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A TENTATIVE KEY TO THE SOUTH AMERICAN SPECIES OF ABUTILON, MILLER

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The characterizations in this key are based, whenever possible, upon examination of herbarium specimens and (or) photographs of types, but, for many of the species, published descriptions were the only available source of information. In such cases, especially, the characterizations are subject to correction. Juxtaposition of species in this purely artificial key does not necessarily imply close relationship. The segregate genera *Bakeridesia* Hochr., *Bogenhardia* Reichenb. (*Gayoides* Small) and *Corynabutilon* (K. Schum.) Kearney are not included. This is, perhaps, the most difficult of the genera of *Malvaceae,* an "umfangreiche und schwierige Gattung," as Garcke characterized it in a paper (Bot. Jahrb. 15:480–491) devoted mainly to a criticism of Schumann's treatment of the genus in Flora Brasiliensis (12^3: 364–437). Note 1.

1. Calyx inflated (more or less utricular), the lobes not (seldom?) more (often much less) than ½ as long as the tube. Leaves truncate or cordate at base; flowers solitary, on long, very slender peduncles; petals (20) 30–40 mm. long, narrow; androecium more or less exserted; carpels 5 or 6, pluriovulate. Note 2. (2).

1. Calyx otherwise, if somewhat inflated (in *A. thyrsodendron*), then deeply cleft (3).

2. Leaves rarely slightly 3-lobed, elongate-deltoid or ovate-oblong, rather finely serrate or dentate; petals pale yellow; mature fruit unknown. Calyx commonly red or brown. Southern Brazil.....
.....*A. megapotamicum* (Spreng.) St. Hil. & Naud.

2. Leaves distinctly 3–5-lobed, broadly ovate, irregularly and coarsely serrate; petals drying pink; carpels muticous, villous, about 15 mm. long. Southern Brazil.....*A. inflatum* Garcke & K. Schum. Note 3

3. Flowers relatively large, the petals 25 mm. or longer (4).

3. Flowers smaller, the petals less than 25 mm. long (45).

4. Leaves peltate. Plants shrubby or arborescent; calyx cleft about ⅔, the lobes deltoid-lanceolate, acuminate; petals about 35 mm. long; carpels 8, ⅗–⅘ as long as the calyx, pluriovulate, hirsute, muticous or slightly apiculate (5).

(†) This is the second paper dealing with the taxonomy of *Malvaceae* to be published with aid from the T. H. Kearney Memorial Fund of the California Academy of Sciences. The first dealt with South American *Hibiscus* and was published in this journal last year (8: 161–168).—J. T. H.

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4. Leaves not peltate but sometimes appearing so when deeply cordate and with overlapping basal lobes (6).
5. Blades not lobed, rounded at base, the margins subentire; petals pale yellow. Brazil (Minas Geraës).....*A. peltatum* K. Schum.
5. Blades distinctly 3-lobed, cordate at base, the margins conspicuously dentate; petal color not described. Brazil (Rio de Janeiro).....
.....*A. fluviatile* (Vell.) K. Schum.
6. Leaves conspicuously and often deeply lobed above the base. Carpels pluriovulate (7).
6. Leaves (except sometimes in *A. Bedfordianum, A. insigne,* and *A. Sellowianum*) not conspicuously although sometimes very shallowly lobed (13).
7. Petals white, strongly veined, 25–35 mm. long, suborbicular, abruptly long-clawed. Flowers subcorymbosely clustered at ends of the stems and branches; androecium nearly equalling the petals; carpels about 10, muticous or nearly so, 12–16 mm. long. Argentina.....
.....*A. niveum* Griseb.
7. Petals not white (8).
8. Calyx cleft nearly to the base, the lobes lanceolate, attenuate-acuminate. Petals yellow or red, conspicuously veined (9).
8. Calyx less deeply cleft or the lobes broader (10).
9. Herbage glabrous or nearly so; leaves cleft nearly to the base, the lobes narrow; petals 35–55 mm. long; carpels about 13 in number, 17–18 mm. long, not more than ½ as long as the calyx, rounded and muticous at apex. Southern Brazil, cultivated elsewhere in South America.
.....*A. venosum* Lem. Note 4
9. Herbage more or less tomentose when young; leaves less deeply cleft and the lobes broader; petals 22–25 (40?) mm. long; carpels 8, the mature fruit unknown. Southern Brazil.....*A. Darwinii* Hook. f.
10. Stems and leaves glabrous or glabrescent. Flowers axillary, long-pedunculate, more or less nutant; petals 25–40 mm. long, deep yellow with conspicuous reddish veins; androecium often conspicuously exserted; carpels about 11, 7–9-ovulate. Colombia, Peru, Brazil, Uruguay, Argentina; North America, where probably only an escape from cultivation.....*A. striatum* Dicks. Note 5
10. Stems and leaves more or less tomentose, at least when young (11).
11. Carpels 10, with 9–11 ovules; petals 45–55 mm. long, red. Leaves discolorous, whitish-velutinous beneath; androecium exserted; mature fruit unknown. Brazil (Santa Catarina).....
.....*A. Muelleri-Friderici* Gürke & Schum. Note 6
11. Carpels more numerous, with 4–6 ovules; petals 35–45 mm. long (12).
12. Plants up to 1 m. high; peduncles up to 8 cm. long; calyx coarsely papillate, strongly nerved; petals orange-yellow; carpels about ½ as long as the calyx. Brazil (Minas Geraës, São Paulo).....
.....*A. Regnellii* Miq. Note 7
12. Plants up to 4 m. high; peduncles up to 15 cm. long; calyx not papillate, obscurely nerved; petals violet (?); carpels about ¾ as long as the calyx. Brazil (Minas Geraës).....*A. pedrae-brancae* K. Schum.

13. Leaves distinctly to conspicuously asymmetric (oblique at base), ½–⅔ as wide as long. Carpels plurioculate (14).

13. Leaves (so far as is known except sometimes in *A. geminiflorum, A. Mouraei, A. Schenckii,* and perhaps, *A. insigne)* symmetric or nearly so (18).

14. Corolla 25–30 mm. long (15).

14. Corolla 35–40 mm. long (17).

15. Petals becoming reflexed; leaves subsessile, with the deeply cordate base amplexicaul, discolorous. Flowers solitary, nodding, the peduncles long and slender; calyx campanulate, cleft about ½ way, the lobes lanceolate; petals pink, oblanceolate; carpels about 16, pluriovulate(?); mature fruit unknown. Peru.....*A. piurense* Ulbr. Note 8

15. Petals not becoming reflexed; leaves distinctly petiolate (16).

16. Flowers in several-flowered axillary racemes; leaves cordate at base; petals probably yellow, with red veins. Southern Brazil..... .....*A. appendiculatum* K. Schum. Note 9

16. Flowers solitary or geminate in the axils; leaves obliquely subcordate at base, crenate or serrulate; petals yellow or yellowish, drying pink. Carpels numerous, rounded at apex, muticous, somewhat inflated. Colombia, Venezuela.....*A. Woronovii* Ulbr. Note 10

17. Leaves truncate or subcordate at base; calyx 5-ribbed and somewhat winged at base; petals white. Southern Brazil..*A. inaequale* K. Schum.

17. Leaves cordate at base, sharply attenuate-acuminate; calyx 10-nerved; petals presumably purple. Peduncles very slender; fruit truncate, the carpels about 10, slightly apiculate. Brazil.....*A. Glaziovii* K. Schum.

18. Petals becoming more or less reflexed. Carpels pauciovulate (19).

18. Petals (so far as is known) not becoming reflexed (23).

19. Inflorescence a terminal raceme. Peduncles subtended by long, tricuspidate bracts; calyx not at all angulate, rounded at base; petals 26–28 mm. long, ⅓ as wide, ochroleucous with a purple basal spot; androecium about equalling the petals, the stamens in 5 fascicles; ovary constricted at the middle; carpels about 13, described as uniovulate; mature fruit unknown. Colombia..... .....*A. oxypetalum* Planch. & Lind. Note 11

19. Inflorescence otherwise. Carpels with 2 or 3 ovules (20).

20. Corolla brick-red, 35–40 mm. long. Leaves coarsely crenate-dentate, suborbicular, deeply cordate, abruptly short-acuminate, nearly concolorous except when young; flowers long-pedunculate, subnutant; petals about ⅓ as wide as long; carpels very numerous, thin, conspicuously cuspidate, less than ½ as long as the calyx, separating at maturity. Peru.....*A. lateritium* Ulbr.

20. Corolla yellow or purple (21).

21. Peduncles shorter than to little-surpassing the subtending leaves; staminal-tube densely white-lanate at base; petals about 30 mm. long, obovate, pale yellow when dry. Leaves short-petiolate; carpels numerous, about ½ as long as the calyx, obliquely acute, tomentose. Ecuador..... .....*A. pubistamineum* Ulbr.

21. Peduncles mostly greatly surpassing the subtending leaves; stamen-tube glabrous; petals narrowly spatulate, not more than 1/6 as wide as long, purple. Carpels villous (22).

22. Stems with long, slender, spreading or reflexed, presumably simple hairs; peduncles up to 20 cm. long, filiform; carpels about 20, aristate. Colombia (?) and Ecuador or Peru.....*A. pedunculare* H.B.K.

22. Stems otherwise pubescent, the hairs usually all short and mostly stellate; peduncles up to 12 cm. long, slender but not filiform; carpels 12–14, with a short, oblique beak. Petals about 35 mm. long. Peru.....*A. reflexum* (Juss. ex Cav.) Sweet

23. Calyx tubular or tubular-campanulate, cleft not more than about 1/3-way from the apex. Leaves attenuate-acuminate (24).

23. Calyx campanulate, usually more deeply cleft (25).

24. Leaves lanceolate, about 1/6 as wide as long, denticulate to subentire, cuneate or truncate at base; carpels pluriovulate; petals, when dry, purple with darker veins, 30–40 mm. long. Androecium as long as or longer than the petals; carpels 9, muticous, about 17 mm. long. Brazil (Minas Geraës).....*A. longifolium* K. Schum.

24. Leaves ovate or deltoid-ovate, 1/3 to nearly as wide as long, crenate or crenate-serrate, cordate at base; carpels pauciovulate; petals white, with red or purple veins, 40–50 mm. long. Plants shrubby, up to 1 m. high; herbage ferruginous-pubescent; leaves (the lower ones) 3-lobed; flowers pendulous; mature fruit unknown. Venezuela.....*A. insigne* Planch.

25. Width of the leaf-blades (except sometimes in *A. elegans, A. Schenckii,* and *A. sylvaticum)* not more and commonly less than 2/3 of the length (26).

25. Width of the leaf-blades (except sometimes in *A. peruvianum*?) seldom less and usually more than 2/3 of the length (33).

26. Petals yellow or whitish. Leaves attenuate-acuminate; flowers 1–3 in the axils (27).

26. Petals (in *A. amoenum*?, *A. elegans*?) pink, red, purple, or purple-veined. Carpels pluriovulate (29).

27. Leaf-bases distinctly cordate. Plants shrubby, up to 3 m. high; petals 35 (-40?) mm. long, more than 2/3 as wide; carpels 9–16, pluriovulate, somewhat inflated, muticous or nearly so, about 15 mm. long, tomentose dorsally. Peru, Bolivia....*A. sylvaticum* (Cav.) K. Schum. Note 12

27. Leaf-bases truncate, rounded or subcordate (28).

28. Corolla ochroleucous, 25–30 mm. long; leaf-margins serrate; petioles 1/5–1/3 as long as the blades; carpels pluriovulate, about 13 in number, obtuse. Brazil (Rio de Janeiro).....*A. Schenckii* K. Schum. Note 13

28. Corolla orange-yellow, 30–35 mm. long; leaf-margins entire; petioles not more than 1/6 as long as the blade; carpels pauciovulate. Leaves narrowly ovate or subrhombic, less than 1/2 as wide as long, long-attenuate-acuminate, rounded or subcordate at base; peduncles up to 4 cm. long; androecium about 1/2 as long as the petals; mature fruit unknown. Colombia .. ..*A. Goudotianum* Tr. & Planch.

29. Leaves seldom more than ⅓ (usually 1/6–¼) as wide as long, elliptic or elliptic-lanceolate. Pubescence usually ferruginous, especially on the leaf-nerves; carpels about 15, rounded at apex, muticous, 10–12 mm. long, shorter than the calyx. Brazil.....*A. rufinerve* St. Hil. Note 14

29. Leaves ½–⅔ or more as wide as long (30).

30. Calyx 20–25 mm. long (31).

30. Calyx 30–35 mm. long (32).

31. Petals dull pink, the short claws pale yellow; carpels about 13 mm. long, about ½ as long as the calyx, muticous. Leaves sometimes distinctly 3-lobed, somewhat discolorous. Southern Brazil.....
.....*A. Sellowianum* (Klotzsch) Regel. Note 15

31. Petals purple; carpels 20–22 mm. long, about equalling the calyx, obtuse. Leaves more or less abruptly narrowed from the middle. Brazil (Minas Geraës).....*A. montanum* St. Hil.

32. Carpels 12; petals broadly obovate. Southern Brazil.....
.....*A. amoenum* K. Schum.

32. Carpels 8; petals elliptic. Brazil (Rio de Janeiro, Minas Geraës).....
.....*A. elegans* St. Hil.

33. Leaf-margins entire. Plants shrubby or arborescent; leaves suborbicular, shallowly cordate with an open sinus, shortly acuminate; petals up to 45 mm. long, slightly 2-lobed, deep yellow; androecium about ⅓ as long as the petals; carpels pauciovulate; mature fruit unknown. Colombia, Venezuela.....*A. integerrimum* (Hook.) Turcz. Note 16

33. Leaf-margins crenulate, crenate, or serrate, sometimes obscurely so (34).

34. Flowers mostly in paniculate or subcorymbose terminal inflorescences (35).

34. Flowers 1–3 in the axils (38).

35. Calyx externally rugose and densely woolly; petals dark- or violet-purple, up to 50 mm. long; stipules small, subulate, caducous. Leaves broadly ovate or suborbicular, deeply cordate, crenate or crenulate, strongly discolorous; flowers mostly in small, subcorymbose, terminal clusters; carpels muticous, 14 mm. long, about ½ as long as the calyx, pluriovulate. Brazil.....*A. macranthum* St. Hil. Note 17

35. Calyx otherwise; petals (in *A. cyclonervosum*?) yellow; stipules large, more or less persistent (36).

36. Leaves nearly concolorous; petals about 45 mm. long, the color unknown. Carpels 14–16, pluriovulate; mature fruit unknown. Bolivia.....
.....*A. cyclonervosum* Hochr.

36. Leaves more or less discolorous; petals not more than 40 mm. long. Leaves sometimes shallowly 3-lobed; carpels muticous or nearly so, very pubescent (37).

37. Calyx about 25 mm. long, cleft about ⅔ of its length; petals 30–40 mm. long, conspicuously veined, contracted into a rather long claw; carpels pauciovulate, 15–20 mm. long. Leaf-margins crenate-dentate; stipules deltoid; androecium slightly longer than the petals. Bolivia.....
.....*A. Bakeri* Rusby. Note 18

37. Calyx about 18 mm. long; petals 25–30 mm. long, yellow, not (?) conspicuously veined; carpels pluriovulate. Brazil (Matto Grosso).....*A. Malmeanum* R. E. Fries

38. Petals blood-red, 30–35 mm. long, 1/5–1/4 as wide. Shrub about 3 m. high; stems hirsute with long, simple, retrorse hairs and also tomentulose; leaves up to 16 cm. long and 3/4 as wide as long, deeply cordate with a closed sinus so as to appear peltate, acuminate, sparsely denticulate to subentire, discolorous; peduncles slender, much surpassing the subtending leaves, up to 18 cm. long; carpels about 20 mm. long, about 2/3 as long as the calyx, obliquely truncate at apex, pauciovulate. Peru.....*A. pionense* Ulbr. Note 19

38. Petals (in *A. Mouraei*?) otherwise colored, at least 1/2 as wide as long (39).

39. Carpels 25 or more, 1-ovulate or with an additional aborted ovule. Shrub about 1 m. high; leaves up to 5.5 cm. long and nearly as wide as long, finely serrulate, discolorous; stems more or less tomentose and with long, simple hairs; corolla about 30 mm. long, bright yellow with a dark-purple center; mature fruit unknown. Northeastern Brazil.....*A. monospermum* K. Schum.

39. Carpels (in *A. longipes*?) fewer, normally pluriovulate (40).

40. Corolla rose-pink. Lower leaves obscurely trilobate; mature fruit unknown. Northern Argentina.....*A. jujuiense* Hassler

40. Corolla (in *A. Mouraei*?) yellow or ochroleucous, sometimes conspicuously red-veined (41).

41. Stipules narrow, seldom more than 1.5 mm. wide at base; carpels 8–14 (42).

41. Stipules broader, about 2.5 mm. wide at base, becoming reflexed; carpels (in *A. longipes*?) 12 or more. Leaves usually discolorous; calyx usually cleft to below the middle, the lobes lanceolate or ovate-lanceolate, acuminate; petals (30?) 35–40 mm. long, pale yellow or whitish (44).

42. Stems with longish simple hairs, also tomentellous; leaves strongly discolorous. Petals up to 40 mm. long, abruptly contracted into a rather long claw, the color unknown; mature fruit unknown. Southern Brazil.....*A. Mouraei* K. Schum.

42. Stems glabrous or puberulent, without long hairs; leaves (except in *A. Bedfordianum* var. *discolor)* nearly concolorous (43).

43. Petals 30–35 mm. long, 3/5–2/3 as wide as long, yellow with conspicuous red or purple veins; carpels 8–10 in number, 12–15 mm. long, nearly as long as the calyx. Southern Brazil.....*A. Bedfordianum* (Hook.) St. Hil. & Naud. Note 20

43. Petals up to 50 mm. long, about 1/2 as wide as long, pale yellow (?); carpels about 13, the mature fruit apparently unknown. Venezuela.....*A. geminiflorum* H.B.K. Note 21

44. Peduncles shorter than the subtending leaves; blades crenate. Ecuador (?), Peru, Bolivia.....**A. peruvianum** (Lam.) Kearney. Note 22

44. Peduncles longer than the subtending leaves, up to 16 cm. long; blades denticulate. Peru.....*A. longipes* Ulbr. Note 23

45. Petals 15 mm. or longer (46).

45. Petals not more, usually less than 15 mm. long (62).

46. Leaves conspicuously lobed. Flowers nutant, 1–3 in the axils; petals 22–25 mm. long, yellow outside, pink within and with purple veins and basal spot; carpels 8, pluriovulate; mature fruit unknown. Southern Brazil.....*A. Darwinii* Hook. f.
46. Leaves not lobed, or shallowly and inconspicuously trilobate (47).
47. Flowers in paniculate, corymbiform, or umbelliform inflorescences. Carpels pauciovulate (48).
47. Flowers mostly solitary or binate (exceptionally ternate) in the axils, but the inflorescences sometimes subpaniculate or subcorymbose by the development of accessory, axillary branchlets (52).
48. Ovules not in a vertical series, the 2 upper ones collateral and the lower one solitary, as in *Wissadula*. Plants shrubby or arborescent, up to 10 m. high; stems terete; stipules broad, very caducous; leaves up to 11 cm. long, attenuate-acuminate; flowers in an ample, open panicle; calyx angulate, tomentose, accrescent and becoming somewhat inflated; petals 15–18 mm. long and about ⅔ as wide; carpels 4–6, shorter than the calyx, obovoid-trigonous, thin-walled, inflated. Bolivia and northwestern Argentina...*A. thyrsodendron* Griseb. Note 24
48. Ovules (so far as is known) all in one vertical series (49).
49. Corolla white tinged with purple, about 20 mm. long; style-branches slightly enlarged toward apex, these and the capitate stigmas dark-purple. Plants shrubby; leaves ⅔ to nearly as wide as long, deeply cordate with a closed sinus, subcrenulate to coarsely serrate, moderately discolorous; inflorescences corymbiform-paniculate; carpels 9 (–15?), rounded at apex, about 9 mm. long. Bolivia.....*A. fusicalyx* Ulbr. Note 25
49. Corolla yellow to deep orange, sometimes tinged with or fading pink; styles and stigmas otherwise (50).
50. Inflorescences subtended by long, narrow, stipule-like bracts, subcapitate-umbelliform. Plants herbaceous or suffrutescent; stems yellowish-tomentellous and with long, very fine, simple hairs below the inflorescence; leaves strongly discolorous, long-petiolate, deltoid-ovate or oblong-ovate, cordate, coarsely crenate-serrate, sometimes slightly trilobate; petals 15–20 mm. long, yellow (?) when fresh, drying red or pink; carpels about 10, trigonous, obtuse and muticous. Southern Brazil, Uruguay, and northern Argentina.....*A. malachroides* St. Hil. & Naud. Note 26
50. Inflorescences not so subtended (51).
51. Carpels 13 or fewer; stems usually more or less hirsute with very long, spreading, simple hairs in addition to other pubescence. Leaves commonly about as wide as long; flowers in relatively short, axillary and terminal umbelliform clusters; carpels muticous or nearly so, conspicuously and densely hirsute. Southern Brazil, Paraguay, northern Argentina.....*A. umbelliflorum* St. Hil. Note 27
51. Carpels about 20; stems not conspicuously hirsute, the simple hairs, if any, much shorter. Petioles up to 12 cm. long; leaf-nerves 11–13; petals 15–18 mm. long, not more than ⅓ as wide, yellow; calyx in fruit 8–10 mm. long; carpels 9–12 mm. long, but the fruit much sur-

passing the somewhat explanate calyx. Colombia, Ecuador.....
.....*A. ibarrense* H.B.K.

52. Fruit of numerous (commonly about 20) thin-walled carpels (53).
52. Fruit of 12 or fewer carpels (55).
53. Petals narrow, purple; carpels aristate, ½ as long as the calyx, without (?) attaching threads, pluriovulate. Peduncles mostly greatly surpassing the subtending leaves, up to 20 cm. long, very slender. Colombia (?), Ecuador (?), Peru.....*A. pedunculare* H.B.K.
53. Petals broad, orange- or tawny-yellow with a dark basal spot; carpels muticous or apiculate, nearly as long as to longer than the calyx with attaching threads, pauciovulate. Stems usually with long, spreading, simple hairs in addition to other pubescence. Old World species, introduced in South America (54).
54. Herbage more or less glandular; petals 15–20 mm. long. Venezuela, Peru, and probably elsewhere in South America.....
.....*A. hirtum* (Lam.) Sweet. Note 28
54. Herbage not glandular; petals usually less than 15 mm. long. Leaves often coarsely dentate. Colombia, Guiana, Peru, Brazil.....
.....*A. indicum* (L.) Sweet
55. Petals (so far as is known) pink, red, or purple, at least when dry (56).
55. Petals yellow. Leaves velutinous, broadly ovate or suborbicular (60).
56. Petioles relatively short, usually less than 5 cm. long. Leaves ½–⅔ as wide as long; flowers axillary (often geminate) and in small terminal clusters; androecium aboutt ⅔ as long as the corolla; carpels about 10, pluriovulate, 10–15 mm. long, short-beaked or muticous. Brazil.
.....*A. esculentum* St. Hil. Note 29
56. Petioles elongate, 5–15 cm. long (57).
57. Leaf-bases truncate-subcuneate. Plants arborescent-shrubby, up to 6 m. high; leaves ¾ as wide as long; flowers 2–4 in the upper axils and in subglobose, umbelliform, terminal clusters; androecium about ¼ as long as the dark-maroon petals; carpels 10–12, pluriovulate; mature fruit unknown. Brazil (Minas Geraës).....*A. Mexiae* R. E. Fries
57. Leaf-bases cordate (58).
58. Carpels 7, pauciovulate. Mature fruit unknown. Brazil.....
.....*A. minarum* K. Schum.
58. Carpels more numerous, pluriovulate (59).
59. Petioles mostly longer than the blades, these long-acuminate, sharply dentate. Carpels 10–11 mm. long, apiculate or cuspidate. Colombia.
.....*A. petiolare* H.B.K.
59. Petioles shorter than the blades, these shortly acuminate. Stems apparently without long, simple hairs; leaves finely dentate, with very numerous teeth; petals pink; carpels slightly to considerably longer than the calyx. Brazil (Rio de Janeiro).....
.....*A. carneum* St. Hil. Note 30
60. Carpels pauciovulate; petals less than 15 mm. long. Otherwise similar to *A. molle*. Eastern Peru.....*A. mollissimum* (Cav.) Sweet. Note 31
60. Carpels pluriovulate; petals 15–20 mm. long. Stems with long, spreading, simple hairs in addition to other pubescence (61).

61. Leaves seldom strongly discolorous; flowers often geminate. Southern Brazil, Argentina.....*A. molle* (Ortega) Sweet. Note 32

61. Leaves strongly discolorous; flowers always solitary. Plants suffruticose, rarely shrubby; leaves mostly short-acuminate, often slightly 3-lobed. Southern Brazil, Paraguay, Uruguay, Argentina.....
.....*A. pauciflorum* St. Hil. Note 33

62. Carpels 12 or more (63).

62. Carpels (except sometimes in *A. abutiloides, A. giganteum,* and perhaps *A. arequipense*) 10 or fewer, pauciovulate (67).

63. Flowers in more or less umbelliform inflorescences. Leaves more or less discolorous; carpels pauciovulate (64).

63. Flowers solitary in the axils but sometimes paniculately aggregated at ends of the stem and branches (66).

64. Inflorescences corymbiform, more or less subtended by narrow, stipule-like bracts; leaves oblong or oblong-lanceolate, up to 9 cm. long, ⅕–⅓ as wide as long; corolla yellow. Carpels 12–15 in number, 6–7 mm. long. Southern Brazil, Paraguay?, Uruguay?, Argentina.....
.....*A. affine* (Spreng.) G. Don. Note 34

64. Inflorescences not so subtended; leaves broader; corolla orange (65).

65. Stamen-tube stellate-hirsute; carpels nearly as long as the calyx. See first paragraph 51.....*A. umbelliflorum* St. Hil.

65. Stamen-tube glabrous; carpels considerably shorter than the calyx. Petioles up to 6.5 cm. long; leaf-nerves 9; petals 11 mm. long, nearly as wide, orange with darker veins; calyx 1.3–2 mm. long; Venezuela.
.....*A. cuspidatum* Pittier

66. Calyx very accrescent and enclosing the fruit, 20–25 mm. long at maturity, plicate-alate, cleft nearly to the base, the lobes suborbicular, deeply cordate, abruptly short-acuminate. Herbage densely soft-velutinous, with simple and stellate longish, spreading hairs; leaves ovate or ovate-lanceolate, up to 8 cm. long, ½–⅔ as wide, tapering from near base to apex, rather coarsely crenate; flowers solitary in the axils, the peduncles mostly shorter than the leaves; petals little if at all surpassing the calyx; carpels very numerous, pluriovulate, thin, 10–15 mm. long, aristate, villous, nigrescent. Paraguay and northern Argentina.....*A. Hassleranum* Hochr. Note 35

66. Calyx otherwise. Plants perennial (?); petals pure white, 12–15 mm. long, becoming reflexed; carpels pauciovulate, spreading at maturity, cuspidate; stems with rather long, spreading or reflexed, simple hairs; leaves up to 10 cm. long, ¾–⅘ as wide, deeply cordate, rather abruptly acuminate, denticulate or subentire; androecium about ½ as long as the petals. Ecuador.....*A. multiflorum* R. E. Fries

67. Petals becoming reflexed (68).

67. Petals (so far as is known) not becoming reflexed, mostly yellow or yellowish, sometimes fading pink (70).

68. Petals suborbicular, violet; flowers axillary, solitary, long-pedunculate. Leaves 2–4.5 cm. long, oblong or ovate-oblong, shallowly cordate, crenulate, soft-tomentose on both surfaces; stems shortly stellulate-pubescent (sublepidote); stamen-tube densely pilose below the fila-

ments; style-branches filiform, slightly thickened toward apex, these and the small stigmas dark-violet; carpels 9–10, obtuse, 2-seeded. Peru.....*A. arequipense* Ulbr.

68. Petals narrower, yellow or whitish; flowers in an open, terminal, often nearly naked panicle (69).

69. Carpels 8–14 (16?), more or less aristate (exceptionally muticous and rounded or truncate at apex), 10–15 mm. long, villous; petals obovate-oblong, 9–15 mm. long, about ½ (?) as wide as long, often with a purple basal spot. Plants shrubby or arborescent; herbage velutinous, the stems and (or) petioles also with long, spreading, simple hairs; leaves broadly ovate or suborbicular, more or less cordate, sometimes slightly lobed; flower-buds angulate-turbinate; corolla often with a red or purple center. Venezuela to Peru; North America.....
.....*A. giganteum* (Jacq.) Sweet. Note 36

69. Carpels 7–9 (12?), truncate and muticous or very nearly so at apex, 7–8 mm. long; petals narrowly oblong, 7 mm. long, about ⅓ as wide. Colombia and Venezuela.....*A. stenopetalum* Garcke

70. Ovules not in a vertical series, the 2 upper ones collateral, the lower one solitary, as in *Wissadula* (71).

70. Ovules (so far as is known) all in one vertical series (73).

71. Petals 6–9 mm. long; flowers very numerous, in a nearly leafless terminal panicle. Plants shrubby (or herbaceous?); stems trigonous and deeply sulcate above; leaves up to 18 cm. long, obtuse to short-acuminate; calyx globose in bud; carpels 6–7, about twice the length of the calyx, 7–8 mm. long, mucronulate to cuspidate. Brazil, Paraguay.....
.....*A. ramiflorum* St. Hil.

71. Petals 12–15 mm. long; inflorescence otherwise (72).

72. Plants arborescent; flower-buds globose, rounded at base; carpels 6–8, long-rostrate, 1½ times as long as the calyx. Stems minutely stellate-pubescent, sometimes also with long, simple hairs; leaves thin, discolorous, acuminate at apex, prominently reticulate beneath, up to 16 cm. long; stamen-tube, fruit, and seeds white-pilose. Brazil.....
.....*A. itatiaiae* R. E. Fries

72. Plants shrubby; flower-buds angulate, carpels 5, the mature fruit unknown. Leaves 2–4 cm. long, suborbicular, shortly acuminate, irregularly and coarsely dentate, sometimes slightly 3-lobed; flowers pendulous; calyx alate-pentagonous, cleft nearly to the base, the lobes cordate; petals 12–14 mm. long. Bolivia.....
.....*A. Herzogianum* R. E. Fries

73. Flowers mostly in corymbiform, umbelliform, racemiform, or paniculate inflorescences (74).

73. Flowers mostly solitary in the axils but sometimes also more or less aggregated apically or in small axillary clusters or (in *A. divaricatum*) the inflorescence sometimes subpaniculate (79).

74. Carpels 5; petals not more than 8 mm. long (75).

74. Carpels (except sometimes in *A. umbellatum*) more than 5; petals (except sometimes in *A. umbellatum*) more than 8 mm. long (77).

75. Stems stellate-tomentellous below the inflorescence; leaves somewhat discolorous, persistently (?) softly-stellate-tomentose on both surfaces. Calyx in fruit about 8 mm. long, nearly equalling the aristate carpels. Brazil.....*A. aristulosum* K. Schum.

75. Stems stellulate-puberulent below the inflorescence; leaves nearly concolorous (76).

76. Carpel-body about 4 mm. long, the awns 2.5–3 mm. long. Bolivia.....*A. benense* (Britton) Baker f. Note 37

76. Carpel-body 6 mm. long, the awns 5 mm. long. Paraguay.....*A. Balansae* (Hassler) Hassler. Note 38

77. Inflorescences becoming loosely racemose, up to 20 cm. long but usually shorter; carpels very obtuse, muticous, silky-villous, about 9 in number, 8–10 mm. long. Leaves deltoid-ovate, cordate, crenate, up to 4 cm. long, ½ to equally as wide as long. Brazil, Uruguay, Argentina. .....*A. terminale* (Cav.) St. Hil.

77. Inflorescences otherwise; carpels cuspidate or aristate (78).

78. Flowers axillary and also racemosely or subcorymbosely clustered at ends of more or less elongate axillary branchlets, the inflorescence, when well developed, a very open, leafy panicle. Stems not conspicuously hirsute, the simple hairs, if any, relatively short; leaves commonly longer than wide; petals 10–15 mm. long; carpels conspicuously beaked, rather finely tomentose. Colombia; North America.....*A. abutiloides* (Jacq.) Garcke. Note 39

78. Flowers mostly in small corymbiform or subumbellate clusters at ends of the stem and axillary branchlets. Leaves sometimes shallowly trilobate; calyx hirsute; petals 8–10 mm. long; carpels 5–7, aristate, 6–8 (9?) mm. long. Venezuela and Colombia to Peru and Bolivia.....*A. umbellatum* (L.) Sweet. Note 40

79. Stipules 13–15 mm. long, about ⅓ as wide at the unequally auriculate base. Petals 10–13 mm. long, deep yellow; carpels about 10, apiculate, 1½–2 times as long as the calyx. Venezuela, Colombia, Peru, Brazil, introduced from the Old World....*A. auritum* (Wall. ex Link) Sweet

79. Stipules narrower and mostly shorter, not auriculate (80).

80. Carpels biovulate. Stems with few or numerous long, simple hairs in addition to other pubescence; leaves broadly ovate, deeply cordate, sharply acuminate, crenulate to rather coarsely dentate; calyx-lobes strongly ribbed; carpels 5 in number, 10–15 mm. long, aristate with erect awns, glandular-pilose as are the herbage and calyx. Ecuador. .....*A. divaricatum* Turcz. Note 41

80. Carpels triovulate, mostly long-cuspidate or aristate (81).

81. Leaves conspicuously asymmetric at base, ovate-oblong, up to 10 cm. long and not more than ½ as wide, rather finely and regularly crenate-serrate. Carpels about equalling the calyx, villous. Brazil.....*A. inaequilaterum* St. Hil.

81. Leaves symmetric or nearly so (82).

82. Blades discolorous, the lower surface much more pubescent than the upper, ovate or ovate-lanceolate, ½ or more times as wide as long, truncate or subcordate at base, sharply long-acuminate, denticulate.

Flowers small; carpels about 8, longer than the calyx. Brazil (Rio de Janeiro).....*A. neovidense* K. Schum. Note 42

82. Blades concolorous or nearly so (83).

83. Carpels commonly 8 or 9, long-cuspidate or aristate; leaves often shallowly 3-lobed. Stems subhirsute or (in var. *tomentosum* K. Schum.) velutinous with stellate hairs, sometimes also with long, simple hairs; flowers often several in the upper axils and the inflorescence becoming a leafy thyrse; fruit mostly considerably surpassing the calyx, more or less septicidal as well as loculicidal. Brazil, Peru, Bolivia, Chile, Argentina.....*A. virgatum* (Cav.) Sweet. Note 43

83. Carpels commonly 5–7; leaves not lobed or very obscurely so (84).

84. Stems tomentellous, without long, simple hairs; leaves shallowly dentate; some of the flowers often subumbellate on accessory branchlets; carpel-awns 1.5–2 mm. long. Galápagos Islands.....
.....*A. Anderssonianum* Garcke. Note 44

84. Stems with or without long simple hairs; leaves deeply dentate; flowers solitary, long-pedunculate; carpel-awns about 1 mm. long. Brazil, Argentina.....*A. saltense* Hassler. Note 45

NOTES

1. The following taxa are too little known for inclusion in this key: *A. Arnottianum* (Gill.) Walp. (Chile), *A. benedictum* Bunb. (Brazil), *A. circinnatum* (Willd.) G. Don (Brazil), *A. densiflorum* Walp. (Chile), *A. eximium* Lind. & Planch. (Venezuela), *A. globiflorum* (Hook.) G. Don, *A. hirsutum* (Vell.) K. Schum. (Brazil), *A. lineatum* (Vell.) K. Schum. (Brazil), *A. pilosum* (Vell.) K. Schum. (Brazil), *A. pyramidale* Turcz. (Colombia). *A. globiflorum* is probably an Old World species, although E. G. Baker (Journ. Bot. 31:271) assigned it to Peru or Chile, where it may have been cultivated. *A. benedictum* may be a *Bakeridesia,* since Baker (ibid.) thought it allied to "*A. rufivellum*" K. Schum., which is *Bakeridesia rufivela* Hochr. *A. quinquelobum* Ulbr. is certainly *Bakeridesia,* being based on the same type collection as is *B. senilis* (K. Schum.) Hochr. *A. scabridum* K. Schum., which Garcke (Bot. Jahrb. 15:408) thought to be the same as *A. truncatum* (Vell.) K. Schum., also should be transferred to *Bakeridesia. A. Weberbaueri* Ulbr., from Peru, is a *Bastardia. A. pulverulentum* Ulbr., from Peru, is a *Sida (S. pulverulenta* (Ulbr.) Kearney). *A. turumiquirense* Steyerm., from Venezuela, seems to be known only by the type collection, without flowers but with old dehiscent fruits. Its identity is uncertain but it does not seem to be an *Abutilon,* the ovule, apparently, being solitary and pendulous. It may represent an undescribed genus.

2. The term pluriovulate, as used in this key, signifies that the number of ovules in each carpel is 4 or more; and the term pauciovulate signifies that the number is not more than 3. Garcke (Bot. Jahrb. 15:483) considered the number of ovules an inconstant and unsatisfactory character, although Schumann in Flora Brasiliensis and most recent authors have used it as the principal basis for grouping the species. In the present artificial key, this character has been subordinated as far as is practicable.

3. Perhaps only a variety of *A. megapotamicum,* with lobed leaves.

4. *A. venosum* Lem. (Fl. Serr. Jard. 2[3]: pl. 5, -1846), although stated to have come originally from Mexico, appears to be the same as *Sida venosa* Hook. (Bot. Mag. 75 : t. 4463, -1849), the latter being the basonym of *Abutilon venosum* (Hook.) Hook. ex Walp.

5. Synonyms: *A. pictum* (Gill.) Walp. and perhaps *A. Thompsoni* André.

6. Apparently very close to *A. senile*, which is a *Bakeridesia*.

7. Synonym: *A. septemlobum* Miq.

8. Ulbrich considered this species related to *A. megapotamicum*, but it differs in several characters. He did not state the number of ovules.

9. Garcke (Bot. Jahrb. 15:484) thought this to be identical with *A. inaequale*, but the descriptions in Fl. Bras. (12[3]:407,408) indicate different plants.

10. A collection from near Caracas *(Pittier 9931)*, determined by Ulbrich as *A. Woronovii* var., was described by the collector as "shrubby, trailing, flowers yellowish white."

11. Schumann stated (Fl. Bras. 12[3]:432) that, although anomalous in the uniovulate carpels, *A. oxypetalum* otherwise agrees with *Abutilon*. It would seem better, however, to transfer it to *Sida*. The constriction of the carpels suggests *Wissadula*, but the carpels are too numerous.

12. See Fl. Bras. 12[3]:418, where the name is spelled *silvaticum*. Cavanilles (Diss. 2:56-57) described his *Sida sylvatica* as having "capsulae 30-36 compressae, muticae, monospermae," which certainly would not apply to the plant described by Schumann, but as Schumann himself pointed out (ibid., Obs.), Cavanilles' illustration (Diss. t. 133 f. 2) corresponds well with the plant described by Schumann. *A. laxum* Rusby is perhaps a synonym. Three subspecies of *A. silvaticum* (sic) were described by R. E. Fries (K. Sv. Vet. Akad. Handl. ser. 3, 24[2]: 7-8). As compared with ssp. *genuinum*, ssp. *Buchtienii* seems to differ chiefly in the more caudate-acuminate calyx-lobes. Ssp. *Klugii* was described as having longer, ferruginous pubescence of the herbage and calyx, leaves less deeply cordate at base, stamens in 5 fascicles, and more numerous carpels.

13. Synonym (?) fide Garcke: *A. falcatum* St. Hil. & Naud., an older name. This was described as having a 9–10-merous ovary and carpels 20 mm. long at maturity.

14. Synonym (?): *A. paeoniflorum* (Hook.) Walp.

15. According to Garcke (Bot. Jahrb. 15:491), *A. Sellowianum* may be synonymous with *A. macrocarpum* St. Hil. & Naud. and *A. macrophyllum* St. Hil. & Naud. These taxa were too briefly and inadequately described to afford certain identification. Photographs of the types in the Paris Herbarium show, in the former, a leaf with 2 rather large, acutish teeth, and in the latter, a leaf with 2 very sharp but very short lateral lobes. The carpels were stated to be 12–15 in *A. macrocarpum*, the ovary polymerous in *A. macrophyllum*, and in both the carpels were described as having more than 4 ovules and muticous. A fruit from the type of *A. macrocarpum* has muticous carpels about ½ as long as the calyx, the latter about 2 cm. long, cleft nearly to the base with triangular-lanceolate, attenuate-acuminate lobes. The calyx of *A. macrophyllum*, as shown in the photograph, seems very similar. Since both photographs show the petals at least twice as long as the calyx, it may be assumed that the corolla is about 40 mm. long. Garcke

(ibid.) suggested that *A. elegans* St. Hil., an older name, may be only varietally distinct from *A. Sellowianum.*

16. This plant is probably a *Bakeridesia,* the carpels being described as "dorso bialatis" (Fl. Bras. 12^3:388). It was not mentioned, however, by Hochreutiner in his synopsis of *Bakeridesia* (Ann. Genève 21:418-421). *A. aurantiacum* Linden is probably a synonym.

17. Synonym: *A. lanatum* Miq., the name under which this species was described in Fl. Bras. (12^3:409).

18. Superficially resembles *A. sylvaticum* but the carpels are 3-ovulate. Rusby described them as "strongly beaked," but they do not appear so in the type specimen.

19. Ulbrich thought this species to be related to *A. reflexum,* but described the petals as spreading, as is evident in the type collection.

20. Leaves discolorous in var. *discolor* K. Schum. In subsp. *discolor* var. *hirsutum* R. E. Fries, the young stems have longish hairs, as in *A. Mouraei,* which may be not specifically distinct from *A. Bedfordianum.* Garcke (Bot. Jahrb. 15:488) thought that *A. montanum* St. Hil. may be an older name for *A. Bedfordianum.*

21. An insufficiently known species. *A. dianthum* Presl may be a synonym. If *Steyermark 55054* was correctly identified as *A. geminiflorum,* the immature carpels are muticous and densely soft-pilose. According to Garcke (ibid. p. 489), this species is scarcely distinguishable from *A. sylvaticum.*

22. **A. peruvianum** (Lam.) Kearney, comb. nov., based on *Sida peruviana* Lam., Encycloped. 1:6 (1783). Synonym: *A. arboreum* of Sweet and later authors, not *Sida arborea* L. f. if the latter was described as having fruits of only 5 carpels and as coming from Africa. (See Cavanilles, Diss. p. 389).

23. Probably at most only a variety of *A. peruvianum.* According to Ulbrich (Bot. Jahrb. 54, Beibl. 117:52), the carpels are 3–5-seeded.

24. Synonym: *A. Lilloi* Hassler (fide A. Krapovickas, personal communication).

25. The styles are slightly enlarged toward apex but the stigmas are capitate and this species certainly does not belong to Schumann's Section *Corynabutilon* (genus *Corynabutilon* Kearney) as Ulbrich thought it did.

26. Synonyms: *A. Flueckigerianum* K. Schum., *A. tacuaremboense* Arech.

27. Synonym: *A. Briquetii* Hochr.

28. Synonym: *A. indicum* var. *hirtum* Griseb. A collection of *A. hirtum* in Peru, by Pavon, was mentioned in Fl. Bras. (12^3:385).

29. Synonyms: *A. purpurascens* K. Schum. but probably not *Sida purpurascens* Link (see Garcke, Bot. Jahrb. 15:489–490). *A. virens* St. Hil. & Naud. may also be a synonym.

30. *A. carneum* was referred by Garcke (Bot. Jahrh. 15:483) to *A. esculentum* St. Hil.

31. Cavanilles' description and illustration of his *Sida mollissima* (Diss. 2:49, t. 14, fig. 1) indicate a plant with very small flowers and triovulate carpels. Garcke (Bot. Jahrb. 15:487, 488) cited as synonyms: *A. calycinum* Presl, *A. sordidum* K. Schum., *A. asiaticum* Griseb. non *Sida asiatica* L., and *Sida cistiflora* L'Hér.

32. *A. molle* (Ortega) Sweet, based on *Sida mollis* Ortega non Rich., is apparently the same as *A. mollissimum* K. Schum. non (Cav.) Sweet, and *A. grandifolium* (Willd.) Sweet.

33. Garcke (ibid. p. 488) referred *A. melanocarpum* St. Hil. & Naud. and *A. pedunculare* Griseb. non H.B.K. to *A. pauciflorum*. Presumably *A. parvifolium* (St. Hil. & Naud.) Hochr. (*A. melanocarpum* var. *parvifolium* St. Hil. & Naud.) and *A. rugulosum* Hochr. are additional synonyms. The corolla of *A. pauciflorum* is always yellow when fresh, although frequently drying pink, fide A. Krapovickas (personal communication). In the related North American *A. Hulseanum* (T. & G.) Torr., the corolla seems to be always white or pink when fresh.

34. Synonym: *A. rivulare* St. Hil. (See Garcke, Bot. Jahrb. 15:484.)

35. Synonym: *A. Johnsonii* Ekman. According to Ingr. A. Krapovickas (personal communication), this very distinct species (*A. Hassleranum*) has an endoglossum under the seeds and in this character represents a transition to the genus *Pseudabutilon,* although otherwise it is very unlike any recognized species of that genus.

36. Synonyms: *A. pseudogiganteum* Steyerm. (and others cited in the key to the North American species, Note 18). Steyermark (Fieldiana 28:362) distinguished *A. pseudogiganteum* from *A. giganteum* as having pubescent seeds, muticous carpels, and corolla without a purple center. The seeds of *A. giganteum* were described in Fl. Bras. (12^3:394) as glabrous, but by Fawcett & Rendle (Fl. Jamaica 5^3:102) as having "short white hairs tuberculate at base", and this seems generally the case in West Indian and Central American specimens. The carpels of *A. giganteum* are usually cuspidate or short-aristate, but in a specimen from Cuba *(Hioram 1270),* they are exactly as described for *A. pseudogiganteum*; and Urban & Helwig (Repert. Sp. Nov. 24:231) mentioned a specimen from Trinidad with carpels rounded and muticous or submuticous. Finally, the purple center of the coralla seems to be occasionally present in *A. giganteum*. The type and 2 other collections of *A. pseudogiganteum,* cited by Steyermark, came from Venezuela.

37. Very like *A. umbellatum* (L.) Sweet and perhaps only a variety thereof.

38. Probably not distinct, as a species, from *A. benense*. The combination was based upon *Wissadula Balansae* Hassler (1907) which R. E. Fries, in his monograph of *Wissadula* (p. 91) concluded to be probably an *Abutilon*. Hassler's name is untenable, however, there being an older *Wissadula Balansae* Baker f. (1893) which Fries (ibid.) identified as a *Briquetia*.

39. Synonyms: see key to the North American species, Note 31 (Leafl. West. Bot. 7:253).

40. According to Cavanilles, the carpels are 6–11. A specimen from Huanuco, Peru *(Macbride 3493,* Chicago Museum No. 534567), very like *A. umbellatum,* has 11 carpels, these 9 mm. long. Synonyms?: *A. Bridgesii* Baker f., and *A. cymosum* Tr. & Planch. See also *A. Anderssonianum* (first paragraph 84).

41. According to Garcke (Bot. Jahrb. 15:483, 484) the older name *A. divaricatum* Turcz. was based upon the same collection *(Jameson 605)* as was *A. cordatum* Garcke & K. Schum. Garcke confirmed the fact that the carpels

are dispermous, although Turczaninow described them as trispermous in *A. divaricatum*.

42. This name is antedated by *A. anodoides* St. Hil. & Naud. according to Garcke (ibid. p. 485).

43. Synonyms (?): *A. cinereum* Griseb., *A. cornutum* (Humb. & Bonpl.) Sweet, *A. Grevilleanum* (Gill. & Hook.) Walp., *A. mendocinum* Phil., *A. paranthemoides* Griseb.

44. Perhaps only a variety of *A. umbellatum*. See Kearney, Madroño 11:285, 286.

45. Perhaps only a variety of *A. virgatum*.

THE AUTHOR OF BROMUS HAENKEANUS, A CORRECTION. In a recent article on certain weedy species of *Bromus* (Leafl. West. Bot. 8: 151–154,–1957), I cited Presl as the authority for *B. Haenkeanus,* as has been done also in references by C. F. Smith (A Flora of Santa Barbara, p. 16,–1951), T. H. Kearney (Leafl. West. Bot. 7: 172,–1954), and E. C. Twisselmann (Wasmann Journ. Biol. 14: 203,–1957). Dr. P. A. Munz, however, has called my attention to the fact that Presl's name was *Ceratochloa Haenkeana* (Rel. Haenk. 1: 285,–1830) and that Kunth transferred it to *Bromus* (Enum. Pl. 1: 416,–1833). Hence, for those not recognizing the genus *Ceratochloa,* the correct citation becomes *Bromus Haenkeanus* (Presl) Kunth.–PETER H. RAVEN.

LATHYRUS CICERA ADVENTIVE IN CALIFORNIA. The attractive little Mediterranean annual, *Lathyrus Cicera* L., has been found by Miss Vesta Hesse in the Santa Cruz Mts., San Mateo Co., California. Of its occurrence Miss Hesse writes: "My *No. 1886* was growing among grasses and other weeds along the Skyline Boulevard about 2 miles north of Saratoga Summit at an elevation of about 2300 feet. There was quite a number of plants but they were scattered and inconspicuous. The fresh flowers were reddish." From *L. sphaericus* Retz., which is also an annual with solitary reddish flowers and bifoliolate leaves, *L. Cicera* may be distinguished by the flower-stalks which are longer than the petioles, the very short prolongation of the rhachis, the calyx-lobes which are much longer than the tube, and the twisted style. Since the species is not given by C. L. Hitchcock in his Revision of the North American Species of Lathyrus (Univ. Wash. Publ. Biol. vol. 15, –1952), the plant may be new not only to California but to North America as well.–JOHN THOMAS HOWELL.