3 mm. latae, apice graciliter acuminatae, pilosae, pilis usque ad 4 mm. longis; calycis segmenta anguste lanceolata, apice filamentosa, pilosa, segmentum posterius et segmenta anteriora usque ad 2 cm. longa, basi 2-2.5 mm. lata, segmenta lateralina usque ad 1.8 cm. longa et 1-2 mm. lata; corolla rubra, 4 cm. longa, basi 4 mm. lata, sursum 6 mm. lata, tubo

sursum pubescente, lobis ca. 3 mm. longis, 2.5 mm. latis (siccis), revolutis; stamina 5 mm. exserta; filamenta pilosa; antherae 3 mm. longae, ventre pilosae. Fig. 3, A.

PERU: SAN MARTÍN: Tropical forest, Trocha, between Agua Blanca and Desquita, on road to Tarapoto, 600-800 m, July 24, 1950, *Ferreya* 7969 (US, type).

27. *Sanchezia aurea*, sp. nov.

Frutex volubilis, 1.5-2 m. altus, caulibus curvatis, quadrangularibus, dense pilosis, pilis 2-3 mm. longis, plerumque patulis, fusco-brunneis; foliorum lamina ovata vel elliptica, usque ad 15 cm. longa et 7 cm. lata, apice breviter acuminata, basi acuta, firma, integra vel leviter undulata, supra glabra vel parce pilosa, cystolithis multis, 0.5-1 mm. longis, conspicuis, subtus parce pilosa, costa et venis 8-10 paribus dense pilosis, pilis 1-1.5 mm. longis, patulis vel ascendentibus; petioli 1-2.5 cm. longi, dense pilosi; flores plures, in fasciculis secundis congestis; spicae terminales, una usque ad 12 cm. longa et 5 cm. lata, pedunculis 4 cm. longis, dense pilosis, spica basalis usque ad 8 cm. longa, 5 cm. lata, pedunculo 2 cm. longo; bracteae lineari-lanceolatae, usque ad 6 cm. longae, basi 3-5 mm. latae, sursum apice filiformi-productae, dense pilosae; bracteolae bracteis similes sed minores; calycis segmenta inaequalia, segmentum posterius et segmenta anteriora ad 3.5 cm. longa, segmenta lateralia 1.5-2 cm. longa, omnia ca. 1 mm. lata, pilosa; corolla 3 cm. longa, tubo basi ca. 2 mm. lato, sursum hirtello, aureo, lobis ca. 3 mm. longis, 2.5 mm. latis, rotundatis, erectis; stamina inclusa, pilosa. Fig. 3, B.

PERU: HUÁNUCO: Forest, Hacienda Shapajilla near Tingo Maria, 600-700 m, August 10, 1946, *Ferreya* 887 (US, type: GH).

28. *Sanchezia stenomacra*, sp. nov.

Frutex 2-3 m. altus, caulibus subquadrangularibus, dense pilosis, pilis patulis, usque ad 2 mm. longis, brunneis vel subalbidis; foliorum lamina oblongo-ovata, usque ad 32 cm. longa et 6-15 cm. lata, breviter vel longe acuminata, apice saepe curvata, basi acuta vel subobtusata, integra, supra glabra vel in costa et venis 10-12 paribus parce hirsuta, cystolithis conspicuis, multis, 0.5 mm. longis, subtus parce pilosa vel glabra costa et venis longe pilosis exceptis, pilis brunneis, patulis vel ascendentibus; inflorescentiae terminales, simplices vel ramosae, dense pilosae, floribus pluribus in fasciculis congestis, secundis; spicae densae, laminis parvis vel bracteis basi 2-3 mm. latis, apice longe filiformibus productis, usque ad 8 cm. longis, dense pilosis suffultae; bracteae basi 4 mm. latae, apice filiformes, pilosae, usque ad 6 cm. longae; bracteolae similes; calycis segmenta filiformia, pilosa, 4 cm. longa; corolla aurantiaca et flava, 4 cm. longa, basi 4 mm. lata, sursum 6 mm. lata, minute pubescens, pilis retrorsis, lobis oblongis, 4 mm. longis et 3 mm. latis, rotundatis; stamina exserta 5-12 mm., filamentis pilosis, pilis patentibus, usque ad 2 mm. longis; antherae



Figure (3)

A: *Sanchezia villosa*, inflorescence $\times \frac{1}{2}$; B: *S. aurea*, leaf and stem section $\times \frac{1}{2}$; C: *S. stenomacra*, fascicle of inflorescence $\times \frac{1}{2}$; D: *S. rhodochroa*, leaf and stem section $\times \frac{1}{2}$; E: *S. aurantiaca*, leaf $\times \frac{1}{2}$; F: inflorescence $\times \frac{1}{2}$; G: sepal $\times 1$; H: *S. klugii*, inflorescence $\times \frac{1}{2}$; I: calyx $\times 1$; J: *S. coccinea*, leaf $\times \frac{1}{2}$; K: inflorescence $\times \frac{1}{2}$; L: sepal $\times 1$.

5 mm. longae, parce et minute pilosae, basi calcaratae; staminodia 15 mm. longa, parce et minute pilosa. (From the Greek, *stenos*, narrow, and *macros*, long). Fig. 3, C.

PERU: HUÁNUCO: Tulumayo near Tingo Maria, *Mus. Nat. Univ. Lima* 123 (US). LORETO: Forest, Balsapuerto, 220 m, April 1933, *Klug* 3020 (US, type; F, GH, NY).

29. *Sanchezia filamentosa* Lindau, Bull. Herb. Boiss. II, 4: 314. 1904.

PERU: HUÁNUCO: Forests, Tingo Maria, *Asplund* 12084 (S). LORETO: Near Pongo de Cainarachi, September 1902, *Ule* 6401 (B, type; F photo 5889).

30. *Sanchezia rhodochroa*, sp. nov.

Frutex 3 m. altus, caulibus quadrangularibus, sulcatis, dense pilosis, pilis 3-4 mm. longis, patulis vel ascendentibus, brunneis, angulis rotundatis; foliorum lamina oblongo-lanceolata, ad 30 cm. longa, 7.5 cm. lata, apice acuminata, aliquando curvata, basi acuta, firma, integra vel leviter crenato-dentata, supra glabra, papillosa, cystolithis conspicuis, 0.25-0.5 mm. longis, subtus leviter pilosa, costa et venis plerumque 9 paribus dense pilosis, pilis 2-5 mm. longis, patulis vel ascendentibus; petioli ad 5.5 cm. longi, dense pilosi; flores plures in fasciculis congestis, his secundis; inflorescentiae terminales, sessiles vel ad 6 cm. pedunculatae; spicae 2-3, ad 16 cm. longae, sessiles vel ad 5 cm. pedunculatae, longe pilosae, pilis ad 4 mm. longis, patulis, brunneis; bracteae lineari-lanceolatae, ad 6 cm. longae, 5-6 mm. latae, apice longe filiformes; calycis segmenta lineari-lanceolata, apice filiformia, segmentum posterius 5-7 cm. longum, basi 4 mm. latum, segmenta anteriora 5.5 cm. longa, 3.5 mm. lata, segmenta lateralia 4 cm. longa, 2 mm. lata, omnia dense pilosa; corolla rosea, 4 cm. longa, basi 3 mm. lata, sursum 8 mm. lata, graciliter pubescens, lobis 3 mm. longis, 2.5 mm. latis, recurvatis; stamina vix exserta, parce pilosa; antherae 4 mm. longae, ventre minute pilosae, basi calcaratae; stylus glaber; capsula 15 mm. longa, glabra. (From the Greek, *rhodon*, rose, and *chros*, colored). Fig. 3, D.

PERU: SAN MARTÍN: Mountain forest, Chazuta, Río Huallaga, 260 m, April 1935, *Klug* 4083 (US, type; F, GH, NY).

31. *Sanchezia aurantiaca*, sp. nov.

Frutex 2-2.5 m. altus, caulibus subquadrangularibus, glabris; foliorum lamina oblongo-elliptica, ad 20 cm. longa, 8 cm. lata, breviter acuminata, basi acuta, firma, utrinque glabra, integra vel undulata, costa et venis 6-8 paribus prominentibus, cystolithis pluribus, ad 0.5 mm. longis, conspicuis; petioli ad 4 cm. longi, glabri, canaliculati; inflorescentiae parce ramosae, floribus pluribus in fasciculis congestis; bracteae anguste ovatae, ad 23 mm. longae, basi ca. 7 mm. latae, acutae, basi rotundatae, apice ciliatae, parce hirsutae et nervosae, cystolithis pluribus, conspicuis, parallelis; bracteolae lanceolatae, 2

cm. longae, acutae, ciliatae, extus minute hirsutae, nervatae, cystolithis conspicuis; calycis segmenta lanceolata, 17-19 mm. longa, acuta, ciliata, pilis ad 1 mm. longis minute pubescentia, graciliter nervata; corolla aurantiaca, 5 cm. longa, basi 5 mm. lata, sursum 9 mm. lata, basi glabra, sursum minute pubescens, pilis tenuibus, patulis vel retrorsis, 0.4 mm. longis, lobis ovatis, 5 mm. longis, 4 mm. latis, rotundatis; filamenta ca. 8 mm. exserta, pilosa, pilis ad 2 mm. longis, articulatis; staminodia ca. 2 cm. longa. Fig. 3, E, F, G.

PERU: SAN MARTÍN: Prov. Mariscal Cáceres: Tropical forest, Quebrada Chambira near Juanjui, 200-300 m, August 24, 1948, *Ferreyra 4559* (US, type).

32. *Sanchezia klugii*, sp. nov.

Frutex vel arbor, 2.5-5 m. alta; ramis subquadrangularibus vel deorsum subteretibus, pilis appressis ad 0.5 mm. longis vestitis; foliorum lamina ovato-lanceolata, ad 20 cm. longa et 8 cm. lata, apice acuminata vel breviter acuminata, basi acuta, firma, integra, costa et venis (6-8 paribus) plus minusve appresse pilosis exceptis utrinque glabra, supra cystolithis conspicuis 0.25 mm. longis numerosis instructa; petioli 1-3 cm. longi, appresse pilosi; inflorescentia terminalis, simplex vel ramosa, 6-15 cm. longa, floribus densis, secundis instructa, rachibus pilosis, pilis 0.5 mm. longis, appressis instructis; bracteae anguste triangulares, 1-1.5 cm. longae, acuminatae, subcarinatae, appresse pilosae; bracteolae similes sed minores; nodi uniflori; calycis segmenta oblonga, 2-2.3 cm. longa, 2-3 mm. lata, apice aristata, extus minute pilosa; corolla 4 cm. longa, basi 3 mm. lata, sursum 8 mm. lata, apice 6 mm. lata, rubra vel rosea, apice minute pubescens, pilis 0.2-0.3 mm. longis, lobis rotundatis, recurvatis, 3 mm. longis et latis; stamina 5-12 mm. exserta, filamentis pilosis, pilis ad 2 mm. longis; antherae 4 mm. longae, parte ventralis minute pilosa, pilis 0.25 mm. longis, basi calcaratae; ovarium glabrum. Fig. 3, H, I.

PERU: SAN MARTÍN: Clearing in forest, Pongo de Cainarachi, on the Río Cainarachi, 230 m, September-October 1932, *Klug 2617* (US, type; F, GH, NY). Forest, Chazuta, Río Huallaga, 260 m, April 1935, *Klug 4117* (F, GH, NY, US).

33. *Sanchezia williamsii* Leonard, Journ. Washington Acad. Sci. 22: 127. 1932.

PERU: SAN MARTÍN: Forest, San Roque, 1350-1500 m, January - February 1930, *L. Williams 7701* (US, type); 7215 (F, US).

34. *Sanchezia coccinea*, sp. nov.

Frutex 4 m. altus, caulibus subquadrangularibus, glabris, angulis obtusis; foliorum lamina lanceolata vel oblanceolata, ad 27.5 cm. longa et 9 cm. lata, apice acuminata, basi angustata, firma, integra vel leviter crenata, utrinque glabra, cystolithis obscuris, supra minute papillosa; petioli 1-2 cm. longi; inflorescentiae ramosae, pyramidales, ad 26.5 cm. longae et 14 cm. latae, floribus pluribus, in fasciculis

congestis, fasciculis contiguis vel basalibus laxis; bracteae ovatae, ad 15 mm. longae, 6 mm. latae, acutae, glabrae; bracteolae anguste ovatae, 10-15 mm. longae, 3-6 mm. latae, acutae, glabrae; calycis segmenta subrufo-violacea, oblongo-lanceolata, subaequalia, ad 22 mm. longa, 2-3 mm. lata, acuta vel acuminata, apice minute pilosula, interdum recurvata, marginibus hyalinis; corolla 4 cm. longa, coccinea, vel rosea deorsum glabra, sursum dense pilosa, pilis 0.5-0.75 mm. longis, retrorse adpressis, lobis 2.5 mm. longis, 2 mm. latis, marginibus recurvatis, extus retrorse pilosis, intus glabris, apice obtusis; filamenta pilosa, basi tomentosa; antherae 4.5 mm. longae, ventre minute pilosae, basi calcaratae; staminodia ca. 1 cm. longa, basi tomentosa; ovarium glabrum. Fig. 3, J. K. L.

PERU: HUÁNUCO: Forest, east of Divisoria, 1400 m, July 27, 1940, *Asplund 12588* (S). SAN MARTÍN: Near Arroyo Bravo on road to Divisoria, near Tingo Maria, 1200 m, November 1949 - January 1950, *Allard 21771* (US, type). Between Tingo Maria and Divisoria, August 13, 1946, *Ferreira 981* (US).

35. *Sanchezia punicea*, sp. nov.

Frutex, caulibus glabris subquadrangularibus, angulis rotundatis; foliorum lamina oblongo-elliptica, ad 27 cm. longa, 12 cm. lata, graciliter caudato-acuminata, basi acuta, crenato-dentata, utrinque glabra, minute papillosa, cystolithis 0.5 mm. longis, obscuris; petioli ad 5 cm. longi, glabri; inflorescentiae paniculatae, pyramidatae, terminales, ad 23 cm. longae et 15 cm. latae, floribus pluribus in fasciculis congestis, fasciculis approximatis; bracteae parvae, triangulares, ad 7 mm. longae, basi 2.5 mm. latae, acriter acutae, carinatae, minute et parce puberulentae; bracteolae bracteis similes sed minores; calycis segmenta lanceolata, 17-22 mm. longa, segmentum posterius 3.5 mm. latum, segmenta anteriora 3 mm. lata, segmenta lateralalia 2.5 mm. lata, omnia graciliter acuminata, subrubro-violacea, ciliata, parce pubescentia; corolla 3-4 cm. longa, basi 4 mm. lata, sursum 8 mm. lata, in fauce parce constricta, punicea, basi glabra, sursum pilosa, pilis gracilibus, 1-2 mm. longis, lobis 2.5 mm. longis, 2 mm. latis, rotundatis, revolutis; stamina inclusa; filamentis quam corollae tubo valde brevioribus, parce pilosis; staminodia 1.5 cm. longa. Fig. 4, A, B.

PERU: HUÁNUCO: Forest, Campamento Boza, between Pumahuasi and Divisoria, 1000 m, August 22, 1940, *Asplund 13248* (S, type); *13257* (S).

36. *Sanchezia woytkowskii*, sp. nov.

Frutex, caulibus subquadrangularibus, glabris; foliorum lamina late ovata vel elliptica, ad 25 cm. longa et 14.5 cm. lata, breviter acuminata, firma, glabra, marginibus leviter crenata, supra minute papillosa, utrinque costa et venis 9 paribus prominentibus, cystolithis obscuris; petioli ad 6 cm. longi, glabri; inflorescentia terminalis, pyramidata,

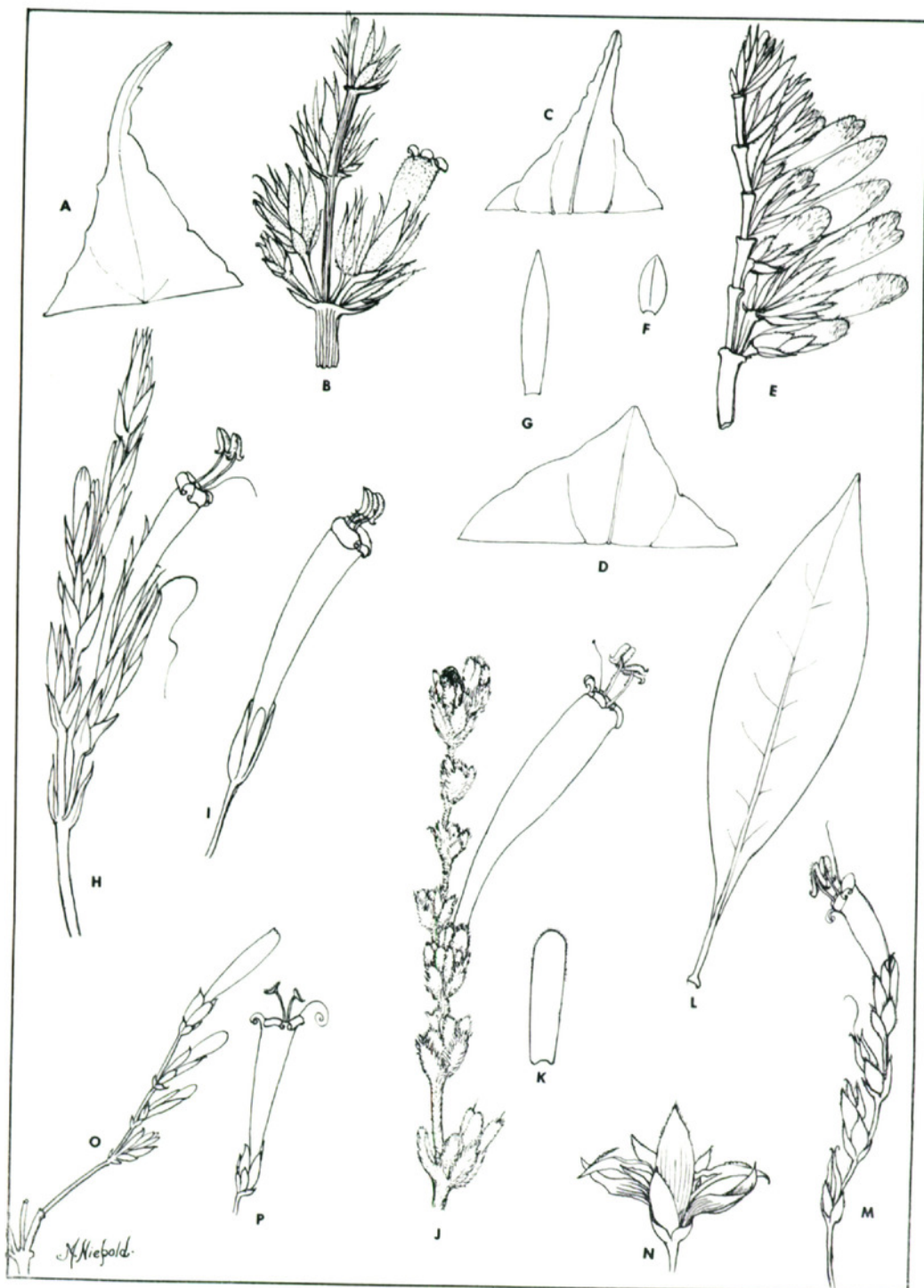


Figure (4)

A: *S. punicea*, leaf apex $\times \frac{1}{2}$; B: inflorescence $\times \frac{1}{2}$; C and D: *S. woytkowskii*, leaf apices $\times \frac{1}{2}$; E: inflorescence $\times \frac{1}{2}$; F: bract $\times 1$; G: calyx segment $\times 1$; H: *S. lampra*, inflorescence $\times \frac{1}{2}$; I: *S. pedicellata*, flower $\times \frac{1}{2}$; J: *S. lasia*, inflorescence $\times \frac{1}{2}$; K: calyx segment $\times 1$; L: *S. ferreyrae*, leaf $\times \frac{1}{2}$; M: inflorescence $\times \frac{1}{2}$; N: fruit $\times 1$; O: *S. arborea*, inflorescence $\times \frac{1}{2}$; P: flower $\times \frac{1}{2}$.

congesta, apice truncata, floribus ca. 3 in fasciculis congestis, fasciculis contiguus in spicis secundis; bracteae deciduae, angustae ovatae, ca. 8 mm. longae, 3-4 mm. latae, acutae, carinatae, minute hirsutae; bracteolae bracteis similes; calycis segmenta oblonga, ca. 15 mm. longa, 2-2.5 mm. lata, acuta, hirsuta; corolla rubra (?), 3-3.3 cm. longa, basi 3-4 mm. lata, sursum 7-8 mm. lata, in fauce constricta, deorsum glabra, supra parce pilosa, pilis plus minusve patulis, 1.5-2 mm. longis, lobis 3 mm. longis, 2.5 mm. latis, rotundatis, fere glabris, planis; filamenta quam corollae tubo longiora sed nonnunquam inclusa; antherae ovato-oblongae, 5 mm. longae, prope basim 2 mm. latae, ventre minute hirsutae, basi calcaratae; staminodia ca. 1 cm. longa, pilosa, pilis patulis, ad 1.5 mm. longis; ovarium glabrum. Fig. 4, C, D, E, F, G.

PERU: LORETO: Boquerón Padre Abad, 470 m, August 11, 1946, *Woytkowski 34359* (F, type); *34472* (F).

37. *Sanchezia rosea* Leonard, Journ. Washington Acad. Sci. **22**: 129. 1932.

PERU: LORETO: Woods, Yurimaguas, lower Río Huallaga, 135 m, August 25, 1929, *Killip & A. C. Smith 28040* (US, type; NY).

38. *Sanchezia sprucei* Lindau, Bull. Herb. Boiss. **5**: 648. 1897.

PERU: SAN MARTÍN: Near Tarapoto, *Spruce s. n.* (GH, isotype; F, US photos). San Roque, *Melin 134* (S); *356* (S).

39. *Sanchezia lampra*, sp. nov.

Frutex ad 2 m. altus, caulibus quadrangularibus, glabris, sulcatis; foliorum lamina lanceolata, ca. 40 cm. longa, 6.5 cm. lata, apice longe caudato-acuminata, basi attenuata, costa et venis lateralibus 10-11 paribus subtus perobscure pubescentibus exceptis utrinque glabra, cystolithis subdensis, ca. 0.2 mm. longis, tenuis, leviter undulata; petioli 2 cm. longi; inflorescentia terminalis, ramosa, ad 17 cm. longa, spicis strictis, floribus 2 in fasciculis congestis, haud secundis, fasciculis contiguus; bracteae triangulari-ovatae, 13 mm. longae, apice carinatae, cystolithis multis parallelis instructae, apice obscure pubescentes; bracteolae minores, oblongae, acutae; calycis segmenta oblonga, subaequalia, 18 mm. longa, 2.5-3 mm. lata, cuspidata, apice obscure pubescentia; corolla fulgente rubra, 4 cm. longa, basi 5 mm. lata, sursum attenuata dein 8 mm. lata, apice 6 mm. lata, glabra, lobis anguste ovatis, 4 mm. longis, recurvatis; stamina 12 mm. exserta; antherae 4.5 mm. longae, basi cuspidatae; staminodia elongata. Fig. 4, H.

ECUADOR: GUAYAS: Lowland along stream, 10 km. west of Pedro Carbo, July 22, 1940, *Haught 3082* (US, type).

40. *Sanchezia longiflora* (Hook.) Hook. f. ex Planch. Fl. des Serres **23**: 257, pl. 2460. 1883.

Ancylogyne longiflora Hook. Bot. Mag. **92**: pl. 5588. 1866.

ECUADOR: Near Guayaquil, *Pearce* (K, type).

41. *Sanchezia oxysepala* Mildbr. Notizblatt 9: 983. 1926.

PERU: AMAZONAS: High land at the mouth of the Río Apaya, *Tessmann* 3874 (NY). Mouth of Río Santiago, upper Río Marañon, *Tessmann* 3874a (B, type; US photo). Prov. Bagua: Rainforest along Quebrada Miraná (above km. 277 of Marañon road), valley of Río Marañon above Cascadas de Mayasi, 450-500 m, September 8, 1962, *Wurdack* 1909 (US). LORETO: Undergrowth in dense forest, foothills of Sierra del Pongo, 400 m, November 29, 1931, *Mexia* 6189 (F, GH, NY, US).

42. *Sanchezia pedicellata*, sp. nov.

Frutex ad 2 m. altus, caulibus subquadrangularibus, glabris; foliorum lamina oblongo-elliptica, ad 24 cm. longa et 10 cm. lata, obtusa vel breviter acuminata, utrinque glabra, firma, crenato-dentata, costa et venis lateralibus 14 paribus prominentibus, cystolithis obscuris, supra minute papillosa; petioli 6 cm. longi, crassi, glabri; inflorescentia terminalis, parce ramosa, floribus pluribus in fasciculis congestis; bracteae deciduae, brunneo-rubrae, lanceolatae, 1 cm. longae, ca. 2 mm. latae, obtusae (?), glabrae; pedicelli graciles, glabri, ad 12 mm. longi; calycis segmenta oblonga, 10-15 mm. longa, 3-4.5 mm. lata, apice rotundata, glabra; corolla fulgente rubra, 6 cm. longa, basi 3 mm. lata, sursum 6 mm. lata, in fauce leviter constricta, lobis ca. 4 mm. longis, 3 mm. latis, revolutis; filamenta 3-5 mm. exserta, parce pilosa, pilis ca. 1 m. longis, patulis; antherae 4 mm. longae, ventre minute hirsutae, basi calcaratae; staminodia ca. 12 mm. longa. Fig. 4, I.

PERU: LORETO: Jungle, Aguatía, 200 m, August 25, 1946, *Woytkowski* 34427 (F, type).

43. *Sanchezia conferta* Leonard, Journ. Washington Acad. Sci. 22: 131. 1932.

PERU: JUNÍN: Dense forest, Yapas, Pichis Trail, 1350-1600 m, June 29, 1929, *Killip & A. C. Smith* 25479 (US, type). PASCO: Villa Rica, August 1955, *Soukup* 4375 (US).

44. *Sanchezia lasia*, sp. nov.

Frutex 1.5-2 m. altus, caulibus glabris vel ad nodos tomentosis, subquadrangularibus; foliorum lamina oblongo-ovata vel elliptica, ad 22 cm. longa et 11 cm. lata, breviter acuminata (apice ipso obtuso), basi angustata, utrinque glabra, firma, integra vel leviter undulata, costa et venis 8-10 paribus prominentibus, cystolithis obscuris: petioli 4 cm. longi; inflorescentia terminalis, laxe paniculata, spicis ad 15 cm. longis, brunneo-tomentosis, internodiis infimis ad 2 cm. longis, aliis sursum sensim minoribus, apice contiguis, floribus pluribus in fasciculis congestis, secundis; bracteae ovatae, ad 1 cm. longae, 5-6 mm. latae, dense tomentosae; bracteolae bracteis similes sed minores;

calycis segmenta oblonga, 14 mm. longa, 3-3.5 mm. lata, apice rotundata, glabra vel apice plus minusve tomentosa, marginibus subhyalinis; corolla rosea, 5 cm. longa, basi 3-4 mm. lata, sursum 9 mm. lata, in fauce constricta, lobis 2.5 mm. longis et latis, rotundatis, revolutis; filamenta ca. 8 mm. exserta, pilosa, pilis 0.5-1 mm. longis, patulis vel recurvatis; antherae 4 mm. longae, ventre tomentosae, basi calcaratae. (Name from the Greek, *lasios*, *shaggy*). Fig. 4, J, K.

PERU: HUÁNUCO: Tropical forest, La Merced, 400-500 m, August 14, 1948, *Ferreyra* 4467 (US, type). SAN MARTÍN: Riverbank, Juan Jui, upper Río Huallaga, 400-800 m, May 1936, *Klug* 4380 (F, GH, NY, US).

45. *Sanchezia scandens* (Lindau), comb. nov.

Steirosanchezia scandens Lindau, Bull. Herb. Boiss. II. 4: 317. 1904; Mildbr. Notizblatt 9: 983. 1926.

PERU: LORETO: Yurimaguas, August 1902, *Ule* 6286 (B, type; F photo 5884). Pongo de Manseriche, 155 m, August 27, 1924, *Tessmann* 3880 (Bassler Herb., Iquitos, Peru; US photo). La Victoria on the Amazon River, August-September 1929, *L. Williams* 2616 (F, US). Puerto Arturo, lower Río Huallaga, August-September 1929, *L. Williams* 5248 (F). SAN MARTÍN: Tarapoto, Río Mayo, 360-900 m, December 1929, *L. Williams* 6264 (F, US).

46. *Sanchezia sylvestris* Leonard, Journ. Washington Acad. Sci. 22: 128. 1932.

PERU: LORETO: Dense forest, between Yurimaguas and Balsa-puerto, 135-150 m, August 26, 1929, *Killip & A. C. Smith* 28093 (US, type; F, NY).

47. *Sanchezia ferreyrae*, sp. nov.

Frutex 4-5 m. altus, caulibus subquadrangularibus, glabris; foliorum lamina oblongo-elliptica, ad 12 cm. longa, 3.5 cm. lata, breviter acuminata (apice ipso obtuso), basi angustata, firma, integra vel undulata, utrinque glabra, costa et venis ca. 8 paribus prominentibus, cystolithis obscuris; petioli 1 cm. longi; inflorescentia terminalis, parce ramosa, foliosa, floribus secundis, solitariis, imbricatis; bracteae purpureae, ovatae, 7 mm. longae, 3 mm. latae, acuminatae, ciliatae, costa parce strigosa, pilis 0.25 mm. longis, cystolithis pluribus, parallelis; bracteolae bracteis similes sed paulo longiores; calycis segmenta oblonga, 15 mm. longa, 3.5-4.5 mm. lata, acuta, apice ciliata, venis tenuibus, marginibus subhyalinis; corolla rubra, glabra, 3 cm. longa, basi 3 mm. lata, sursum 7 mm. lata, in fauce leviter constricta, lobis ca. 4 mm. longis, 3 mm. latis, revolutis; filamenta ca. 6 mm. exserta, parce pilosa, pilis patulis, ad 1 mm. longis; antherae 4 mm. longae, ventre minute hirsutae, basi calcaratae; capsula glabra, lanceolata, 1.5 cm. longa, 4 mm. lata, 2.5 mm. crassa, acuta; retinacula 2 mm. longa, apice plana; semina (immatura) lenticularia, glabra, 3.5 mm. longa, ca. 1.5 mm. lata. Fig. 4, L, M, N.

PERU: HUÁNUCO: Prov. Pachitea: Tropical forest, La Merced, between Situlli and Cerro Santa Cruz, 86 km. from Tingo María, 500-600 m, August 3, 1948, *Ferreya 4392* (US, type).

48. *Sanchezia arborea*, sp. nov.

Arbor 4 m. alta, caulibus glabris, subquadrangularibus, angulis rotundatis vel deorsum subteretibus; foliorum lamina lanceolata vel oblongo-elliptica, apice acuminata, saepe curvata, basi angustata, ad 16 cm. longa, 4 cm. lata, utrinque glabra, cystolithis minutis et obscuris; petioli 0.5-2 cm. longi, glabri; inflorescentia terminalis, parce ramosa, glabra, floribus solitariis, secundis, racemis laxis, ad 8 cm. longis; bracteae ovatae, 3 mm. longae et latae, apice rotundatae, apiculatae, glabrae sed marginibus parce ciliolatis; bracteolae ellipticae, 4.5 mm. longae; calycis segmenta glabra, oblonga, 1-1.5 cm. longa, 2.4 mm. lata, apice apiculata, minute ciliolata, marginibus hyalinis; corolla rubroviolacea, glabra, 3.5-4 cm. longa, basi 2 mm. lata, sursum 5-7 mm. lata, lobis rotundatis, 3 mm. longis, 2 mm. latis, revolutis; stamina exserta 5-8 mm., filamentis glabris; staminodia 8 mm. longa, apice parce puberula; antherae 1.5 mm. longae, apice acutae, basi calcaratae, ventre puberulae; ovarium glabrum. Fig. 4, O, P.

PERU: SAN MARTÍN: Clearing in forest, Pongo de Cainarachi, Río Cainarachi, 230 m, September-October 1932, *Klug 2612* (US, type; F, GH, NY).

49. *Sanchezia decora*, sp. nov.

Frutex 2 m. altus, ramis glabris, subquadrangularibus, angulis rotundatis deorsum teretibus; foliorum lamina lanceolata vel oblongo-elliptica, acuminata, apice ipso obtuso, basi angustata, ad 14 cm. longa, 4 cm. lata, utrinque glabra, cystolithis minutis, obscuris; petioli 1-2 cm. longi, glabri; inflorescentia terminalis, parce ramosa, glabra, floribus solitariis, secundis, spicis laxis, ad 7 cm. longis; bracteae lanceolatae, 2-4 mm. longae, 1 mm. latae, acutae; bracteolae ovatae, 4.5 mm. longae, 2.5 mm. latae, rotundatae, apiculatae, glabrae, marginibus minute ciliolatis; calycis segmenta oblonga, ad 12 mm. longa, obtusa, rotundata vel truncata, glabra, apice minute ciliolata, marginibus hyalinis; corolla lilacino-rosea, 3.5-4 cm. longa, basi 2-3 mm. lata, sursum 6 mm. lata, glabra, lobis 3 mm. longis, 2.5 mm. latis, rotundatis, revolutis; stamina 5 mm. exserta, filamentis glabris, basi puberulis et tomentosis; staminodia 12 mm. longa, parce puberula, basi tomentosa; antherae 4.5 mm. longae, ventre puberulae; ovarium glabrum. Fig. 5, A, B, C.

PERU: SAN MARTÍN: Clearing in forest, Pongo de Cainarachi, Río Cainarachi, 230 m, September-October 1932, *Klug 2616* (US, type; F, GH, NY).

50. *Sanchezia lispa*, sp. nov.

Frutex 4 m. altus, caulibus subquadrangularibus, glabris, angulis



Figure (5)

A: *Sanchezia decora*, inflorescence $\times \frac{1}{2}$; B: flower $\times \frac{1}{2}$; C: calyx $\times 1$; D: *S. lispa*, inflorescence $\times \frac{1}{2}$; E: calyx $\times 1$; F: *S. skutchii*, leaf $\times \frac{1}{2}$; G and H: inflorescence sections $\times \frac{1}{2}$; I: calyx $\times 1$; J: *S. tarapotensis*, leaf $\times \frac{1}{2}$; K: inflorescence $\times \frac{1}{2}$; L: calyx $\times 1$.

rotundatis; foliorum lamina oblongo-elliptica, ad 17 cm. longa et 6 cm. lata, apice breviter acuminata, basi angustata, utrinque glabra, costa et venis lateralibus 8 paribus prominentibus, cystolithis ad 0.5 mm. longis; petioli 5-10 mm. longi, glabri; spica terminalis, simplex, glabra, floribus 1-2 in axillis bractearum; bracteae ovatae, 8 mm. longae, 3.5-4 mm. latae, obtusae vel rotundatae, apiculatae; bracteolae bracteis similes vel paulo longiores; calycis segmenta 13 mm. longa, 4 mm. lata, glabra, apice obtusa, apiculata; corolla 4 cm. longa, aureo-rubra, glabra, lobis ca. 5 mm. longis, 3 mm. latis, apice rotundatis, apiculatis, revolutis; filamenta ad 12 mm. exserta, glabra vel parce pilosa, pilis 0.5 mm. longis; antherae 4 mm. longae, ventre minute hirsutae, basi calcaratae; staminodia ca. 2 cm. longa. (Name from the Greek, *lispos*, *smooth*). Fig. 5, D, E.

PERU: HUÁNUCO: Forest, Tingo Maria, July 31, 1940, *Asplund* 12654 (s, type).

51. *Sanchezia putumayensis* Leonard, Contr. U. S. Nat. Herb. 31: 55, fig. 20. 1951.

Sanchezia sylvestris Leonard, Journ. Washington Acad. Sci. 22: 128. 1932, in part, not as to type.

COLOMBIA: NARIÑO: Barbacoas, *Triana s. n.* (COL). PUTUMAYO: Forest, Río Putumayo, September-October 1930, *Klug* 1653 (US, type; GH, MO, NY). Rain forest, Río San Miguel at the mouth of the Río Conejo, 300 m, December 9, 1940, *Cuatrecasas* 10919 (US).

52. *Sanchezia tigrina* Leonard, Journ. Washington Acad. Sci. 22: 130. 1932.

PERU: LORETO: Iquitos, 120 m, October 1929, *L. Williams* 3622 (US, type; F). Garden site, Iquitos, 90 m, September 1942, *Sandeman* 3289 (K).

53. *Sanchezia parviflora* Leonard, Journ. Washington Acad. Sci. 16: 491. 1926.

ECUADOR: ORO: Between Santa Rosa and La Chorita, 0-100 m, August 27, 1923, *Hitchcock* 21127 (US, type). GUAYAS, CAÑAR, CHIMBORAZO, and BOLÍVAR (junction): Foothills of the western cordillera near the village of Bucay, 1000-1250 m, June 8-15, 1945, *Camp* E-3756 (NY, US).

54. *Sanchezia lutea* Leonard, Contr. U. S. Nat. Herb. 31: 53, fig. 19. 1951.

COLOMBIA: CAQUETÁ: Florencia, *Camilo* 78 (GH). CHOCÓ: Headwaters of Río Tutunendo, east of Quibdó, May 20, 21, 1931, *Archer* 2174 (US, type). Rocky margins of Río Atrato above Yuto, 70 m, April 2, 1958, *Cuatrecasas & Llano* 24127 (US). META: Los Llanos, between Villavicencio and El Parrao, 500 m, November 10, 1938, *Cuatrecasas* 4627 (US).

55. *Sanchezia loranthifolia* Lindau, Bull. Herb. Boiss. II, 4: 314. 1904.

PERU: LORETO: San Pedro, Río Cumbaso, March 1903, *Ule 6820* (B, type: F photo 5890).

56. *Sanchezia skutchii*, sp. nov.

Frutex 3 m. altus, caulibus quadrangularibus, sulcatis, glabris; foliorum lamina lanceolata, ad 16 cm. longa et 5 cm. lata, apice longe caudato-acuminata, basi acuta, utrinque glabra, costa et venis lateralibus 8-10 paribus prominentibus, firma, supra papillosa, cystolithis obscuris; petioli ca. 1.5 cm. longi, glabri; inflorescentia terminalis, multiramosa, fere glabra, spicis sublaxis, ad 13 cm. longis, floribus 2-4 in fasciculis congestis vel raro solitariis; bracteis basalibus linearibus, ca. 8 mm. longis, dein brevioribus et latioribus, omnibus glabris; bracteolis late ovatis, 8 mm. longis; calycis segmenta oblonga, 13 mm. longa, ad 4 mm. lata, apice minute ciliolata; corolla rubra, 4 cm. longa, basi 3 mm. lata, sursum 9 mm. lata, ad apicem versus retrorso-pilosa, pilis 0.25 mm. longis, lobis late ovatis, 4 mm. longis, 3.5 mm. latis, rotundatis, recurvatis; filamentis 15-17 mm. exsertis, sparse pilosis; antherae 5 mm. longae, basi cuspidatae. Fig. 5, F. G. H, I.

ECUADOR: NAPO-PASTAZA: Near Puyo, eastern foothills of the Andes, 750-1000 m, September 1939, *Skutch 4500* (US, type).

57. *Sanchezia tarapotensis*, sp. nov.

Herba verisimiliter alta, caulibus quadrangularibus, sulcatis, glabris, angulis rotundatis; foliorum lamina elliptico-lanceolata, ad 20 cm. longa et 6 cm. lata, apice acuminata, basi acuta, utrinque glabra, costa et venis lateralibus 8-11 paribus prominentibus, subtenuis, supra papillosa, cystolithis subdensis, 0.5 mm. longis; petioli vix ultra 5 mm. longi, supra dense sericeo-vestiti, alibi glabri; inflorescentia simplex vel pauciramosa, glabra, spicis laxis vel sublaxis, 11-16 cm. longis, floribus 2-4 in fasciculis congestis; bracteae basales anguste ovatae, ad 25 mm. longae, 6 mm. latae, dein multo breviores; bracteolae subellipticae, ad 14 mm. longae, bracteas superiores superantes; calycis segmenta oblonga, longitudine subaequalia, ad 20 mm. longa et 3.5 mm. lata, rotundata et apiculata; corolla unica imperfecte cognita, citrina, 4 cm. longa, sursum 7 mm. lata, ad apicem versus retrorso-pilosa, lobis 3 mm. latis recurvatis; stamina ignota; stylus exsertus. Fig. 5, J, K, L.

PERU: TARAPOTO: Forest near Tarapoto, 400-420 m, July 18, 1950, *Ferreyra 7883* (US, type).

58. *Sanchezia parvibracteata* Sprague & Hutchinson, Kew Bull. 1908: 253. 1908; Leonard, Journ. Washington Acad. Sci. 16: 492. 1926; Contr. U. S. Nat. Herb. 31: 56. 1951.

Sanchezia sprucei var. *salvadorensis* Donn. Smith, Bot. Gaz. 44: 116. 1907.

MEXICO: CHIAPAS: Escuintla, December 16, 1936, *Matuda 128* (US).

GUATEMALA: QUEZALTENANGO: Gardens of San Francisco Miramar, 660 m, March 15, 1921, *Tonduz & Rojas 165* (US).

SALVADOR: Garden, Salvador, 1905, *Renson 112* (US). Same, December 1906, *Velasco 8985* (US, type of *Sanchezia sprucei* var. *salvadorensis* Donn. Smith).

COLOMBIA: PUTUMAYO: Banks of the Río Güamués between San Antonio and the mouth, 270-310 m, December 20, 1940, *Cuatrecasas 11231* (US).

59. *Sanchezia ecuadorensis* Leonard, Journ. Washington Acad. Sci. 16: 492. 1926.

ECUADOR: TUNGURAHUA: Valley of Pastaza River, between Baños and Cashurco, 1300-1800 m, September 25, 1923, *Hitchcock 21833* (US, type).

EXSICCATAE CITED IN SANCHEZIA

(Number of the species in parentheses)

ALLARD 21711 (8); 21771 (34); 21883 (13); 22183 (13); 22432 (13). ALLEN, P. H., 269 (4); 4300 (4). ARCHER 2174 (54). ASPLUND 12081 (13); 12084 (29); 12086 (9); 12587 (13); 12588 (34); 12654 (50); 13248 (35); 13257 (35); 14448 (18).

BANG 1473 (13). BEARD, P., 1274 (16).

CAMILO 78 (54). CAMP E-3756 (53). CUATRECASAS 4627 (54); 10919 (51); 11231 (58); 24127 (54). CURTISS, A. H., 622 (16).

DIERS 1227 (13). DUSS 835 (16).

EKMAN H-2204 (16).

FERREYRA 887 (27); 981 (34); 1612 (13); 1664 (13); 4211 (9); 4220 (13); 4275 (22); 4391 (5); 4392 (47); 4467 (44); 4559 (31); 5156 (9); 7883 (57); 7969 (26).

GINES 4919 (4).

HAUGHT 3082 (39). HITCHCOCK 21127 (53); 21801 (14); 21833 (59).

JIMÉNEZ 3049 (16).

KILLIP & A. C. SMITH 22954 (13); 23205 (13); 23411 (13); 24080 (11); 24640 (17); 25271 (1); 25287 (9); 25472 (9); 25479 (43); 26207 (9); 26447 (18); 26768 (20); 27842 (18); 27993 (4); 28040 (37); 28093 (46); 28829 (4); 28967 (24); 29549 (13); 30208 (19). KLUG 667 (13); 1653 (51); 2612 (48); 2616 (49); 2617 (32); 2671 (23); 3020 (28); 3478 (13); 4083 (30); 4117 (32); 4380 (44).

LIMA, MUS. NAT. UNIV. 123 (28).

MACBRIDE 4634 (9); 4665 (20); 5056 (13). MARTIUS s. n. (19). MATHEWS 1221 (13); 1230 (2); 2013 (13); 3168 (13). MATUDA 128 (58). MELIN 134 (38); 349 (13); 356 (38); 368 (13). MEXIA 6189 (41).

PEARCE s. n. (15); s. n. (40). PENNELL 3798 (4). PITTIER, H. 6527 (4).

RENSON 112 (58). RODRIGUEZ s. n. (18). RUIZ & PAVÓN s. n. (7); s. n. (9); s. n. (12).

SANDEMAN 3289 (52). SCHULTES, R. E., 6607 (6a); 6937 (6b). SCHUNKE 1758 (13). SKUTCH 4498 (21); 4500 (56). SOUKUP 819 (13); 2282 (13); 4375 (43); 4376 (13). SPRUCE s. n. (38). STEYER-MARK 54127 (10). STORK, HORTON & VARGAS 10492 (13).

TESSMANN 3134 (3); 3874 (41); 3874a (41); 3880 (45); 5423 (3). TONDUZ & ROJAS 165 (58). TRIANA s. n. (51).

ULE 6286 (45); 6401 (29); 6820 (55).

VAN HERMANN 2700 (16). VARGAS 2131 (13); 3240 (13). VELARDE 4816 (9). VELASCO 8985 (58). VÉLEZ 3230 (16).

WILLIAMS, L., 380 (20); 1906 (13); 2616 (45); 2880 (20); 3622 (52); 5143 (20); 5248 (45); 6018 (25); 6264 (45); 6933 (13); 7215 (33); 7701 (33). WILLIAMS, R. S., 659 (4). WOYTKOWSKI 5794 (1); 34359 (36); 34427 (42); 34472 (36). WURDACK 1909 (41).

Suessenguthia Merxm.

Mitteil. Bot. Staatss. München [1], Heft 6: 178, *pl.* 1953.

Characters of *Sanchezia*, but 4 fertile stamens. A single species.

1. *Suessenguthia trochilophila* Merxm. l. c.

Sanchezia peruviana sensu Rusby, Bull. New York Bot. Gard. 4: 429. 1907, in part, as to *Bang* 2367, not as to basonym; sensu Leonard, Journ. Washington Acad. Sci. 16: 487. 1926, in part, as to *Buchtien* 1403 and *Bang* 2367, not as to basonym.

BOLIVIA: BENI: Rurrenabaque, 300 m, November 1921, *Rusby* 850 (NY, US). LA PAZ: Wet sand near river, in shade, near Coroico, Yungas, August 2, 1894, *Bang* 2367 (GH, NY, US, paratype number of *Suessenguthia trochilophila*). Guanai, 600 m, May 1886, *Rusby* 1119 (US). Woods, San Carlos, Mapiri, 700 m, August 1907, *Buchtien* 1403 (NY, US). San Bartolome (near Calisaya), basin of Río Bopi, Prov. S. Yungas, 750-900 m, July 1929, *Krukoff* 10186 (US). Asunta (near Evenay), Prov. S. Yungas, 690-750 m, July 1939, *Krukoff* 10585 (US).

For distinguishing imperfect material see key to *Sanchezia*.

Trichosanchezia Mildbr.

Notizblatt 9: 984. 1926.

Characters of *Sanchezia*, but 4 fertile unappendaged stamens. A single species.

1. *Trichosanchezia chrysothrix* Mildbr. l. c.

PERU: AMAZONAS: Brookbank in forest, mouth of the Río Santiago, upper Río Marañon, 160 m, September 11, 1924, *Tessmann* 4011 (B, type).

For distinguishing imperfect material see key to *Sanchezia*.

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UNITED STATES NATIONAL MUSEUM, WASHINGTON



Leonard, E C and Smith, Lyman B. 1964. "Sanchezia and related American Acanthaceae." *Rhodora* 66, 313–343.

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