1. **LYSIMACHIA** Linnaeus, Sp. Pl. 1: 146. 1753.

珍珠菜属  zhen zhu cai shu

Herbs erect or procumbent, rarely suffrutescent, glabrous or pubescent, often with internal glands appearing as pustulate dots or stripes. Leaves alternate, opposite, or whorled, usually entire. Flowers solitary in axils of upper leaves or in terminal and axillary panicles or racemes, often shortened into capitulate clusters, with bracts. Calyx green, usually 5(or 6–9)-parted. Corolla white or yellow, rarely pink, homomorphic, rarely heteromorphic, subrotate or campanulate, deeply 5(or 6–9)-parted; lobes contorted in bud. Filaments glabrous, free or connate into a ring or tube at base and ± adnate to corolla tube; anthers basifixed, dorsifixed, or versatile, opening by apical pores or by lateral slits. Capsule subglobose, usually dehiscing by valves, rarely indehiscent.

About 180 species: temperate and subtropical parts of the northern hemisphere, but with a few species in Africa, Australia, and South America; 138 species in China.

1a. Flowers usually 6- or 7-merous, in pedunculate, dense capitulate, or spikelike racemes .................................. 138. *L. thyrsiflora*

1b. Flowers 5-merous, in terminal racemes, or inflorescences not racemose.

2a. Flowers heteromorphic, with anthers and stigma at 2 levels; corolla tubular, parted scarcely to middle .............................................................................................................................................................................. 137. *L. crispidens*

2b. Flowers homomorphic; corolla rotate or campanulate, parted below middle.

3a. Corolla white to pink; filaments free, adnate to middle of corolla ...........................................................  2. *L. insignis*

3b. Flowers in clusters or extremely shortened racemes; capsules dehiscing by valves.

4a. Anthers longer than filaments, distinctly basifixed, usually opening by apical pores, occasionally by lateral slits; plants not colored glandular punctate or striate ............................................................. ..............

4b. Anthers shorter than filaments, ± dorsifixed (rarely indistinctly so) to versatile, opening by lateral slits
(except *L. albescens*); plants often colored glandular punctate or striate ........................................................ Key 2

**Key 1**

1a. Stems 1–1.5 cm tall; flowers forming terminal racemes on leafless scapes .................................................. ......  1. *L. scapiflora*

1b. Stems more than 20 cm tall; flowers solitary or in racemes on leafy stems.

2a. Leaves terminal.

3a. Flowers in many-flowered racemes, 6–9 cm; capsules indehiscent ...........................................................  2. *L. insignis*

3b. Flowers in clusters or extremely shortened racemes; capsules dehiscing by valves.

4a. Leaf blade rounded to obtuse at apex; calyx lanceolate, 6–8 mm; corolla lobes acute at apex ....... 6. *L. crassifolia*

4b. Leaf blade acute at apex; calyx ovate, 2–4 mm; corolla lobes obtuse at apex.

5a. Inflorescences distributed along stems under leaf whorls ........................................................................  3. *L. saxicola*

5b. Inflorescences subterminal.

6a. Leaves nearly equal, rounded at base ............................................................................... 4. *L. dushanensis*

6b. Leaves unequal, cordate at base .........................................................................................  5. *L. linguiensis*

2b. Leaves alternate or opposite, not terminal.

7a. Leaves opposite.

8a. Leaf blade cuneate to rounded at base ................................................................. 36. *L. engleri*

8b. Leaf blade cordate at base.

9a. Flowers solitary; leaf blade 1–4 cm ................................................................. 37. *L. cordifolia*

9b. Flowers usually in pairs; leaf blade 4.5–8 cm .................................................................  38. *L. biflora*

7b. Leaves alternate.

10a. Anthers conical, less than 3.5 × as long as wide; stems herbaceous.

11a. Flowers in racemes.

12a. Braacts subulate; leaf blade with more than 10 pairs of lateral veins ................. 25. *L. physaloides*

12b. Braacts leaflike; leaf blade with 5–7 pairs of lateral veins.

13a. Stems not winged; flowers subverticillate ........................................................................  28. *L. subverticillata*

13b. Stems winged; flowers racemose.


14b. Racemes elongated, 5- to many flowered ........................................................................  27. *L. nutantiflora*

11b. Flowers solitary, axillary.

15a. Stems ± procumbent at base, upper part erect, rarely branched; leaf blade broadly ovate to elliptic.

16a. Calyx 7–12 mm; corolla 2–3.5 cm in diam.; leaf blade attenuate to cuneate at base ................................................................. 29. *L. foenum-graecum*

16b. Calyx 2.5–6 mm; corolla 1.2–2 cm in diam.; leaf blade rounded or...
slightly cordate, rarely cuneate at base.

17a. Corolla 1.5–2 cm in diam.; calyx 4–6 mm; plants not aromatic .......... 30. L. trichopoda
17b. Corolla ca. 1.2 cm in diam.; calyx ca. 2.5 mm; plants aromatic
when dry ................................................................. 31. L. pseudotrachypoda

15b. Stems erect or sometimes arcuate at base, usually branched; leaf blade lanceolate to narrowly elliptic or oblong-lanceolate.

18a. Corolla 3–5 mm; calyx lobes narrowly ovate, ca. as long as or slightly shorter than corolla; capsules 3.5–4 mm in diam. ........................................ 32. L. brachyandra
18b. Corolla more than 6 mm; calyx lobes ovate to ovate-elliptic, 1/3 to 1/2 × as long as corolla; capsules more than 5 mm in diam.

19a. Flowers in racemes continuing apically into vegetative shoots .......... 35. L. cauliflora
19b. Flowers solitary, in axils of upper leaves.

20a. Corolla 10–15 mm; anthers opening by apical pores ..................... 33. L. grandiflora
20b. Corolla 6–8 mm; anthers opening by lateral slits ............................... 34. L. laxa

10b. Anthers linear, more than 4 × as long as wide; stems subwoody.

21a. Flowers in elongated racemes.

22a. Petiole less than 2 mm; leaf blade rounded or subcordate at base; bracts subulate ........ 7. L. filipes
22b. Petiole 5–30 mm; leaf blade subattenuate at base; at least lower bracts leaflike.

23a. Calyx lobes lanceolate ................................................................. 8. L. heterobotrys
23b. Calyx lobes ovate ................................................................. 9. L. chapaeaensis

21b. Flowers solitary or 2 to many flowers crowded in leaf axils.

24a. Pedicel 3–10(–12) mm.

25a. Leaf blade 6–12 × 3–7 cm; calyx 6–9 mm .......................................... 10. L. inaperta
25b. Leaf blade 0.6–1.7 × 0.2–0.8 cm; calyx 3–4 mm.

26a. Leaves sparsely setulose adaxially; corolla epunctate .......................... 11. L. aspera
26b. Leaves glabrous; corolla glandular punctate .................................. 12. L. tianyangensis

24b. Pedicel usually more than 12 mm.

27a. Leaf blade linear or leathery, veinlets obscure.

28a. Leaf blade linear, subfalcate at apex, herbaceous .......................... 13. L. vittiformis
28b. Leaf blade neither linear nor falcate at apex, subleathery.

29a. Leaves oblanceolate, ± crowded in interrupted whorls ........ 14. L. pittosporoides
29b. Leaves lanceolate, evenly distributed along stems ........................... 15. L. millietii

27b. Leaf blade neither linear nor leathery, veinlets conspicuous.

30a. Calyx ca. as long as to slightly longer than corolla ......................... 16. L. evalvis
30b. Calyx shorter than corolla.

31a. Stems conspicuously angular, usually herbaceous.

32a. Calyx 5–6 mm, lobes subulate; leaf blade truncate
to subcordate at base ................................................. 22. L. jingdouensis
32b. Calyx 2–4 mm, lobes acuminate; leaf blade
subattenuate at base.

33a. Stems angular or winged, usually much branched; leaf
blade ovate to lanceolate .......................................... 23. L. capitilpes
33b. Stems angular, usually simple; leaf blade lanceolate .... 24. L. lancifolia

31b. Stems terete, subwoody.

34a. Pedicel ca. as long as to shorter than petiole; capsules
indehiscent ............................................................... 17. L. navillei
34b. Pedicel much longer than petiole; capsules dehiscing by valves.

35a. Capsule 3–4 mm.

36a. Leaf blade elliptic-lanceolate to lanceolate; free parts
of filaments distinctly longer than sinus of corolla
base of anthers .......................................................... 18. L. fooningensis
36b. Leaf blade ovate to ovate-lanceolate; free parts
of filaments ca. as long as sinus of corolla base
of anthers ............................................................. 19. L. microcarpa

35b. Capsule 5–6 mm.

37a. Leaf blade elliptic to elliptic-lanceolate,
1–3(–4) cm wide ................................................... 20. L. ardisioides
37b. Leaf blade ovate to elliptic or broadly elliptic, 1.3–7(–9) cm wide .................................................. 21. L. petelotti

Key 2

1a. Filaments nearly free, barely connate at base into an indistinct ring; anthers indistinctly dorsifixed to semi-basifixed, erect.
   2a. Pedicel 0.5–0.7 cm; leaves and corolla short black glandular striate .................................................. 39. L. albscens
   2b. Pedicel 2.5–4.5 cm; plants epunctate .................................................. 40. L. peduncularis

1b. Filaments connate basally into a distinct ring or tube; anthers distinctly dorsifixed.
   3a. Inflorescences paniculate; calyx lobes black glandular striate at margin.
      4a. Stems pubescent; leaves short petiolate, oblong-lanceolate to ovate-lanceolate, pubescent abaxially; corolla 1.5–2 cm in diam. .................................................. 41. L. vulgaris
      4b. Stems glabrous on lower part; leaves sessile, broadly or narrowly lanceolate, glabrous; corolla 1.1–1.5 cm in diam. .................................................. 42. L. davurica

   3b. Inflorescences not paniculate; calyx lobes not glandular striate at margin.
      5a. Stems 1–5 cm; leaves spirally arranged, ± forming a rosette.
         6a. Plants hirsute .................................................. 43. L. alpestris
         6b. Plants glabrous .................................................. 44. L. rupestris
      5b. Stems more than 5 cm; leaves opposite, alternate, or whorled.
         7a. Corolla rotate; filaments connate basally into a ring or thin tube; leaves sessile or only lower ones short petiolate (except in white-flowered species).
            8a. Leaf blade lanceolate, tapering toward dilated clasping base ................................................ 49. L. ophelioides
            8b. Leaf blade ovate to ovate-lanceolate, base rounded or cuneate.
               9a. Corolla white; leaf blade cuneate at base .................................................. 48. L. huitsunae
               9b. Corolla yellow; leaf blade rounded at base.

      9b. Corolla yellow; leaf blade rounded at base.
         10a. Plants less than 10 cm tall; lower leaves short petiolate; upper leaves ca. 1.5 cm; pedicel 0.9–1.6 cm .................................................. 45. L. stellarioides
         10b. Plants 15–50 cm tall; lower leaves scalelike; upper leaves 3.5–6.5 cm; pedicel 1–7 cm.
            11a. Stems usually simple; pedicel usually more than 20 mm; corolla 1.2–2 cm in diam., red or brown glandular punctate .................................................. 46. L. omeiensis
            11b. Stems usually branched; pedicel 5–10 mm; corolla 1–1.5 cm in diam., epunctate .................................................. 47. L. hypericoides

   7b. Corolla subfunnelform; filaments connate 1/3–1/2 into a tube, or if only forming a ring, then leaves petiolate or corolla black glandular striate.
      12a. Flowers in terminal or axillary racemes; bracts small, not leaflike.
         13a. Leaves petiolate.
            14a. Racemes densely flowered; pedicel 2–5 mm; plants strigillose, epunctate .................................................. 53. L. otophora
            14b. Racemes sparsely flowered; pedicel 8–20 mm; stems glabrous; leaves and corolla glandular punctate .................................................. 54. L. nanchuanensis

      13b. Leaves sessile.
         15a. Leaf blade ovate-lanceolate, rounded at base .................................................. 50. L. longipes
         15b. Leaf blade lanceolate, cuneate at base.
            16a. Pedicel 1.5–5 cm; bracts inserted on rachis .................................................. 51. L. fukienensis
            16b. Pedicel 0.2–0.4 cm; bracts adnate to pedicel .................................................. 52. L. rubinervis

      12b. Flowers axillary and solitary or in terminal clusters or umbels; if in racemes, then bracts leaflike.
         17a. Petiole auriculate at base (at least in lower leaves); inflorescences not capitate.
            18a. Leaf blade connate-perfoliate .................................................. 55. L. perfoliata
            18b. Leaf blade not connate-perfoliate.
               19a. Flowers solitary and axillary or in terminal racemes; pedicel 0.4–2 cm; plants strigillose .................................................. 56. L. melampyroides
               19b. Flowers in terminal umbels; pedicel 1–1.5 cm; plants glabrescent .................................................. 57. L. brittenii

      17b. Petiole slender or, if auriculate at base, inflorescences subcapitate.
         20a. Flowers solitary and axillary or in lax terminal racemes.
            21a. Plants epunctate or translucent glandular punctate.
22a. Flowers in terminal racemes; filaments connate to 1/2 their length into a tube.
23a. Flowering Jul–Aug; pedicel usually ascending to erect in fruit; lower leaves ovate or elliptic .......................... 61. L. hemsleyi
23b. Flowering May–Jun; pedicel recurved in fruit; lowest 1 or 2 pairs of leaves rhomboid-ovate to ovate .......... 62. L. pseudohenryi
22b. Flowers axillary, solitary; filaments basally connate into a thin ring.
24a. Roots fasciculate, stringy; stems with 1 or 2 pairs of scalelike leaves near base; upper leaves obtuse at apex, rust-colored pubescent .................................................. 58. L. deltoidea
24b. Roots fibrous; stems without scalelike leaves; upper leaves acute at apex, grayish pubescent.
25a. Stems erect or ascending-erect, decumbent at base; corolla 1–1.5 cm in diam. ............................................... 59. L. remota
25b. Stems prostrate to decumbent; corolla 0.5–0.8 cm in diam. .............................................................. 60. L. japonica
21b. Plants red to black glandular punctate or striate.
26a. Stems erect.
27a. Leaves and corolla red or dark glandular punctate ............. 63. L. erosipetala
27b. Leaves and corolla black glandular striate .......................... 64. L. grammica
26b. Stems prostrate to ascending or arcuate.
28a. Plants purple or black glandular punctate.
29a. Calyx lobes abaxially cristate, glabrous .................................. 88. L. carinata
29b. Calyx lobes not cristate, pilose.
30a. Leaves strigillose; pedicel 2–4 mm ............................... 89. L. debilis
30b. Leaves setulose or glabrate; pedicel more than 5 mm.
31a. Stems prostrate; plants black or purple glandular, rarely transparent glandular ........ 90. L. hemsleyana
31b. Stems prostrate to ascending; plants transparent glandular ........................................ 91. L. chekiangensis
28b. Plants purple or black glandular striate.
32a. Calyx lobes not cristate.
33a. Calyx lobes glabrous or pubescent on margin and abaxially; corolla lobes long glandular striate; pedicel ca. as long as to shorter than subtending leaves .......................................................... 96. L. christiniae
33b. Calyx lobes pubescent on abaxial surface only, margin glabrous; corolla lobes short glandular striate; pedicel usually longer than subtending leaves .................................................. 97. L. drymarifolia
32b. Calyx lobes cristate abaxially.
34a. Leaf blade lanceolate to ovate-lanceolate, apex acuminate, base rounded; crest of calyx lobes uniform in width or widest below middle.
35a. Leaves and calyx glabrescent; crest of calyx lobes widest below middle .......................... 92. L. pterantha
35b. Leaves and calyx pubescent; crest of calyx lobes uniform in width .................. 93. L. baoxingensis
34b. Leaf blade ovate or rounded, apex acute or obtuse, base cordate; crest of calyx lobes widest above middle.
36a. Leaves densely minutely bristly, transparent purplish glandular striate ...... 94. L. pteranthoides
36b. Leaves strigillose or glabrescent, densely black glandular striate and punctate; crest of calyx lobes decurrent forming a spur ............... 95. L. crista-galli
20b. Flowers in terminal umbels or capitulate clusters.

37a. Leaves verticillate.
   38a. Plants rust-colored pilose ..................................................  67. *L. klattiana*
   38b. Plants glabrous.
      39a. Umbels sessile .................................................................  65. *L. paridiformis*
      39b. Umbels pedunculate .........................................................  66. *L. sciadantha*

37b. Leaves opposite.

40a. Plants colored glandular punctate or striate.
   41a. Plants black glandular striate.
      42a. Flowers 3–5, crowded at apices of branches, seldom at apex of main axis ..................................................  86. *L. rubiginosa*
      42b. Flowers in terminal, abbreviated, subcapitate racemes .......... 87. *L. alfredii*
   41b. Plants black or purple punctate.
      43a. Glandular dots black, very dense on leaf blade and calyx.
         44a. Leaves in 3 to many pairs, nearly equal, ovate to ovate-elliptic, 3.5–8 cm ....................  78. *L. punctatilimba*
         44b. Leaves usually in 2 pairs crowded toward stem apex, elliptic to rhomboid-ovate, 10–18 cm; lower leaves scalelike, reduced.
         45a. Stems and pedicels glabrous ...............................  79. *L. fordiana*
         45b. Stems and pedicels rust-colored villous ............. 80. *L. miyiensis*
   43b. Glandular dots purple or black, sparse or only near leaf margins.
      46a. Flowers crowded at stem apex, without bracts .... 81. *L. nanpingensis*
      46b. Flowers in terminal, subcapitate clusters, with bracts.
         47a. Flowers 2–4, on leafless axillary short branches ....................  82. *L. liui*
         47b. Flowers usually more than 4, on leafy stems and branches.
            48a. Leaves sessile, tapering toward dilated clasping base .................  85. *L. lychnoides*
            48b. Leaves petiolate, base not clasping.
               49a. Stems prostrate, rooting at nodes, upper part ascending; leaf blade ovate to suborbicular ............. 83. *L. congestiflora*
               49b. Stems erect; leaf blade lanceolate to ovate-lanceolate ...........  84. *L. kwangtungensis*

40b. Plants epunctate or translucent glandular.
   50a. Stems procumbent, elongated; corolla with thick translucent glandular stripes sometimes becoming dark when dry.
      51a. Flowers 2–4, crowded at stem apex, without bracts; calyx not keeled ........................................  76. *L. patungensis*
      51b. Flowers many, in terminal, subcapitate clusters, with bracts; calyx keeled abaxially ..................................  77. *L. yingdeensis*
   50b. Stems erect or ascending from creeping base; corolla with or without translucent glands.
      52a. Leaves glabrous or sparsely pilose on midvein abaxially ...... 68. *L. henryi*
      52b. Leaves pilose or minutely bristly adaxially.
         53a. Leaf blade lanceolate or elliptic-lanceolate, long attenuate at base.
            54a. Upper leaves falcate-lanceolate, 4–9 mm wide ..................................................  74. *L. sciadophylla*
            54b. Upper leaves lanceolate to elliptic-lanceolate, not falcate, usually wider than 10 mm.
               55a. Leaves herbaceous, lateral veins
3–5 pairs ................................................... 75. *L. fistulosa*

55b. Leaves papery, lateral veins invisible ..........  68. *L. henryi*

53b. Leaf blade ovate or ovate-elliptic, if ovate-
lanceolate, then broadly cuneate or rounded
at base.

56a. Stems with only 3 or 4 pairs of leaves on
upper part; petiole 2.5–4 cm; corolla
1.8–2 cm in diam. ...........................................  69. *L. esquirolii*

56b. Stems with evenly distributed leaves; petiole
less than 2 cm; corolla 0.8–1.6 cm in diam.

57a. Flowers many, in terminal, subcapitate
clusters.

58a. Stems erect; leaves strigillose;
flower clusters lax; lowest
pedicels recurved in fruit .........  62. *L. pseudohenryi*

58b. Stems ascending from creeping
base; leaves with articulate hairs;
flower clusters compact;
lowest pedicels ascending-
erect in fruit ............................ 70. *L. phyllocephala*

57b. Flowers 2–4, in axils of uppermost
1 or 2 leaf pairs.

59a. Stems erect; leaf blade ovate,
subacuminate, sparsely bristly;
corolla ca. 7.5 mm ............  71. *L. shimienensis*

59b. Stems ascending from creeping
base; leaf blade ovate, with
articulate hairs; corolla to 13 mm.

60a. Leaf blade subrounded at
base; petiole
2–10 mm .....................  72. *L. tengyuehensis*

60b. Leaf blade broadly cuneate
at base; petiole (at least
in medial leaves)
more than 1 cm ..................... 73. *L. siamensis*

**Key 3**

1a. Calyx parted 1/2–2/3 its length; corolla lobes nearly free ................................................................. 98. *L. pentapetala*

1b. Calyx parted nearly to base; corolla lobes distinctly connate at base.

2a. Style shorter than corolla, usually only reaching middle of corolla lobes, ca. as long as to shorter than
capsules.

3a. Leaves opposite, rarely alternate in upper part of stem; anthers with thick red glands or callus at apex.

4a. Leaves petiolate, abaxially very densely, minutely rust-colored glandular punctate ................... 111. *L. circaeoides*

4b. Leaves sessile, base auriculate and clasping, abaxially sparsely thick glandular punctate.

5a. Corolla lobes oblong, obtuse or subacute at apex ........................................................................ 112. *L. auriculata*

5b. Corolla lobes suborbicular or subflabellate, erose-denticulate at apex ............................. 113. *L. glanduliflora*

3b. Leaves alternate, rarely opposite; anthers without red glands at apex.

6a. Calyx lobes lanceolate, only margin membranous and apex without red glands; persistent
style usually shorter than capsules; racemes sparsely flowered or flowers solitary in axils of
upper leaves.

7a. Flowers solitary, in axils of upper leaves; corolla ca. as long as calyx; filaments longer
than anthers ................................................................................................................ ... 107. *L. chenopodioides*

7b. Flowers in racemes, subtended by subulate bracts; corolla distinctly longer than calyx;
filament shorter than anthers.

8a. Corolla 3.5–5 mm, lobes not glandular striate; calyx lobes glandular ciliate ......................... 108. *L. excisa*

8b. Corolla 6–10 mm, lobes brown or black glandular striate; calyx lobes glabrous along
margin.
9a. Corolla white, lobes ligulate, reflexed, with many dark glandular triches; style ca. 1 mm; leaves black glandular punctate near margin ...................................................... 109. L. reflexiloba
9b. Corolla pink, lobes obovate, not reflexed, with 2 red glandular stripes at middle; style ca. 2 mm; leaves black glandular striate near margin ............................................. 110. L. roseola

6b. Calyx lobes elliptic or oblong, apex membranous or red glandular; persistent style ca. as long as capsules; racemes densely flowered.
10a. Bracts leaflike; corolla lobes erect; ovary conical; capsules pyriform, ca. 5 mm in diam.; plants glabrous ................................................................. 99. L. mauritiana
10b. Bracts subulate; corolla lobes spreading; ovary ovoid; capsules globose, ca. 3 mm in diam.; plants glandular puberulent (at least on inflorescences).

11a. Corolla 5–9 mm, lobes oblong or sublinear; persistent style ca. as long as capsules; plants glabrous ................................................. 103. L. stigmatosa
11b. Corolla 3–5 mm, lobes elliptic to ovate-elliptic; filaments 1–1.5 mm.
12a. Plants without creeping rhizomes; pedicel shorter than calyx and capsules .... 100. L. jiangxiensis
12b. Plants with creeping rhizomes; pedicel longer than calyx and capsules.

17a. Anthers linear, 1–1.5 mm, with thick red glands or callus at apex.
18a. Leaves sessile, clasping at base, densely black glandular punctate ........................................ 114. L. heterogenea
18b. Leaves usually petiolate, sparsely purple or brown glandular punctate or striate ................. 115. L. stenosepala

17b. Anthers elliptic or ovate, without glands or callus at apex.
19a. Flowers 4–8, near stem apex, in axis of leaves or a capitulate cluster.
20a. Flowers in axis of apical leaves; corolla shorter than pedicel ......................................... 135. L. prolifera
20b. Flowers in a terminal, subcapitate cluster; corolla longer than pedicel ......................... 136. L. pumila

21a. Corolla parted to ± middle.
22a. Corolla campanulate, ca. 5 mm; leaf blade ovate to ovate-lanceolate ................... 132. L. racemiflora
22b. Corolla narrowly campanulate, 8–10 mm; leaf blade obovate to sublinear.
23a. Stems erect, simple or branched; branches ascending to erect; racemes initially broadly coniform, densely flowered ......................................................... 133. L. candida
23b. Stems ± prostrate, fasciculate, usually much branched; branches elongated flagelliform; racemes slender, sparsely flowered ........................................... 134. L. parvifolia

21b. Corolla parted to 2/3 or below.
24a. Corolla 2.5–5(–6) mm, ca. as long as calyx.
25a. Corolla ca. 6 mm; stamens included or with only apex of anthers exserted ....................................................................... 116. L. silvestrii
25b. Corolla 2.5–4 mm; stamens distinctly exserted.
26a. Corolla slightly longer than or ca. as long as calyx, lobes oblong-spatulate .................. 117. L. decrens
26b. Corolla shorter than calyx, lobes narrowly oblong ...................................................... 118. L. breviflora

24b. Corolla 6–12 mm, distinctly longer than calyx.
27a. Corolla lobes suborbicular, clawed at base.
28a. Leaves abaxially minutely rust-colored glandular punctate ............................. 119. L. platypetala
28b. Leaves abaxially glaucous.
29a. Corolla pink, epunctate .............................................................. 120. L. glauca
29b. Corolla white, reddish brown glandular striate near apex .......... 121. L. orbicularis
27b. Corolla lobes elliptic, obovate, or narrowly oblong, not clawed at base.
30a. Corolla lobes elliptic or broadly obovate, rarely elliptic-oblong, wider than 2 mm.
31a. Corolla 8–12 mm, ca. 2 × as long as calyx, sinus between lobes acute; stamens ca. 2/3 as long as corolla lobes .......................................................... 122. L. violascens
30b. Corolla lobes narrowly oblong, less than 2 mm wide.
32a. Corolla 8–12 mm, ca. 2 × as long as calyx, sinus between lobes acute; stamens ca. 2/3 as long as corolla lobes .......................................................... 122. L. violascens
32b. Corolla 6–7(–8) mm, slightly longer than calyx, sinus between lobes rounded; stamens ca. as long as to longer than corolla ........................................ 123. L. lichiangensis
31b. Leaves opposite (at least on branches) or in whorls, linear-lanceolate.
33a. Corolla ca. 5 mm; leaves subleathery .................................... 126. L. robusta
33b. Corolla 8–10 mm; leaves herbaceous.
34a. Leaves sparsely glandular punctate and striate, usually in whorls of 3 or 4 on main stem ..................... 124. L. taliensis
34b. Leaves glandular striate on margin only, subopposite on main stem ................................................. 125. L. tsaii
35a. Leaves sessile.
36a. Leaf blade narrowly lanceolate to linear, 0.4–1 cm wide; corolla epunctate ................................................... 127. L. delavayi
36b. Leaf blade oblanceolate, 1.8–2.6 cm wide; corolla red glandular striate ......................................................... 128. L. medogensis
35b. Leaves petiolate.
37a. Corolla to 10 mm; leaves glaucescent abaxially ............ 131. L. tsarongensis
37b. Corolla 5–7 mm; leaves pale green abaxially.
38a. Stamens ca. as long as corolla .......................... 129. L. chungdienensis
38b. Stamens 1–2 mm longer than corolla ........................ 130. L. lobelioides


葶花香草   ting hua xiang cao

Herbs perennial, glabrous. Stems 1–1.5 cm tall. Leaves spirally arranged, ± forming a rosette; petiole 12–20 cm, channelled; leaf blade elliptic to narrowly elliptic, 15–28 × 4.5–9 cm, leathery when dry, base cuneate-attenuate, margin narrowly revolute, apex acute to subacuminate; veins 10–13 pairs, conspicuous abaxially; veinlets obscure. Scapes 14–20 cm; racemes terminal, many flowered; bracts linear-lanceolate, 2–3 mm. Flowers 1–2 cm apart. Pedicel 6–12 mm. Calyx 5–6 mm, sparingly white farinose; lobes lanceolate. Corolla yellow; tube ca. 1 mm; lobes oblong, 9–10 × 3.5–4 mm, apex acute. Filaments connate basally into a ring, fused with corolla, free parts ca. 1 mm; anthers ca. 5 mm, gradually narrowed upward from corolla base, basifixed, opening by lateral slits. Ovary globose; style ca. 6 mm. Capsule unknown. Fl. Apr–May.

* Deep in forests on calcareous formations; ca. 300 m. Guangxi (Ningming Xian).

2. Lysimachia insignis Hemsley, Hooker's Icon. Pl. 27: t. 2634. 1900.

三叶香草   san ye xiang cao

Lysimachia insignis Hemsley f. flaviflora Lock.

Plants perennial, erect, 25–90 cm tall, glabrous. Stems terete or obscurely quadrangular, woody at base, simple or weakly branched. Lower leaves scalelike, early deciduous. Upper leaves (2 or)3(or 4), in a terminal whorl, subsessile or petiole to 1 cm; leaf blade ovate to ovate-lanceolate, rarely elliptic to oblong-lanceolate, 8–25 × 5–13 cm, base obtuse to subrounded, occasionally cuneate, apex acuminate; veins 6–9 pairs; veinlets obscure. Racemes distributed along stem under leaf whorl, 6–9 cm, 3–10-flowered; bracts narrowly lanceolate, 3–4 mm. Pedicel 0.6–1.5 cm. Calyx lobes ovate, 2–3 × ca. 1.3 mm, minutely glandular, especially inside, apex acuminate. Corolla white to pale yellow, parted nearly to base; lobes narrowly oblong, 5–8 × 2–3 mm, apex obtuse. Filaments connate basally into a ring, fused with corolla, free parts very short; anthers 4–5 mm, basifixed, opening by apical pores. Capsule globose, 5–7.5 mm in diam., indehiscent. Fl. Apr–May.

Open woodlands, stream sides in mountain valleys; 300–1600 m. SW Guangxi, SW Guizhou, SE Yunnan [N Vietnam].

The fleshy roots are used medicinally for rheumatism and injuries.


岩居香草   yan ju xiang cao
Herbs perennial, to 18 cm tall. Stems erect or prostrate at base, terete or slightly angular in upper part, usually simple. Lower leaves scalelike. Upper leaves alternate, 3 or 4 crowded at apex of stem in a whorl; petiole 5–8 mm; leaf blade ovate, subleathery, base rounded to broadly cuneate, margin thickened and cartilaginous, apex acute. Racemes in axes of normal leaves, scalelike leaves along stem, 2–4-flowered; rachis 0.5–2 mm; bracts lanceolate to subulate, 2–4 mm. Pedicel 2–5 mm. Calyx ca. 3 mm; lobes ovate, glandular on margin and inside, apex acuminate. Corolla yellow, deeply parted; lobes reflexed at anthesis, 7–10 × ca. 2 mm. Filaments connate basally into a ring, free parts ca. 0.7 mm; anthers 4–5 mm, basifixed, opening by apical pores. Ovary ovoid; style ca. 4 mm. Capsule unknown.

* On calcareous formations; ca. 2500 m. NW Guangxi.

1a. Leaves glabrous ..................................................  3a. var. saxicola
1b. Leaves ± pubescent ............................................  3b. var. minor

3a. Lysimachia saxicola var. saxicola
岩居香草 (原变种) yan ju xiang cao (yuan bian zhong)

Plants 10–18 cm tall. Leaf blade 4.5–6.5 × 3–4.5 cm, glabrous. Fl. Jul.

* On calcareous formations; ca. 2500 m. NW Guangxi (Nandan Xian).


小岩居香草 xiao yan ju xiang cao

Plants 4–8 cm tall. Leaf blade 2–4 × 1.5–3 cm, adaxially setulose near margin.

* On limestone. NW Guangxi (Hechi Xian).


独山香草 du shan xiang cao

Herbs perennial, glabrous, 10–25 cm tall. Stems deep reddish brown, terete or slightly angular in upper part, usually simple. Leaves 2–4, in a subterminal whorl; petiole 5–8 mm, verrucose; leaf blade broadly ovate to ovato-elliptic, 5–11.5 × 2.7–3.8 cm, papery, base rounded to truncate, margin narrowly revolute, apex acute; midvein and 5 or 6 pairs of veins raised abaxially, impressed adaxially, prominently reticulate. Racemes ± umbellate, in axes of leaves, rarely arising from leaf scars on lower part of stem, 2–6-flowered; rachis ca. 2 mm; bracts linear-lanceolate, 1–1.5 mm. Pedicel 1.5–3 cm. Calyx lobes ovate, ca. 2.5 × 1.2 mm, minutely glandular on margin and inside, apex acute. Corolla yellow, deeply parted; lobes ovate-oblong, ca. 4 × 3 mm, apex obtuse. Filaments connate basally into a ring, free parts ca. 1 mm; anthers linear, ca. 4.8 mm, basifixed, opening by apical pores. Capsule globose, ca. 3 mm in diam. Fl. Jul.

* Mountain streambeds and valleys; ca. 900 m. N Guangxi, S Guizhou (Dushan Xian).


临桂香草 lin gui xiang cao

Herbs perennial, glabrous, 20–40 cm tall. Stems terete, finely glandular striate. Lower leaves scalelike. Upper leaves usually 2, unequal, ± at stem apex, subsessile, broadly ovate to ovato-elliptic, larger leaves 14–20 × 9–16 cm, smaller leaves 6–11 × 4–8.5 cm, base cordate, apex acute; base veins 5–7, prominently reticulate. Racemes in axes of terminal leaves and lower scalelike leaves, 3–17-flowered; rachis 2–6 mm, glandular, bracts linear-triangular, 2–3 mm, minutely glandular, midvein raised abaxially. Pedicel 2.5–4 cm. Calyx lobes ovate, ca. 4 × 2 mm, apex acute. Corolla yellow, deeply parted; lobes oblong, 8–10 × 3–5 mm. Filaments connate basally into a ring, free parts ca. 1 mm; anthers 5–6 mm, basifixed, opening by apical pores. Capsule brown, globose, ca. 3 mm in diam. Fl. Jun–Jul.

* Shaded areas on mountain slopes. NW Guangxi (Lingui Xian).


厚叶香草 hou ye xiang cao

Herbs perennial, glabrous. Stems erect or ascending, 10–20(–40) cm, quadrangular or narrowly winged. Lower leaves scalelike. Upper leaves 3 or 4 crowded at apex of stem, forming a terminal whorl, subsessile, broadly ovate to elliptic, 7–16 × 5–12.5 cm, papery, faintly whitish farinose, base rounded to broadly cuneate, apex rounded to obtuse; veins 5 or 6 pairs, raised abaxially; veinlets obscure. Racemes in axes of terminal leaves, rarely arising from axes of lower scalelike leaves, abbreviated, many flowered. Pedicel 0.5–2 cm, reddish glandular punctate. Calyx lobes lanceolate, 6–8 × ca. 2 mm, minutely brownish glandular, especially inside. Corolla yellow, ca. as long as to slightly longer than calyx, deeply parted; lobes ovate-oblong, ca. 8 × 2.5–3.5 mm, apex acute. Filaments connate basally into a ring, free parts ca. 1 mm; anthers 4–5 mm, basifixed, opening by apical pores. Style ca. as long as to slightly longer than stamens. Capsule globose, 2–3 mm in diam. Fl. Jun.

* In thickets on calcareous formations. C Guangxi (Xincheng Xian).


纤柄香草 xian bing xiang cao

Herbs perennial, glabrous, aromatic when dry. Stems erect, 20–50 cm, quadrangular. Leaves alternate, subsessile; petiole less than 2 mm; leaf blade ovate to ovato-lanceolate, 5–13 × 2–4 cm, base rounded to subcordate, slightly asymmetrical, apex acuminate to long acuminate; veins raised abaxially, slightly impressed adaxially; veinlets prominently reticulate. Racemes terminal and axillary, 4–15-flowered; rachis 5–20 cm; bracts subulate, 2–3 mm. Pedicel 2–3 cm. Calyx lobes ovate-lanceolate, ca. 2 mm, glandular inside. Corolla yellow, deeply parted; lobes reflexed at anthesis, narrowly elliptic, 7–10 × ca. 2 mm. Filaments connate basally into a ring, free parts ca. 1 mm; anthers 4–5 mm, basifixed,
opening by apical pores. Style ca. as long as to slightly longer than stamens. Capsule globose, ca. 3 mm in diam. Fl. Jun.

* In caves within calcareous formations. NW Guangxi (Fengshan Xian).


**条叶香草** tiao ye xiang cao

Herbs perennial, 40–70 cm tall, not aromatic. Stems erect, angular or narrowly winged, ± minutely glandular on young parts. Leaves alternate; petiole 0.5–1.5 cm, glandular; leaf blade elliptic, 6.5–13 × 3–6.5 cm, abaxially whitish farinose, base attenuate, apex acute; veins 6–8 pairs, raised abaxially; veinlets prominently reticulate. Racemes terminal and axillary, 4–9-flowered; rachis 2.5–10 cm, sometimes flowers clustered on lower part of stem; lowest bracts leaflike, to 1.5 cm, gradually reduced upward to ca. 4 × 1 mm. Pedicel 1.3–2.5 cm. Calyx ca. 6 mm, enlarging to 8 mm in fruit; lobes lanceolate, glandular, narrowly hyaline margined, apex subulate. Corolla yellow, deeply parted; lobes lanceolate, ca. 7 × 2.5 cm, apex acute. Filaments connate basally into a ca. 0.3 mm high ring, free parts ca. 1 mm; anthers ca. 4.5 mm, basifixed, opening by apical pores. Capsule globose, ca. 1/2 as long as calyx. Fl. May–Jun.


**近总序香草** jin zong xu xiang cao

_Lysimachia subracemosa_ C. Y. Wu.

Herbs perennial, glabrous, 40–70 cm tall. Stems erect from rostrate base, terete or striate, herbaceous. Leaves alternate, ± aggregated toward apex of young shoots; petiole 1.5–3 cm; leaf blade ovate to ovate-elliptic or ovate-lanceolate, 6–11 × 3–6 cm, adaxially with numerous minute sunken dots, base subrounded to broadly cuneate, apex acuminate; veins 4 or 5 pairs, raised abaxially. Racemes terminal and axillary, 2–6-flowered; rachis 0.3–4(–8) cm; bracts leaflike, ovate-lanceolate, 4.5–5 cm, gradually reduced upward to 5 mm. Calyx lobes ovate-lanceolate, ca. 2.5 mm, glandular, margin membranous. Corolla yellow, deeply parted; lobes oblong, ca. 10 × 5 mm, apex obtuse. Filaments connate basally into a ring, free parts very short; anthers ca. 5 mm, basifixed, opening by apical pores, sometimes decurrent into a slit. Style ca. 6 mm. Capsule unknown. Fl. May.

* Mixed forests. 1000–1700 m. SE Yunnan [Vietnam].


**长萼香草** chang e xiang cao

Herbs perennial, 40–70 cm tall, ± aromatic when dry. Stems single or several, conspicuously quadrangular; young parts and nodal regions copiously minutely glandular. Leaves alternate; petiole 1–1.5(–2.5) mm, glandular; leaf blade elliptic, 6–12(–17) × 3–6.8 cm, base cuneate, margin narrowly revolute, apex acute; veins 6–8 pairs. Pedicel 3–8 mm, elongating to 1.2 cm in fruit, glandular. Flowers 2 or 3, crowded on extremely abbreviated (2–5 mm) branches; bracts leaflike, 1.5–3.5 × 0.5–1.5 mm. Calyx lobes lanceolate, 6–9 × ca. 2 mm, copiously minutely glandular, apex acuminate. Immature corolla ca. 5 mm, parted nearly to base; lobes narrowly ovate, apex acute. Filaments connate basally into a ca. 0.3 mm high ring, free parts very short; anthers ca. 4 mm, basifixed, opening by apical pores. Capsule globose, 2.5–3 mm, shorter than calyx.

* On limestone rocks. W Guangxi (Tianyang Xian).


**短枝香草** duan zhi xiang cao

Herbs perennial, erect, 20–45 cm tall. Stems 1 to many, quadrangular; branches usually many, short. Leaves alternate; petiole 2–5 mm; leaf blade ovate to rhomboid-ovate, 10–17 × ca. 8 mm, abaxially glabrous, adaxially ± appressed bristly pubescent, especially near margin, base cuneate-attenuate, apex acute to apiculate; veins 2 or 3 pairs; veinlets inconspicuous. Leaves of short branches 3–4 × smaller. Flowers solitary, in axils of branch leaves. Pedicel 3–7 mm. Calyx 3–4 mm; lobes narrowly lanceolate, glandular on margin and inside. Corolla yellow, deeply parted; lobes ovate-lanceolate, ca. 3.5 × 1.1 mm, apex acute. Filaments very short, anthers ca. 2.5 mm, basifixed, apex obtuse, opening by apical pores. Ovary ovoid, style ca. 3.5 mm. Capsule unknown.

* Valleys of mountains, stream banks; ca. 600 m. NW Guangxi.


**田阳香草** tian yang xiang cao

Herbs perennial, to 30 cm tall. Stems 1 to many, erect, much branched and glandular in upper part, finely glandular striate. Leaves alternate; petiole ca. 2 mm; leaf blade elliptic to rhomboid-elliptic, 6–9 × 1.5–3 mm, papery, densely glandular punctate, base cuneate, decurrent, margin narrowly revolute, apex acute; midvein raised abaxially; veinlets obscure. Flowers solitary, axillary. Pedicel 6–12 mm, glandular. Calyx lobes ovate-lanceolate, ca. 3 mm, copiously minutely glandular. Corolla yellow, deeply parted; lobes oblong, ca. 5 × 1.5 mm, dark glandular punctate. Filaments connate basally into a ring, free parts ca. 1 mm; anthers ca. 3 mm, basifixed, opening by apical pores. Style slightly longer than stamens. Capsule globose, ca. 3 mm in diam. Fl. May–Jun.

* On limestone rocks. W Guangxi (Tianyang Xian).


**条叶香草** tiao ye xiang cao

Herbs perennial, glabrous, erect, to 40 cm tall. Stems usually numerous, terete or weakly angular, shortly branched, copiously minutely glandular at apex. Leaves spirally...
arranged; petiole 2–3 mm; leaf blade linear, 30–85 × 2.5–6 mm, papery, tapering to both ends, margin narrowly revolute, apex often falcate; midvein raised abaxially, slightly impressed adaxially; veinlets obscure. Flowers solitary, axillary. Pedicel filiform, 1–2 cm, elongating to 3 cm in fruit. Calyx lobes ovate, ca. 1.5 mm, glandular on margin and inside, apex acuminate. Corolla yellow, 5–6 mm, deeply parted; lobes nearly linear, 4–5 × ca. 1.5 mm, apex obtuse. Filaments connate basally into a ring, free parts ca. 0.5 mm; anthers ca. 3.2 mm, basifixied, opening by apical pores. Style ca. 4 mm. Capsule globose, ca. 3 mm in diam. Fl. May.

* Shaded areas on mountain slopes. NW Guangxi (Tianlin Xian).


海桐状香草  hai tong zhuang xiang cao

Plants perennial, glabrous, 50–100 cm tall. Stems erect, woody, quadrangular in upper part, usually much branched. Leaves alternate, crowded toward apex of young shoots, forming many interrupted whors on stem; petiole 2–4 mm; leaf blade oblanceolate, 2–4 cm × 4–10 mm, subleathery, abaxially ± minutely glandular, adaxially with minute sunken dots, base attenuate, margin narrowly revolute, apex acute; midvein raised abaxially, impressed adaxially; veinlets obscure. Flowers solitary, axillary. Pedicel 1–2 cm. Calyx lobes ovate, ca. 5 mm, glandular on margin and inside, apex caudate-acuminate. Corolla yellow, 6–7 mm, deeply parted; lobes oblong, 5.6–3.4 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, fused with corolla, free parts ca. 0.6 mm; anthers ca. 4 mm, basifixied, opening by apical pores. Style ca. 4 mm. Capsule globose, 3.4–4 mm in diam., shorter than calyx. Fl. Apr–May.

* Mixed forests and scrub, on calcareous formations; 1400–1800 m. SE Yunnan.


兴义香草  xing yi xiang cao


Herbs perennial, glabrous, 40–60 cm tall, ± aromatic when dry. Stems erect, terete or angular in upper part, branched from base. Leaves alternate, evenly distributed on stems; petiole 3–5 mm; leaf blade lanceolate, 3.4–4.5 × 0.5–1.5 cm, subleathery, abaxially glaucous, adaxially dark green, base cuneate, apex acute to subacuminate; veins 2 or 3 pairs; veinlets invisible. Flowers solitary, axillary. Pedicel 2.5–3 cm. Calyx lobes lanceolate, ca. 3 mm, costate. Corolla yellow, ca. 6 mm, deeply parted; lobes narrowly oblong, ca. 5 × 2 mm, apex subobtuse. Filaments connate basally into a ring, free parts ca. 0.5 mm; anthers ca. 3.8 mm, basifixied, opening by apical pores. Capsule subglobose, 3.3–3.5 mm in diam.

* At margins of mixed forests. W Guizhou.

**Lysimachia evallis** Wallich in Roxburgh, Fl. Ind. 2: 27. 1824.

不裂果香草  bu lie guo xiang cao

Herbs perennial, glabrous, 15–60 cm tall. Stems erect, weakly angular, usually simple, minutely brownish glandular at apex. Leaves alternate, evenly distributed on stem; petiole 0.5–1.5 cm, ± decurrent at base; leaf blade ovate to narrowly oblong or elliptic, (2.5–)4–9 × 2.5–3.5 cm, base short attenuate, apex acuminate; veins 4 or 5 pairs, raised abaxially. Flowers solitary, in axils of upper leaves. Pedicel nodding in fruit, ca. as long as to slightly longer than calyx; tube ca. 1 mm; lobes lanceolate to narrowly oblong, 4–6 mm wide. Filaments connate basally into a ca. 1 mm high ring, fused with corolla, free parts ca. 1 mm; anthers ca. 4 mm, basifixied, opening by apical pores. Capsule globose, 6–7 mm in diam. Fl. May–Jun. 2n = 18, 30.

Trailsides on mountain slopes; ca. 1400 m. SE Xizang [Bhutan, India, Myanmar, Nepal, Sikkim].


木茎香草  mu jing xiang cao

Plants perennial, glabrous, 30–70 cm tall. Stems 1–3, terete or weakly quadrangular, woody, minutely brownish glandular at apex, lower part with only a few leaf scars, middle and upper parts with leaves. Leaves alternate; petiole 1–3 cm; leaf blade ovate to ovate-lanceolate or elliptic to elliptic-lanceolate, 3.5–12.5 × 1–4 cm, base attenuate, margin narrowly revolute, apex acute to acuminate; veins 5–7 pairs; veinlets inconspicuously reticulate. Flowers 1 or 2, in axils of leaves or aggregated at apex of extremely abbreviated twigs and appearing clustered. Pedicel nodding in fruit, 0.7–2 cm. Calyx 2.5–4 mm, enlarging to 6 mm in fruit; lobes ovate, apex acuminate. Corolla yellow, deeply parted; lobes lanceolate to ovate-lanceolate, 8–11 × 2.5–3.5 mm, apex obtuse. Filaments connate basally into a ring, free parts inconspicuous; anthers 7–8 mm, basifixied, opening by apical pores. Ovary ovoid; style 6–8 mm. Capsule globose 4–7 mm in diam., indehiscent.

* Forests; 900–1400 m. NW Guangxi, SW Guizhou, Hainan.

1a. Leaf blade ovate to ovate-lanceolate; capsules 6–7 mm in diam. .............................. 17a. var. navillei

1b. Leaf blade elliptic to elliptic-lanceolate; capsules 4–5 mm in diam. .......................... 17b. var. hainanensis

17a. **Lysimachia navillei** var. navillei

木茎香草 (原变种) mu jing xiang cao (yuan bian zhong)


* Forests; 1000–1400 m. NW Guangxi, SW Guizhou.

Evergreen forests; 900–1200 m. Hainan.

Ardisia esquirolii H. Léveillé; Lysimachia esquirolii (H. Léveillé) Lauener.

Plants perennial, glabrous, 20–50 cm tall, aromatic when dry. Stems erect, woody at base, terete or weakly angular in upper part. Leaves alternate, usually confined to upper 1/2 of stem, ± crowded toward apex; petiole 0.5–1.5 cm; leaf blade elliptic-lanceolate to narrowly lanceolate, 3–11 × 0.7–2.8 cm, abaxially ± glandular, base attenuate, apex acuminate or subacute; veins prominently reticulate. Flowers 1 or 2, in axils of leaves, rarely 3 or 4 flowers crowded at apex of extremely abbreviated branches. Pedicel 1.5–3(–5) cm. Calyx lobes triangular, ca. 2.5 mm. Corolla yellow, 0.9–1.1 cm, deeply parted; lobes linear, 8–10 × 2–3 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts 1–1.5 mm; anthers 4–5 mm, basifixed, opening by apical pores. Capsule subglobose, ca. 4 mm in diam.

Forests, ravines, calcareous soils; 800–1300 m. NW Guangxi, SW Guizhou, SE Yunnan [Vietnam].


小果香草 xiao guo xiang cao

Herbs perennial, 10–30 cm tall, aromatic when dry, with creeping stolons. Stems ascending to erect, terete or weakly angular, ca. 1.5 mm in diam. at base, upper part minutely glandular. Lower leaves scalelike. Upper leaves alternate, usually confined to upper 2/3 of stem; petiole 4–8 mm, glandular; leaf blade ovate to rhomboid-ovate or ovate-lanceolate, 1.5–3(–6) × 0.7–3 cm, adaxially glabrous or initially ± setulose, base cuneate to broadly cuneate, rarely subrounded, margin obscurely undulate-crenate, apex acuminate; veins prominently reticulate. Flowers solitary, axillary. Pedicel 2–4 cm, sparsely glandular. Calyx lobes ovate, apex acuminate, 3.5–4 mm. Corolla yellow, 7–10 mm, deeply parted; lobes narrowly oblong, 9–13 × (2.5–)4–5.5 mm, apex acute or subobtuse. Filaments connate basally into a ca. 0.8 mm high ring, free parts very short; anthers 5.5–9 mm, apex obtuse, basifixed, opening by apical pores. Capsule ovoid, 4–6 mm in diam., ca. 6–8 mm high.

Mixed forests and scrub, streamsides; 1500–2200 m. S Yunnan [N Myanmar].


假排草 jia pai cao

Lysimachia simulans Hemsley

Herbs perennial, glabrous, 15–50 cm tall, with creeping stolons. Stems erect, terete, minutely glandular at apex. Leaves alternate, often confined to upper part of stem; petiole 0.5–1.5 cm; leaf blade elliptic to elliptic-lanceolate, rarely ovate, 4–8(–13) × 1–3(–4) cm, papery, abaxially glaucous, often small purplish punctate, adaxially becoming dark brown when dry, base cuneate, rarely subrounded, apex acuminate; veins 4 or 5 pairs; veinlets prominently reticulate. Flowers axillary, solitary, rarely 2 or 3 flowers aggregated at apex of extremely abbreviated twigs and appearing clustered. Pedicel 1.5–4.5 cm. Calyx lobes ovate, ca. 3 mm. Corolla yellow, parted nearly to base; lobes narrowly oblong, 8–15 × ca. 4 mm, apex acute. Filaments connate basally into a ring, fused with corolla, free parts very short; anthers 4.5–5 mm, basifixed, opening by apical pores. Capsule ivory-white, globose, 5–6 mm in diam.

Picea and broad-leaved forests; 1200–2500 m. Taiwan [Philippines].


阔叶假排草 kuo ye jia pai cao

Lysimachia confertifolia C. Y. Wu; L. sikokiana Miquel subsp. petelotii (Merrill) C. M. Hu; L. similis W. L. Sha; L. solaniiflora C. Y. Wu.

Herbs perennial, glabrous, 10–30 cm tall. Stems ascending to erect, terete, arcuate or decumbent at base, apex minutely brownish glandular. Lower leaves scalelike. Upper leaves alternate, usually confined to upper 2/3 of stem; petiole 2–8 mm; leaf blade ovate to elliptic or broadly elliptic, rarely elliptic-lanceolate, 3–14(–18) × 1.3–6.5(–9) cm, papery, base cuneate to subrounded, narrowly revolute, apex acute; veins 5 or 6 pairs, raised abaxially, impressed adaxially. Flowers axillary, solitary or 2–5 in axils of lower leaves. Pedicel 1.5–3 cm, elongating to 6 cm in fruit, glandular. Calyx 4–6(–7) cm; lobes ovate-lanceolate, glandular on margin. Corolla yellow, deeply parted; lobes oblong, 9–13(–20) × (2.5–)4–5.5 mm, apex acute or subobtuse. Filaments connate basally into a 0.8 mm high ring, free parts very short; anthers 5.5–9 mm, apex obtuse, basifixed, opening by apical pores. Capsule ovoid; style 6–9 mm. Capsule subglobose, ca. 4 mm in diam. Fl. May–Jun.

Open forests on calcareous formations; 600–2100 m. Guangdong, Guangxi, Guizhou, Hunan, Sichuan, Yunnan [N Vietnam].


景东香草 jing dong xiang cao

Herbs perennial, 15–30 cm tall, ± fragrant when dry. Stems of previous year decumbent, rooting at nodes. Stems of current year ascending to erect, conspicuously quadrangular
or weakly winged. Leaves alternate; petiole 0.8–1.2 cm; leaf blade ovate to broadly ovate, 1.5–3.2 × 1–2.2 cm, abaxially glabrous, adaxially ± bristly, base truncate to subcordate, rarely rounded, margin obscurely undulate, apex acute to apiculate; veins 3 or 4 pairs, lowest pair often basal; veinlets prominently reticulate abaxially. Flowers solitary, axillary. Pedicel ca. 2.5 cm. Calyx lobes lanceolate, 5–6 × 1–1.3 mm, abaxially costate, apex subulate. Corolla yellow, deeply parted; tube ca. 1 mm; lobes oblong, ca. 9 × 3 mm, apex obtuse. Filaments very short; anthers ca. 3 mm, basifixed, opening by apical pores. Capsule ca. 3 mm in diam., shorter than calyx. Fl. May–Jun.

* Mixed forests, streamsides; 2100–2600 m. S Yunnan (Jinghong Xian).

Although superficially resembling Lysimachia microcarpa, this species appears to be more closely related to L. capillipes Hemsley because of its herbaceous, angular stem and the shape of its leaves.


细梗香草 xi geng xiang cao

Herbs perennial, 40–60 cm tall, strongly curry-scented when dry. Stems 2 to many, erect, angular or winged, branched from middle. Leaves alternate; petiole 2–8 mm; leaf blade ovate to lanceolate, 1.5–7 × 1–3 cm, adaxially glabrous or sparsely bristly, base short attenuate to obtuse, rarely subrounded to truncate, often slightly asymmetrical, margin entire or obscurely undulate; veins 4 or 5 pairs; veinlets inconspicuously reticulate. Flowers solitary, axillary. Pedicel 1.5–3.5 cm. Calyx lobes ovate to lanceolate, 2–4 mm, apex acuminated to subulate. Corolla yellow, 6–8 mm, deeply parted; lobes narrowly oblong to linear, 5–7 × 1.8–3 mm, apex subobtuse. Filaments connate basally into a ca. 0.5 mm high ring, fused with corolla, free parts ca. 1.3 mm; anthers 3.5–4 mm, basifixed, opening by apical pores. Style filiform, slightly longer than stamens. Capsule globose, 3–4 mm in diam.

Mixed forests, streamsides, acidic soils, rocky limestone slopes; 300–2000 m. Fujian, Guangdong, Guangxi, Guizhou, S Henan, Hunan, Jiangxi, Sichuan, Taiwan, E Yunnan, Zhejiang [Philippines].

1a. Stems often winged; calyx lobes usually less than 4 mm, apex acuminate .......................... 23a. var. capillipes

1b. Stems angular; calyx lobes ca. 4 mm, apex subulate .......................... 23b. var. cavaleriei

23a. Lysimachia capillipes var. capillipes

细梗香草 (原变种) xi geng xiang cao (yuan bian zhong)

Lysimachia fragrans Hayata.

Stems herbaceous, often winged. Calyx lobes ovate to lanceolate, usually less than 4 mm, shorter than capsules, apex acuminate. Fl. Jun–Jul.

Mixed forests, streamsides, acidic soils; 300–2000 m. Fujian, N Guangdong, Guizhou, Hunan, Jiangxi, Sichuan, Taiwan, Zhejiang [Philippines].


石山细梗香草 shi shan xi geng xiang cao


Stems subwoody, angular. Calyx lobes lanceolate, ca. 4 mm, longer than capsules, apex subulate.

* Rocky limestone slopes; 300–1200 m. NE Guangdong, Guangxi, Guizhou, E Yunnan.


长叶香草 chang ye xiang cao

Herbs perennial, erect, 20–55 cm tall, aromatic when dry. Stems angular, simple or slightly branched in upper part, glandular at apex. Leaves alternate, evenly distributed on stem; petiole to 1.5 cm; leaf blade lanceolate, 2.5–6.5(–8) × 0.7–1.7 cm, adaxially glabrous or sparsely bristly, base attenuate, margin obscurely undulate, apex acuminate. Flowers solitary, axillary. Pedicel filiform, 2.5–3.5 cm. Calyx lobes ovate, ca. 2.5 mm, copiously minutely glandular inside, apex acuminate. Corolla yellow, deeply parted; lobes narrowly oblong, 4–5 × 1.6–1.8 mm, apex subobtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts very short; anthers 3–4 mm, basifixed, opening by apical pores. Style filiform, ca. 4 mm, as long as stamens. Capsule globose, ca. 3 mm in diam., longer than calyx. Fl. May.

Mixed forests; 1500–2200 m. S Yunnan [N Thailand].


金平香草 jin ping xiang cao

Herbs perennial, to 60 cm tall. Stems erect, terete, subfleshy, branched in upper part, minutely glandular when young. Lower leaves scalelike. Upper leaves alternate, ± crowded toward apex of stem; petiole 2.5–7.5 cm, glabrous; leaf blade oblong, 10–18 × 3.5–6 cm, membranous when dry, abaxially glabrescent, adaxially ± bristly to glabrate, base cuneate, apex short acuminate; veins 10–13 pairs, prominent. Racemes axillary, 4–5-flowered; peduncle ca. 1 cm, quadrangular; bracts narrowly lanceolate, 1–1.3 cm, subulate, adnate to pedicel at base. Pedicel 1–1.5 cm, subangular, apex thickened. Calyx lobes ovate, 9–10 × ca. 3 mm, apex acuminate to subulate; veins 7–9. Corolla pink; tube 2–2.5 mm; lobes oblong, 9.5–10 × 6–7 mm, apex rounded. Filaments connate basally into a ca. 1 mm high ring, free parts very short; anthers ca. 4.5 mm, basifixed, opening by apical pores. Ovary ovoid; style ca. 6 mm. Capsule unknown. Fl. Apr.

* Shaded areas near water. SE Yunnan (Jinping Xian).

**川香草** chuan xiang cao

Herbs perennial, erect, 30–70 cm tall. Stems ca. 3 mm in diam. at base, upper part thicker than lower part, triangular or quadrangular to narrowly winged, simple, often branched only in inflorescences, minutely brown glandular at apex. Leaves alternate; petiole 1–2.5 cm, narrowly winged; leaf blade elliptic to elliptic-lanceolate, 6–14 × 3–5.5 cm, membranous when dry, abaxially glabrous and purplish, adaxially ± bristly, base obtuse to cuneate, margin entire or sometimes obscurely undulate, apex acute to short acuminate; veins 5–7 pairs. Racemes axillary, corymbiform, 2–5-flowered; peduncle 2–4 cm, angular; bracts ovate, leaflike, 0.8–2 cm, short-stalked. Pedicel 2–3 cm. Calyx lobes overlapping at base, orbicular to slightly depressed, ca. 3 mm, apex apiculate. Corolla yellow, 8–11 mm, deeply parted; lobes oblong, 7–10 × 4–4.5 mm, apex obtuse. Filaments connate basally into a ca. 1 mm high ring, free parts very short; anthers 3–3.5 mm, basifixed, opening by apical pores. Capsule globose, ca. 4.5 mm in diam., with many fine vertical striations. Fl. May–Jun.

* Forest margins, streamsides; ca. 1000 m. Sichuan (Emei Shan), NE Yunnan.


**垂花香草** chui hua xiang cao

Herbs perennial, erect, 30–40 cm tall, with thick horizontal rhizomes. Stems herbaceous, subwoody at base, angular or narrowly winged, minutely brown glandular in upper part. Leaves alternate; petiole 1.3–3 cm, narrowly winged; leaf blade ovate to ovate-elliptic, 6–19 × 3.5–8 cm, membranous when dry, abaxially purplish and scurfy glandular, adaxially dark green and sparsely bristly, base short attenuate to subrounded, margin obscurely undulate, apex short acuminate; veins 6 or 7 pairs. Racemes terminal and axillary, elongate, 9–23 cm, 5– to many flowered; bracts leaflike, elliptic to lanceolate; lowest bracts ca. 2.8 × 1.5 cm, gradually reduced upward to ca. 1.5 mm. Pedicel ± drooping, 2–3.5 cm. Calyx lobes overlapping at base, suborbicular, ca. 4 mm, apex mucronate. Corolla yellow; tube 1–1.5 mm; lobes oblong, 8.5–9 × 4–5 mm, apex obtuse. Filaments connate basally into a ca. 1 mm high ring, fused with corolla, free parts very short; anthers 3–4 mm, basifixed, opening by apical pores. Ovary ovoid, style ca. 4 mm. Capsule unknown. Fl. May.

* Wet mixed forests, streams in mountain valleys, humus-rich soils; 800–1700 m. N Guangdong, Guangxi, SW Hunan, SE Yunnan.


**蔓延香草** man yan xiang cao

Herbs perennial, 15–30 cm tall, not aromatic. Stems ascending to erect from creeping base, with raised lines descending from base of leaves, uppermost part ± minutely brown glandular. Leaves alternate, ± crowded toward apex of stem; upper leaves often 1–2 × as large as lower leaves; petiole 4–10 mm, narrowly winged by decurrent blade; leaf blade broadly ovate, 2.5–4.5 × 1.5–3 cm, glabrous or adaxially ± bristly, base rounded to truncate, rarely subcordate, margin obscurely undulate, apex acute to apiculate; veins 3 or 4 pairs; veinlets conspicuous abaxially. Flowers solitary, axillary. Pedicel 2–4.5 cm. Calyx lobes orbicular to lanceolate, 4–6 mm. Corolla yellow, 0.9–1.5 cm,
30a. Lysimachia trichopoda var. trichopoda

Herbs perennial, to 30 cm tall. Stems erect to arcuate at base, quadrangular or narrowly winged, usually branched from middle. Leaves alternate; petiole 0.8–2.5 cm, narrowly winged by decurrent blade; leaf blade lanceolate, 4–7 × 0.6–1.5 cm, abaxially glabrous, adaxially sparsely bristly or glabrate, minutely glandular, base attenuate, margin finely papillate, apex acuminate; veins 4 or 5 pairs; veinlets inconspicuous. Flowers solitary, axillary. Pedicel 2–2.5 cm, elongating to 3 cm in fruit. Calyx lobes narrowly ovate, ca. 4 mm, apex acuminate to subulate. Corolla yellow, deeply parted; lobes broadly elliptic, 3–5 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts very short; anthers ca. 1.8 mm, basifixed, opening by apical pores. Style ca. 4 mm. Capsule subglobose, 3.5–4 mm in diam., as long as persistent calyx. Fl. Jun–Jul.

1b. Calyx lobes lanceolate to ovate-lanceolate, apex acuminate ....................... 30b. var. sarmentosa

* Damp areas in open forests and ravines; 1200–1800 m. S Guizhou, S Sichuan, Yunnan.

30b. Lysimachia sarmentosa var. sarmentosa

Herbs perennial, to 30 cm tall. Stems erect to arcuate at base, quadrangular or narrowly winged, usually branched from middle. Leaves alternate; petiole 0.8–2.5 cm, narrowly winged by decurrent blade; leaf blade lanceolate, 4–7 × 0.6–1.5 cm, abaxially glabrous, adaxially sparsely bristly or glabrate, minutely glandular, base attenuate, margin finely papillate, apex acuminate; veins 4 or 5 pairs; veinlets inconspicuous. Flowers solitary, axillary. Pedicel 2–2.5 cm, elongating to 3 cm in fruit. Calyx lobes narrowly ovate, ca. 4 mm, apex acuminate to subulate. Corolla yellow, deeply parted; lobes broadly elliptic, 3–5 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts very short; anthers ca. 1.8 mm, basifixed, opening by apical pores. Style ca. 4 mm. Capsule subglobose, 3.5–4 mm in diam., as long as persistent calyx. Fl. Jun–Jul.

30a. Lysimachia trichopoda var. trichopoda

Herbs perennial, to 30 cm tall. Stems erect to arcuate at base, quadrangular or narrowly winged, usually branched from middle. Leaves alternate; petiole 0.8–2.5 cm, narrowly winged by decurrent blade; leaf blade lanceolate, 4–7 × 0.6–1.5 cm, abaxially glabrous, adaxially sparsely bristly or glabrate, minutely glandular, base attenuate, margin finely papillate, apex acuminate; veins 4 or 5 pairs; veinlets inconspicuous. Flowers solitary, axillary. Pedicel 2–2.5 cm, elongating to 3 cm in fruit. Calyx lobes narrowly ovate, ca. 4 mm, apex acuminate to subulate. Corolla yellow, deeply parted; lobes broadly elliptic, 3–5 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts very short; anthers ca. 1.8 mm, basifixed, opening by apical pores. Style ca. 4 mm. Capsule subglobose, 3.5–4 mm in diam., as long as persistent calyx. Fl. Jun–Jul.

思茅香草  jing hua xiang cao

Herbs erect, to 40 cm tall. Stems obtusely quadrangular, ca. 8 mm in diam., woody, branched from middle. Branches slightly angular, minutely dull yellow glandular. Leaves alternate; petiole 1–2 cm; leaf blade elliptic, 6–15 × 2.5–6.3 cm, glabrous, base cuneate, margin entire, apex acute to short acuminate; veins 6–10 pairs, raised abaxially. Inflorescences racemose. Pedicel 2–2.5 cm in fruit, glandular. Calyx lobes narrowly ovate, ca. 4 × 2 mm, margin minutely glandular, apex acute. Fruit borne on naked lower part of branches. Capsule subglobose, ca. 5 mm in diam., 5-valved.

* Shaded forest areas, in shrubs. W Yunnan (Luxi Xian).

This species is known only from the type collection. Lysimachia cauliflora is in many ways similar to Lysimachia laxa from which it differs by having the flowers borne on naked branches that continue apically into leafy shoots.


思茅香草  si mao xiang cao

Herbs perennial, 15–180 cm tall or long. Stems single or few, erect to reclined, quadrangular, with short wings on ridges. Leaves opposite, subsessile or petiole to 8 mm; leaf blade elliptic to broadly ovate, 2–10 × 1.2–5 cm, finely papillate, abaxially densely minutely glandular, adaxially glabrous or ± bristly, base subrounded to broadly cuneate, margin obscurely undulate, apex acute; veins 5–7 pairs, raised abaxially. Flowers 1 or 2(–4), in axils of medial and upper leaves. Pedicel 2–3.5 cm. Calyx lobes ovate, ca. 6 × 1.8 mm, apex acuminate to subulate, costate. Corolla yellow, ca. 8 mm, deeply parted; lobes broadly obovate, ca. 7 × 5 mm, apex obtuse. Filaments connate basally into a ca. 0.5 mm high ring, free parts ca. 0.8 mm; anthers ca. 2.3 mm, basifixed, opening by short slits. Style ca. 4.7 mm. Capsule subglobose, ca. 4 mm in diam., shorter than calyx.

* Mixed woodlands, in shrubs; 2000–3000 m. W Yunnan.

36a. Lysimachia engleri var. engleri

思茅香草(变种)  si mao xiang cao (yuàn biàn zhòng)

Herbs perennial, 30–100 cm tall. Stems arcuately elongate in upper part, 0.5–1.8 m. Leaf blade 4–10 × 2.5–5 cm. Corolla ca. 1 cm, ca. 1.5 × as long as calyx. Fl. Apr–May.

* In shrubs on mountain slopes; 2200–2400 m. SW Sichuan, S and SW Yunnan.


小思茅香草  xiao si mao xiang cao


Herbs erect, not arcuately elongate, 15–30 cm. Leaf blade 2–4 × 1.2–2 cm. Corolla ca. 7 mm, ca. as long as to slightly longer than calyx. Fl. May.

* Clearings, margins of mountain woodlands, ca. 2400 m. N and W Yunnan.


心叶香草  xin ye xiang cao

Herbs perennial, 30–100 tall. Stems ascending to erect, arcuately elongate in upper part, distinctly quadrangular, with short wings or ridges. Leaves opposite; petiole 4–7 mm, narrowly winged by decurrent leaf blade; leaf blade ovate, 1–4 × 1.2–2.6 cm, abaxially glabrous, adaxially ± bristly, base cordate, margin densely papillate, apex short acuminate; veins 3–5 pairs, basal, prominent. Flowers solitary, axillary. Pedicel filiform, 2.5–4.3 cm. Calyx lobes ovate, 4–6.5 mm, stalked glandular on margin and inside, apex acuminate to subulate. Corolla yellow, ca. 6 mm, deeply parted; tube ca. 1.5 mm; lobes broadly ovate, 4–4.5 mm wide. Filaments connate basally into a ca. 0.5 mm high ring, free parts very short; anthers ca. 2.3 mm, basifixed, opening by short slits. Style ca. 4 mm. Capsule subglobose, ca. 4.5 mm in diam. Fl. Jun.

* Mixed woodlands, in shrubs; 2000–3000 m. W Yunnan.


双花香草  shuang hua xiang cao

Herbs perennial, 30–100 cm tall. Stems arcuately elongate from erect base, quadrangular, ± winged on ridges. Leaves opposite; petiole 0.7–2.5 cm, narrowly winged; leaf blade ovate to ovoate-lanceolate, 4.5–8 × 2.5–5.5 cm, glabrescent or adaxially ± strigillose, minutely brown glandular, base cordate, margin obscurely undulate and densely papillate, apex acute; veins 4–6 pairs; veinlets obscure. Inflorescences in axils of leaves. Flowers usually paired. Pedicel arcuate-spread, 1–2.5 cm, thickened toward apex. Calyx lobes ovate-lanceolate, ca. 6.5 mm, glandular on margin, costate. Corolla cream-yellow, ca. 7 mm, deeply parted; lobes broadly ovate, ca. 6 × 4 mm. Filaments connate basally into a ca. 1.3 mm high ring, free parts ca. 0.8 mm; anthers ca. 2 mm, basifixed, opening by short slits. Capsule

云南过路黄 yun nan guo lu huang

Lysimachia albecens Bonati; L. yunnanensis Franchet.


Opening by lateral slits, ca. 1.5 mm, erect. Ovary ovoid; style 4–5 mm. Capsule subglobose, 3–4 mm in diam.

38. Lysimachia peduncularis


假过路黄 jia guo lu huang

Herbs annual, 5–30 cm tall. Stems erect or arcuate at base, striate or weakly angular; branches usually few, above middle. Leaves spirally arranged, ± crowded toward apex of stem; petiole 5–10 mm; leaf blade lanceolate, 1.5–4.5 cm × 5–10 mm, striigillose adaxially and along midvein abaxially, base cuneate-attenuate, apex acute to subacute; veins 5–7 pairs; veinlets visible. Flowers solitary, axillary, confined to upper part of plant. Pedicel 2.5–4.5 cm, glabrous. Calyx lobes oblong-lanceolate, 3–5 mm, short acuminate to acute. Corolla pale yellow, 3–4 mm, parted to middle; lobes elliptic, apex acute. Filaments connate basally into a ca. 0.5 mm high ring, free parts 1.5–2 mm; anthers indistinctly dorsifixed to nearly basifixed, opening by lateral slits, ca. 1.5 mm. Ovary ovoid; style 4–5 mm. Capsule subglobose, 3–4 mm in diam.


毛黄连花 mao huan lian hua

Herbs perennial, 60–120 cm tall, with creeping rhizomes. Stems erect, terete or obtusely quadrangular, simple or paniculately branched, pubescent. Leaves opposite or whorled; petiole 2–10 mm; leaf blade oblanceolate to ovate-lanceolate, 6–17 × 1–5 cm, abaxially glabrescent, sparsely red or black glandular punctate, abaxially pubescent, base obtuse to subrounded, margin entire or obscurely repand, apex acuminate; veins to more than 10 pairs; veinlets prominent. Panicles terminal and axillary; peduncle 1.5–4.5 cm; bracts linear-subulate, 2–8 mm. Pedicel 3–12 mm. Calyx lobes lanceolate, 3.5–6 × 1–1.5 mm, margin black glandular striate and glandular ciliolate. Corolla bright yellow, 8–11 mm, 1.5–2 cm in diam., deeply parted; lobes elliptic, 7–10 × 3.5–6 mm, adaxially densely glandular. Filaments connate basally into a ca. 1.5 mm high ring, free parts ca. 2.5 mm; anthers linear, dorsifixed, opening by lateral slits, ca. 3 mm. Ovary ovoid, style 4–5 mm. Capsule subglobose, 3–4 mm in diam.


黄连花 huang lian hua

Lysimachia vulgaris Linnaeus subsp. davurica (Ledebour) Tatewaki; L. vulgaris var. davurica (Ledebour) R. Knuth.

Herbs perennial, 40–80 cm tall, with creeping rhizomes. Stems erect, stout, simple or weakly branched, glabrous basally, viscid-pubescent apically. Leaves opposite or in whorls of 3 or 4, very short petiolate or sessile, elliptic-lanceolate to linear-lanceolate, 4–12 × 0.5–4 cm, abaxially glabrous except for glandular puberulent midvein, sparsely black glandular punctate, adaxially glabrescent, base obtuse to subrounded, apex acute to acuminate; veins usually more than 10 pairs; veinlets prominent. Panicles terminal and axillary; bracts linear, densely glandular puberulous. Pedicel 7–12 mm. Calyx lobes triangular, ca. 3.5 mm, margin black glandular striate. Corolla bright yellow, ca. 8 mm, deeply parted; lobes oblong, adaxially densely glandular, apex rounded. Filaments connate basally into a ca. 1.5 mm high ring, free parts 2–3 mm, densely glandular; anthers oblong-obovate, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary ovoid; style 4–5 mm. Capsule subglobose, 2–4 mm in diam. Fl. Jun–Aug. 2n = 29, 42, 56, 70, 84 (85, 86).

Mountain meadows, woodland margins, in shrubs. Heilongjiang, Jiangsu, Jilin, Liaoning, Nei Mongol, Shandong, Yunnan, Zhejiang [Japan, Korea, Mongolia, Russia].


香港过路黄 xiang gang guo lu huang

Herbs perennial, 1–4 cm tall, with dense long coarse grayish hairs throughout. Stolons 4–15 cm, arising from leaf rosette, leafy at apex. Leaves numerous, spirally arranged, ± forming a rosette, subsessile, spatulate to narrowly oblong-lanceolate, 3–6 × 0.6–1.5 cm, tapering toward base, apex rounded and mucronate. Flowers solitary, axillary. Pedicel ca. as long as to slightly longer than leaves. Calyx lobes lanceolate, 5–6 × ca. 2 mm, apex acute. Corolla yellow, deeply parted; tube 1–1.5 mm; lobes obovate-elliptic, 4–15 mm wide, apex rounded, erose. Filaments ca. 3 mm, lower 1/2
conenate into a tube; anthers narrowly oblong, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary ovoid; style slightly shorter than stamens. Capsule unknown. Fl. Apr.


龙津过路黄 long jin guo lu huang

Herbs perennial, 2–5 cm tall, glabrous throughout. Stems copiously minutely glandular; stolons 6–17 cm, arising from leaf rosette, leafy at apex. Leaves spirally arranged, ± forming a rosette; petiole 1–2 cm, narrowly winged; leaf blade elliptic-ob lanceolate, 3–6.5 × 1.2–2.2 cm, minutely glandular, base long attenuate, margin narrowly revolute, apex acute to obtuse; veins 3 or 4 pairs, prominent abaxially; veinlets invisible. Flowers solitary, axillary. Pedicel 2.5–3 cm in fruit, glandular. Calyx enlarging to 7 mm in fruit; lobes broadly lanceolate, ca. 2.5 mm wide. Anthers dorsifixed, opening by lateral slits. Capsule subglobose, ca. 4 mm in diam.

* On limestone rocks in forests; 300–500 m. S Guangxi (Longzhou Xian).


茂汶过路黄 mao wen guo lu huang

Herbs perennial, to 10 cm tall, with numerous fibrous roots. Stems erect or arcuate at base, simple or weakly branched from lower part, rust-colored villous, minutely glandular. Lower leaves ± forming a rosette, usually smaller, abaxially with pilose midvein and veins, adaxially glabrous, base rounded, abruptly narrowed into a 2–3 mm petiole. Upper leaves opposite, medial 3 or 4 pairs equally spaced, sessile, ovate to broadly ovate, 0.9–1.5 cm × 5–11 mm. Flowers solitary, in axils of upper leaves. Pedicel filiform, 0.9–1.6 cm, pilose. Calyx lobes subulate-lanceolate, 4–5.5 × ca. 3.3 mm, margin densely papillate, apex long acuminate. Corolla yellow, rotate, 1.1–1.3 cm in diam., e punicate; lobes ovate-lanceolate. Filaments connate basally into a ring; anthers linear, dorsifixed, opening by lateral slits, ca. 2.5 mm. Ovary glabrous; style ca. 4–5 mm. Capsule unknown. Fl. May–Jun.

* About 1300 m. W Sichuan (Maowen Qiang).


峨眉过路黄 e mei guo lu huang

Lysimachia limprichtii Pax & K. Hoffmann; L. moupinensis (Franchet) R. Knuth; L. nemorum Linnaeus var. moupinensis Franchet.

Herbs perennial, 30–60 cm tall. Stems erect from procumbent base, terete, reddish brown, usually simple, with multicellular hairs. Leaves opposite, occasionally alternate in upper part of stem, sessile or subsessile. Lower leaves smaller, ovate to scalelike. Medial and upper leaves ovate-lanceolate to lanceolate, 4–8 × 1–4 cm, initially sparsely bristly, abaxially sparsely reddish or black glandular punctate and puberulous veined, adaxially becoming glabrescent, base rounded, apex acuminate; veins 3 or 4 pairs; veinlets inconspicuous. Flowers solitary, axillary. Pedicel filiform, 1.5–7 cm, densely pubescent. Calyx lobes linear-lanceolate, 5–7 mm, pubescent, apex acuminate. Corolla yellow, rotate, 1.2–2 cm in diam.; tube ca. 1.5 mm; lobes ovate-elliptic to elliptic-lanceolate, 6–8 × 3.5–6 mm, sparsely or brown glandular, apex acute. Filaments 3–4 mm, connate basally into a ring; anthers linear, dorsifixed; opening by lateral slits, ca. 2 mm. Ovary glabrous; style ca. 5 mm. Capsule subglobose, ca. 3 mm in diam. Fl. Jun.

* Grassy mountain slopes; 1700–2200 m. N Guizhou, W Hubei, NE Hunan, E Sichuan.


巴山过路黄 ba shan guo lu huang

Herbs perennial, 15–30 cm tall. Stems obtusely quadrangular, usually branched above middle, densely brownish pubescent. Lower leaves suborbicular to scalelike, base clasping, apex obtuse. Upper leaves opposite, sessile, ovate-elliptic to oblong-lanceolate, 3–6 × 1–1.8 cm, minutely glandular punctate, initially bristly, becoming glabrescent, base rounded to broadly cuneate, apex subobtuse to acute; veins 4 or 5 pairs; veinlets inconspicuous. Flowers solitary, in axils of medial and upper leaves. Pedicel 5–10 mm. Calyx lobes lanceolate, ca. 5 × 1 mm, pubescent, costate. Corolla yellow, rotate, 1.1–1.5 cm in diam.; tube ca. 1 mm; lobes obovate-elliptic, ca. 5 × 3–4 mm, apex rounded. Filaments connate basally into a ca. 0.5 mm high ring, free parts ca. 2 mm; anthers linear, dorsifixed, opening by lateral slits, 1–1.5 mm. Ovary ovoid; style ca. 3 mm. Capsule subglobose, ca. 3 mm in diam. Fl. May–Jun.

* Grassy mountain slopes; 1800–3500 m. W Sichuan, NE Yunnan.


白花过路黄 bai hua guo lu huang

Herbs perennial, 6–15 cm tall. Stems erect or arcuate at base, terete, simple or weakly branched, retrosebly appressed pubescent. Lower leaves scalelike, closely spaced. Upper leaves opposite or occasionally alternate near apex of stem; petioles of medial and upper leaves 2–4 mm, narrowly winged by decurrent leaf blade; leaf blade ovate to lanceolate, 0.5–2.0 cm × 4–9 mm, abaxially pubescent, sparsely transparent glandular, adaxially glabrous, base cuneate, apex obtuse to subacuminate. Flowers solitary, in axils of upper leaves. Pedicel recurved in fruit, 1.2–3 cm, pubescent. Calyx lobes lanceolate, 5–6 × 1–2 mm, densely transparent glandular punctate, midvein pubescent abaxially. Corolla white, rotate; tube ca. 1 mm; lobes ovate-elliptic to elliptic, 6–7 × 3–4 mm, sparsely transparent glandular, apex obtuse to rounded. Filaments connate basally into a ca. 1 mm high ring, free parts 2–2.5 mm; anthers dorsifixed, opening by lateral slits, ca. 2 mm.
Ovary pubescent at apex; style ca. 5 mm. Capsule unknown. Fl. Jun–Jul.

* Marshes, in damp rock crevices; 1500–1700 m. Anhui (Huang Shan), Guangxi (Xiangzhou Xian), Zhejiang (Longquan Xian).


琴叶过路黄  * qin ye guo lu huang

Herbs perennial, 25–40 cm tall. Stems often many, erect, terete, branched above middle, densely puberulent. Leaves opposite, sessile, lanceolate to narrowly lanceolate, 1–6 cm × 4–13 mm, tapering toward auriculate semi-clasping base, abaxially with densely pubescent veins and scattered transparent glands, adaxially glabrous; veins 4 or 5 pairs; veinlets invisible. Flowers solitary, axillary, often with flowers aggregated near apex of branches in a corymblike cluster. Lowest pedicels to 8 mm, gradually reduced upward, pubescent. Calyx lobes lanceolate, 4–5 × ca. 2 mm, apex acuminate-subulate; midvein distinctly raised abaxially. Corolla yellow, 6–7 mm, deeply parted; tube 1–2 mm; lobes elliptic, sparsely transparent glandular. Filaments connate basally into a ring, free parts 2–4 mm; anthers dorsifixed, opening by lateral slits. Ovary glabrous; style ca. 5 mm. Capsule brown, subglobose, ca. 2.5 mm in diam. Fl. Jun.

* Grassy mountain slopes. W Hubei, E Sichuan.

** Lysimachia longipes ** Hemsley, J. Linn. Soc., Bot. 29: 316. 1892.

长梗过路黄  * chang geng guo lu huang

* Lysimachia longipes Hemsley f. simplicicaulis Chien.

Herbs annual, erect, 35–75 cm tall. Stems straw-colored when dry, terete, often branched only in inflorescences. Leaves opposite, sessile or subsessile, ovate-lanceolate, 4–10 × 1–2.3 cm, sparsely dark purple or black glandular punctate and striate, especially near margin, base rounded, apex acut-acute; veins 4 or 5 pairs; veinlets inconspicuous. Racemes terminal, laxly axillary, 4–11-flowered; peduncle 6–12 cm; bracts subulate, 3–5 mm. Pedicel filiform, 1–3 cm, usually divaricate. Calyx lobes lanceolate, 5–7 × 1.2–1.5 mm, dark glandular punctate, narrowly hyaline margined. Corolla yellow, 1.2–1.5 cm in diam.; tube 1.5–2 mm; lobes rhomboid-ovate to narrowly oblong, ca. 5 × 3–4 mm, sparsely dark purple glandular striate near apex, apex acute. Filaments connate basally into a 2–2.5 mm high ring, free parts 1.5–3.5 mm; anthers narrowly oblong, dorsifixed, opening by lateral slits, ca. 1.2 mm. Ovary ovoid, style 5–6 mm. Capsule subglobose, 3–3.5 mm in diam. Fl. May–Jun.

* Mountain stream valleys, open forests; 300–800 m. S Anhui, N Fujian, N Jiangxi, Zhejiang.


福建过路黄  * fu jian guo lu huang

* Lysimachia rosthorniana Handel-Mazzetti.

Herbs glabrous, 20–80 cm tall. Stems 2 to many, erect, terete at base, upper part with raised lines descending from bases of leaves, sparsely black glandular striate. Lowest leaves usually scalelike. Leaves alternate or subopposite on lower part of stem, occasionally in whorls of 3 or 4, sessile or subsessile, lanceolate to narrowly lanceolate, 4–14 × 0.9–2.3 cm, densely black glandular punctate and striate, base cuneate to subrounded, apex long acuminate; veins ca. 5 pairs. Flowers solitary, in axis of upper leaves, rarely aggregated at apex, racemose from reduction of upper leaves to bractlike leaves; bracts inserted on rachis. Pedicel 1.5–5 cm. Calyx lobes narrowly lanceolate, 7–11 × 1–2 mm, black glandular punctate, narrowly hyaline margined; veins 3–5. Corolla yellow, ca. 1 cm; tube 3–5 mm; lobes broadly ovate, ca. 5 mm wide, black glandular striate. Filaments connate basally into a ca. 2.5 mm high tube, free parts 2.5–4 mm; anthers oblong, dorsifixed, opening by lateral slits, 1.2–2 mm. Ovary ovoid; style 6–7 mm. Capsule subglobose, 3.5–5 mm in diam., elongate, black glandular. Fl. May.

* At margins of mountain woodlands, grassy slopes, mountain stream valleys; 500–1000 m. W Fujian, NE Guangdong, E and S Jiangxi, S Zhejiang.


紫脉过路黄  * zi mai guo lu huang

Herbs perennial, to 45 cm tall, glabrous throughout. Stems erect, often branched above middle, sparsely black glandular punctate and striate. Branches usually shorter than leaves, leafy only at apex. Leaves opposite, sessile or petiole 2–4 mm; leaf blade lanceolate, 6–8 × 1.5–2.2 cm, densely dark glandular punctate, especially near margin, base cuneate, margin entire or obscurely repand, apex acuminatae; midvein reddish, keeled abaxially; veins 5 or 6 pairs, prominent. Racemes terminal, compact, 4- to many flowered; peduncle 0.5–1.5 cm, glabrous; bracts ovate, ca. 9 mm, adnate to upper part of pedicel. Pedicel 2–4 mm, glabrous. Calyx lobes lanceolate, ca. 9 × 15 mm, black glandular punctate near apex, apex acuminatae-subulate. Corolla yellow; tube 1.5–2 mm; lobes elliptic, 8–8.5 × ca. 5 mm, black glandular striate, apex obtuse. Filaments connate basally into a ca. 2.5 mm high tube, free parts 3–5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.7 mm. Ovary glabrous, black glandular punctate; style ca. 6.5 mm. Capsule unknown. Fl. Jun.

* Forest margins, streamsides. SE Zhejiang.


耳柄过路黄  er bing guo lu huang

Herbs perennial, 20–60 cm tall, rust-colored striigillose throughout. Stems erect, nearly terete in lower part, obtusely quadrangular in upper part, simple or weakly branched. Leaves opposite; petiole 1–3 cm, auriculate and semi-clasping at base; leaf blade elliptic-ovate, 3–7.5 × 1.5–4 cm, base broadly cuneate to subrounded, apex acute; veins 4–6 pairs, slightly raised abaxially; veinlets invisible. Racemes axillary, 4–10-flowered; peduncle 1–4 cm; bracts narrowly lanceolate, 5–8 mm, ± adnate to base of pedicel. Pedicel 2–5
mm. Calyx lobes lanceolate, 5–7.5 × ca. 1.5 mm, costate. Corolla yellow, slightly longer than calyx; tube ca. 1 mm; lobes 6–8 × 3–4 mm, sparsely transparent glandular, apex acute. Filaments conenate basally into a 2–2.5 mm high tube, free parts 2–3.5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary sparsely strigillose; style 4–5 mm. Capsule subglobose, ca. 3 mm in diam. Fl. May–Jun.

* Mountain valleys, streamsides; 600–1700 m. W Guangxi, SE Yunnan [N Vietnam].


南川过路黄 nan chuan guo lu huang

Herbs perennial, 25–40 cm tall. Stems purplish, procumbent, usually simple; upper part erect, subterete, slightly swollen at nodes, glabrous, young parts densely minutely brown glandular. Leaves opposite; petiole 1.3–2 cm, narrowly winged, base auriculate; leaf blade ovate to ovate-lanceolate, 4–9.5 × 2–4 cm, abaxially subglabrous, adaxially densely bristly, becoming glabrescent, base subrounded, apex acuminate; veins bristly, minutely red glandular punctate, 6–9 pairs; veins inconspicuous. Racemes axillary, lax, corymbiform, 2–4-flowered; peduncle 1–4 cm; bracts subulate, 4–7 mm. Pedicel 0.8–2 cm, sparsely glandular. Calyx lobes lanceolate, 7–9 mm, glabrous, densely red glandular punctate, midvein distinctly raised abaxially. Corolla yellow, 8–10(–13) mm; tube ca. 1.7 mm; lobes elliptic, red glandular punctate, apex rounded. Filaments connate basally into a ring or thin tube, free parts 3.5–5 mm; anthers dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary glabrous; style to 6 mm. Capsule subglobose, ca. 4 mm in diam. Fl. Jul–Aug.

* Woodlands; 1600–1900 m. Sichuan (Nanchuan Xian).


贯叶过路黄 guan ye guo lu huang

Herbs perennial, 20–40 cm tall. Stems erect, dull brownish red at base, branched above middle, initially strigillose. Leaves opposite, connate-perfoliate, lanceolate, occasionally ovate on upper part of stem, 2–7.5 × 0.6–2 cm, contracted at lower part and then dilated and connate with opposite leaf base, densely strigillose and transparent glandular punctate; midvein raised abaxially, pilose; veins 3 or 4 pairs. Flowers solitary, in axils of upper leaves. Lowest pedicels recurved in fruit, to 2.5 cm, gradually reduced upward, densely strigillose. Calyx lobes lanceolate, ca. 6 mm, enlarging to 1 cm in fruit, densely strigillose, abaxially transparent glandular punctate. Corolla yellow, slightly longer than calyx, deeply parted; tube 1.5–2 mm; lobes broadly ovate, apex obtuse. Filaments connate basally into a 2–2.5 mm high tube, free parts 4–4.5 mm; anthers dorsifixed, opening by lateral slits. Ovary ovoid; style ca. as long as stamens. Capsule brown, subglobose, 4–5 mm in diam., sparsely strigillose on upper part.

* Mountain valleys, woodlands; 900–1100 m. S Anhui, N Jiangxi.


山萝过路黄 shan luo guo lu huang

Herbs perennial, (5–)15–50 cm tall, densely strigillose. Stems erect or ascending, terete, often branched. Leaves opposite, short petiolate or sessile, ovate to linear-lanceolate, 1.5–9 × 0.3–2.5 cm, sparsely transparent glandular, base cuneate, apex acuminate, rarely acute to subobtuse; veins 4 or 5 pairs; veinlets inconspicuous. Flowers solitary, in axils of upper leaves, occasionally flowers ± aggregated toward apex, racemose from reduction of upper leaves to bractlike leaves. Lowest pedicels recurved in fruit, to 2 cm, gradually reduced to 4–7 mm. Calyx lobes lanceolate, 6–8 × 1–1.5 mm, transparent glandular punctate, apex acuminate-subulate, cotstate. Corolla yellow, 5–9 mm; tube 1–2 mm; lobes obovate-elliptic, apex rounded. Filaments connate basally into a ring or thin tube, free parts 3–5 mm; anthers dorsifixed, opening by lateral slits. Style ca. 6 mm, rust-colored pubescent on lower part and ovary apex. Capsule brown, subglobose, 3–4 mm in diam.

* Forest margins, streamsides, in shrubs, grassy mountain slopes, cliffs; 400–1200 m. SE Gansu, NE Guangxi, NE Guizhou, SW Hubei, Hunan, SW Shanxi, Sichuan.

1a. Leaf blade 15–25 × 3–6 mm; flowers 5–6 mm

1b. Leaf blade 30–90 × 5–25 mm; flowers 7–9 mm.

2a. Leaves petiolate .................................. 56c. var. *brunnelloides* 

2b. Leaves sessile, clasping at base .......................... 56b. var. *amplexicaulis*


抱茎山萝过路黄 bao jing shan luo guo lu huang

Plants 15–50 cm tall. Petiole 2–10 mm, ± dilated and auriculate at base; leaf blade ovate-lanceolate to narrowly lanceolate, 3–9 × 0.5–2.5 cm. Corolla 7–9 mm; tube 1–2 mm; lobes obovate-elliptic, 6–7 × 4–6 mm, apex obtuse. Fl. May–Jun.

* Forest margins, in shrubs; 700–1200 m. NE Guangxi, NE Guizhou, SW Hubei, Hunan, E Sichuan.


小山萝过路黄 xiao shan luo guo lu huang

Plants to 48 cm tall. Leaves sessile, clasping at base, 4–7 × 1–2.5 cm. Corolla 7–9 mm; tube ca. 2 mm; lobes rhomboid-ovate, ca. 6 mm wide, apex acute. Fl. Jun.

* Streamsides, in shrubs; ca. 1000 m. NE Guangxi, W Hunan.

Plants 5–20 cm tall. Petiole 2–4 mm; leaf blade lanceolate to linear-lanceolate, 1.5–2.5 cm × 3–6 mm, Corolla 5–6 mm; tube ca. 1 mm; lobes obovate-elliptic, ca. 4 mm wide. Fl. May–Jun.

* Grassy mountain slopes, cliffs; 400–900 m. SE Gansu, SW Shanxi, N Sichuan.


展枝过路黄 zhan zhi guo lu huang

Herbs perennial, 60–100 cm tall. Stems erect, usually purplish on lower part, subterete, branched at middle, sparsely pubescent, becoming glabrescent. Branches divaricate. Leaves opposite; petiole (0.5–)1–2 cm, narrowly winged, base subauriculate and clasping; leaf blade lanceolate to oblong-lanceolate, 6–12 × 1.5–3.5 cm, abaxially with sparsely pubescent veins, adaxially glabrous, base cuneate, decurrent, apex acuminate-acuminate. Umbels axillary, 6- to many flowered. Pedicel 1–1.5 cm, sparsely pubescent, becoming glabrescent. Branches purplish on lower part, subterete, branched at middle, densely stringy roots. Stems prostrate to decumbent, 7–15 cm; tube ca. 1 mm; lobes obovate, 4–6 mm wide, erose near rounded apex. Filaments connate basally into a 0.5–1 mm high ring, free parts 1.5–2.5 mm; anthers ovate-oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary puberulous; style ca. 3 mm. Capsule brown, subglobose, ca. 4 mm in diam.

* Grassy mountain slopes, mountain stream valleys. W Hubei, NE Hunan.


小寸金黄 xiao cun jin huang

Lysimachia leveillei Petitmengin.

Herbs perennial, 4–25 cm tall, with numerous stout stringy roots. Stems often many, erect or ascending-erect, simple or branched from base, with dense multicellular hairs. Lower leaves 1 or 2 pairs, scalelike. Upper leaves opposite or alternate; petiole 2–3 mm or subsessile; leaf blade elliptic to suborbicular, 1–2.5 × 0.8–1.8 cm, with multicellular hairs, base cuneate to subrounded, apex subrounded, rarely acute. Flowers solitary, in axils of upper leaves. Pedicel 1–1.5 cm, sparsely pubescent, glandular. Calyx 6–7 mm in fruit, parted nearly to base; lobes lanceolate, ca. 1.5 mm wide, apex acuminate-subulate; midvein raised abaxially. Anthers dorsifixed, opening by lateral slits. Capsule subglobose, 3.5–4 mm in diam.

* Grassy mountain slopes, mountain stream valleys. W Hubei, NE Hunan.

59a. Lysimachia remotav. remot a

疏节过路黄 shu jie guo lu huang

Herbs perennial. Stems prostrate to decumbent, 7–15 cm; tube ca. 1 mm; lobes obovate, 4–6 mm wide, transparent glandular punctate, apex rounded. Filaments connate basally into a ca. 1 mm high ring, free parts ca. 2 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary glabrous; style ca. 3.5 mm. Capsule subglobose, ca. 3 mm in diam. Fl. Jun–Aug.

* Grassy banks, in shaded rock crevices, forest margins; 1000–1400 m. Fujian, S Jiangsu, Jiangxi, Taiwan, Zhejiang.


小茄 xiao jia

Herbs perennial. Stems prostrate to decumbent, 7–15 cm; tube ca. 1 mm; lobes obovate, 4–6 mm wide,-transparent glandular punctate, apex rounded. Filaments connate basally into a ca. 1 mm high ring, free parts ca. 2 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary glabrous; style ca. 3.5 mm. Capsule subglobose, ca. 3 mm in diam. Fl. Jun–Aug.

* Grassy banks, forest margins; 1000–1400 m. N Jiangxi.

59c. Lysimachia cephalantha Wight var. typica R. Knuth; L. deltoidea Wight var. formosana Honda.
yellow, deeply parted, ca. as long as calyx, 5–8 mm in diam.; lobes triangular-ovate, transparent glandular punctate. Filaments connate basally into a ca. 1 mm high ring, free parts 1–2 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary pubescent; style 2–3 mm. Capsule subglobose, 3–4 mm in diam., pubescent at apex. Fl. Mar–Apr. 2n = 18, 20, 22.

Grassy banks, ditches, streamsides; 500–800 m. Hainan, Jiangsu, Taiwan, Zhejiang [Bhutan, India (Darjeling), Indonesia, Japan, Kashmir, Korea].


叶苞过路黄 ye bao guo lu huang

*Lysimachia hemsleyi* Franchet.

Herbs perennial, 20–50 cm tall. Stems erect or arculate at base, terete or obscurely quadrangular in upper part, simple or weakly branched, fulvous pilose. Lowest 1 or 2 pairs of leaves smaller or scalelike. Leaves opposite, occasionally alternate on upper part of stem; petiole 0.5–2 cm, narrowly winged; leaf blade ovate-lanceolate, rarely ovate, 3–7 × 1–3 cm, abaxially sparingly pubescent or glabrescent except on viliious veins, minutely glandular punctate, adaxially strigillose, base cuneate-attenuate, rarely subrounded, apex acute to short acuminate. Lowest pedicels ascending in fruit, to 3 cm, gradually reduced upward. Flowers solitary, in axils of apically diminishing leaves, racemose. Calyx lobes lanceolate, 6–8 × 1.2–2 mm, pubescent. Corolla yellow; tube ca. 4 mm; lobes obovate-oblong, 6–8 × 5–6 mm, transparent glandular, apex rounded. Filaments connate basally into a ca. 3 mm high tube, free parts 2–3 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary and lower part of style pubescent; style 5–6 mm. Capsule subglobose, ca. 4 mm in diam. Fl. Jul–Aug.

* Mountain slopes, under shrubs; 1600–2600 m. W Guizhou, SW Sichuan, C and N Yunnan.


疏头过路黄 shu tou guo lu huang

*Lysimachia pseudohenryi* Pampanini.

Herbs perennial, 7–25(–45) cm tall. Stems erect or arculate at base, terete or slightly angulate, simple or short branched in upper part, with multicellular hairs. Leaves opposite, upper 2 or 3 pairs usually ± crowded; petiole 3–12 mm, narrowly winged. Lower leaves rhomboid-ovate to ovate, much smaller. Upper leaves ovate, rarely ovate-lanceolate, 2–8 × 0.8–2.5 cm, densely strigillose and sparsely transparent glandular, base subrounded to broadly cuneate, apex acute to subobtuse; veins 2 or 3 pairs; veinlets inconspicuous. Racemes terminal, abbreviated, often nearly capitulate. Pedicel recurved in fruit, 4–10(–18) mm. Calyx lobes lanceolate, 8–11 × 1–1.5 mm, abaxially pubescent, costate. Corolla yellow; tube 3–4 mm; lobes narrowly elliptic to obovate-elliptic, 7–11 × 5–6 mm, transparent glandular, apex acute to obtuse. Filaments connate basally into a 2–3 mm high tube, free parts 3–5 mm; anthers dorsifixed, opening by lateral slits. Ovary and lower part of style pubescent; style 5–6 mm. Capsule subglobose, 3–3.5 mm in diam. Fl. May–Jun.


This species is widely distributed and variable in the size of individuals and the density of inflorescences. Robust plants are very similar to *Lysimachia hemsleyi*; however, their distributions and flowering times are different.


尖瓣过路黄 jian ban guo lu huang

Herbs perennial, 25–60 cm tall. Stems erect, terete and sparingly pilose in upper part, usually simple. Leaves opposite; petiole 0.7–1.5 cm, narrowly winged, densely strigillose; leaf blade ovate to ovate-lanceolate, 4–8.5 × 1.8–3.5 cm, sparsely strigillose and densely red or dark glandular punctate, base subrounded to short attenuate, apex acuminate; veins 4 or 5 pairs; veinlets inconspicuous. Lowermost 1 or 2 pairs of leaves smaller, elliptic to ovateobovate. Flowers solitary, in axils of apically diminished leaves, racemose. Pedicel densely rust-colored pubescent; lowest pedicels 1.5–3 cm, gradually reduced upward, recurved in fruit. Calyx lobes lanceolate, 6.5–9 × ca. 1.5 mm, abaxially sparingly pubescent, reddish glandular punctate, especially near margin, costate. Corolla yellow; tube ca. 3 mm; lobes rhomboid-ovate, 7–8 cm, red glandular, margin erose, apex acute to caudate-acuminate. Filaments connate basally into a tube ca. 3 mm high, free parts ca. 3.5 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1.2 mm. Ovary pubescent apically. Style ca. 6.7 mm. Capsule subglobose, sparsely puberulent, ca. 3.5 mm in diam. Fl. Jul.

* Woodland margins, under shrubs; 1900–2300 m. W Sichuan.


金爪儿 jin zhao er

*Lysimachia grammica* var. major Pampanini; *L. nigrolineata* Hemsley.

Herbs perennial, 13–35 cm tall. Stems arculate, erect, simple or branched, with black glandular stripes and tanged multicellular hairs. Leaves opposite on lower part, alternate on upper; petiole 4–15 mm, narrowly winged; leaf blade ovate to rhomboid-ovate, 1.3–3.5 × 0.8–2.5 cm, pilose, black glandular striate, base rounded, truncate to short attenuate, apex acute to subobtuse. Flowers solitary, in axils of upper leaves. Pedicel recurved in fruit, 1–3 cm, densely pubescent. Calyx lobes ovate-lanceolate, ca. 7 mm, ciliate, sparsely pubescent, blackish glandular striate, apex long acuminate. Corolla yellow; tube 0.5–1 mm; lobes ovate or rhomboid-
ovate, 5–8 × 3–5 mm, brown glandular striate. Filaments connate basally into a ring ca. 0.5 mm high, free parts 1.5–2.5 mm; anthers dorsifixed, opening by lateral slits. Ovary pubescent. Style ca. 4.5 mm. Capsule subglobose, ca. 4 mm in diam. Fl. Apr–May.

* Shaded damp areas in open forests, roadsides. Anhui, Henan, Hubei, Jiangsu, Jiangxi, Shandong, Zhejiang.


**Luo di mei**

Herbs perennial, 10–45 cm tall. Rootstock with numerous fibrous roots. Stems erect, slightly swollen at nodes, simple, glabrous. Lower leaves scalelike; upper leaves 4–18, in a terminal whorl, rarely with a second whorl, sessile or subsessile; leaflike ovate to elliptic or lanceolate, 5–17 × 1.2–10 cm, papery, glabrous, with or without black glandular stripes, base cuneate, apex short acuminate; veins 4 or 5 pairs. Umbels terminal, sessile, 6–many flowered, rarely with few flowers in axils of scalelike leaf pair immediately below the terminal whorl. Pedicel 3–15 mm, glabrous. Calyx lobes lanceolate, glabrous or sparsely ciliate, occasionally black glandular striate, apex acuminate. Corolla yellow; tube ca. 3 mm; lobes oblong, 0.9–1.1 cm × 4–4.5 mm, with or without black glandular stripes, apex obtuse to rounded. Filaments connate basally into a tube ca. 2 mm high, free parts 3–5 mm; anthers elliptic, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary glabrous. Style ca. 8.5 mm. Capsule unknown.

* Damp areas in forests, mountain valleys, wet ravines; 500–1400 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Sichuan, Yunnan.

1a. Leaves 4–6 in a terminal whorl, broadly obovate to elliptic .......................... 65a. var. *paridiformis*

1b. Leaves 6 to many in a terminal whorl, narrowly elliptic to lanceolate .............. 65b. var. *stenophylla*

65a. *Lysimachia paridiformis* var. *paridiformis*

**Luo di mei** (yuán biàn zhòng)

*Lysimachia bodinieri* Petitmengin; *L. paridiformis* Franchet var. *elliptica* Franchet.

Leaves 4(–6) in a terminal whorl; leaf blade broadly obovate to elliptic, 5–17 × 3–10 cm. Corolla 1.2–1.4 cm, rarely glandular striate. Fl. May–Jun.

* Damp areas in forests, mountain valleys; 500–1400 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Sichuan.


**Daxie luodi mei**

*Lysimachia triantaloides* Hemsley.

Leaves 6 to many in a terminal whorl; leaf blade narrowly elliptic to broadly lanceolate or linear-lanceolate, 4–16 × 1.2–5 cm. Corolla 1.3–1.7 cm, usually black glandular striate. Fl. May–Jun.

* Damp areas in forests, wet ravines. Guangdong, Guangxi, Guizhou, Hunan, Sichuan, Yunnan.


**San hua luodi mei**

Herbs perennial, 30–40 cm tall, glabrous except for stems. Stems erect, simple, sparsely rust-colored pilose or glabrescent. Lower leaves scalelike, ovate-lanceolate, ca. 15 × 7 mm, base clasping; upper leaves 4 in a terminal whorl; petiole 5–7 mm; leaf blade elliptic, 10–14 × 6–7.5 cm, papery, glabrous, with slightly raised scattered transparent glandular stripes, base broadly cuneate, apex acute to short acuminate. Umbels terminal, rarely in axils of scalelike leaves immediately below terminal whorl, 3–9-flowered, pedunculate; peduncle 1.8–6 cm, glabrous; bracts lanceolate, 6–12 × 1–3 cm. Pedicel 1.2–2.5 cm. Calyx lobes broadly ovate, ca. 3.5 mm in fruit, margin glandular, apex apiculate. Anthers dorsifixed, opening by lateral slits. Capsule ca. 2.5 mm in diam.

* Shaded areas on mountain slopes, under shrubs. N Guizhou (Xiushui Xian).


**Yi chang guo luo huang**

Herbs perennial, 15–45 cm tall. Stems erect, subterete, usually simple, with dense rust-colored multicellular hairs. Leaves 6 to many per terminal whorl, 3 or 4 per whorl or opposite at lower nodes, rarely alternate, sessile or subsessile, leaf blade lanceolate to narrowly lanceolate, 2.5–5.(–11) × 0.5–1.2(–2.5) cm, with multicellular hairs, base cuneate, apex acuminate to subobtuse. Umbels terminal, rarely with flowers in axils of lower leaves. Pedicel recurved in fruit, 7–12 mm, sparsely pubescent. Calyx 9–10 mm; lobes lanceolate, abaxially sparsely pubescent, apex acuminate-subulate, costate. Corolla yellow, 1.1–1.2 cm; tube 2.5–3 mm; lobes narrowly elliptic, ca. 5 mm wide, brown or black glandular striate, apex obtuse. Filaments connate basally into a tube ca. 2.5 mm high, free parts 2–3 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary ovoid. Style ca. 5 mm. Capsule subglobose, 3–4 mm in diam. Fl. May–Jul.

* Open forests, forest margins, shaded areas on mountain slopes. Anhui, Henan, Hubei, Jiangsu, Jiangxi, Zhejiang, Shandong.


**Yi chang guo luo huang**

Herbs perennial, 30–40 cm tall. Stems erect or sometimes prostrate, terete, simple or branched, rust-colored pilose. Leaves opposite, uppermost 2 or 3 pairs crowded; petiole 4–10 mm; leaf blade lanceolate to ovate-lanceolate, rarely ovate-elliptic, 1.4–5 × 0.5–1.6 cm, papery, glabrous, pilose or bristly, with many irregularly scattered glandular dots becoming slightly raised when dry, base cuneate-attenuate, rarely broadly cuneate, apex acute to subobtuse. Inflorescences terminal, in capitulate clusters. Pedicel 1–4 mm, pilose. Calyx lobes lanceolate, ca. 8 mm, glabrous or sparsely pubescent near base, densely transparent glandular punctate,
apex acuminate. Corolla yellow; tube 3–4.5 mm; lobes ovate-elliptic, 7.5–9 × 4–6 mm, apex rounded. Filaments connate basally into a tube ca. 3 mm high, free parts 3–5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary pubescent. Style 5–6 mm. Capsule subglobose, ca. 3 mm in diam., sparsely pubescent. Fl. May–Jul.

* Rock crevices along rivers, thin soil on rocky outcrops of forested slopes; 300–1600 m. NE Guizhou, W Hubei, E Sichuan, NE Yunnan.

1a. Leaves glabrous or pilose on midvein abaxially ........................................ 68a. var. henryi
1b. Leaves ± minutely setulose on both surfaces ........................................ 68b. var. guizhouensis

68a. Lysimachia henryi var. henryi

宜昌过路黄 (原变种) yi chang guo lu huang (yuán biàn zhòng)

Lysimachia iteophylla C. Y. Wu; L. klattiana Hance var. pseudoklattiana Bonati.

Leaves glabrous or pilose along midvein abaxially, glabrous adaxially. Fl. Jun.–Jul.

* Rock crevices along the Chang Jiang; 300–1600 m. W Hubei, E Sichuan, NE Yunnan.


贵州宜昌过路黄 gui zhou yi chang guo lu huang

Leaves sparsely or scarcely setulose abaxially, sparsely setulose adaxially. Fl. Jul.

* Thin soil on rocky outcrops of forested slopes, moss-covered crevices along rivers; 700–1100 m. NE Guizhou (Jiangkou Xian).


贵州过路黄 gui zhou guo lu huang

Herbs perennial, 20–30 cm tall. Stems erect or arcuate at base, slightly angulate, usually simple, with multicellular hairs. Leaves opposite, usually 3 or 4 pairs on upper part of stem; petiole 2.5–4 cm, narrowly winged, pilose; leaf blade ovate, 4–7.5 × 1.5–4 cm, abaxially glabrescent except for minutely bristly veins, sparsely transparent glandular, adaxially sparsely bristly, base broadly cuneate to subrounded, apex acute; veins 4 or 5 pairs, veinlets inconspicuous. Inflorescences terminal, capitulate, 5- or 6-flowered. Pedicel 1–2 mm, densely pubescent. Calyx lobes lanceolate, 9–10 × ca. 1.5 mm, with sparse multicellular hairs. Corolla yellow, 1.8–2 cm in diam.; tube 4–5 mm; lobes oblong-lanceolate, 1.2–1.5 cm × 4.5–5 mm. Filaments connate basally into a tube ca. 4 mm high, free parts 3–5 mm; anthers dorsifixed, opening by lateral slits. Ovary ovoid. Style ca. 8 mm. Capsule unknown. Fl. Apr.

* Open mountain woodlands, woodland margins; 700–800 m. S Guizhou.


叶头过路黄 ye tou guo lu huang

Herbs perennial, 10–30 cm tall. Stems erect to ascending-erect, often prostrate at base, simple or branched. Leaves opposite, lower much smaller, upper 2 pairs closely crowded; petiole 4–10(–15) mm; leaf blade ovate to ovate-lanceolate, 1.5–8 × 0.8–4 cm, pilose or bristly, base broadly cuneate, apex acute. Inflorescences terminal, capitulate, 3- to many flowered. Pedicel ascending-erect in fruit, 1–7 mm. Calyx lobes lanceolate, 6–9 mm, apex acuminate. Corolla yellow; tube 3–4.5 mm; lobes obovate-oblong, sparsely transparent glandular, apex acute to rounded. Filaments connate basally into a tube 3–4 mm high, free parts 2.5–5 mm; anthers ovate-lanceolate, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary puberulent. Style to 8 mm. Capsule subglobose, 3.5–4 mm in diam.

* Broad-leaved forests, streamside, wet forest margins; 600–2600 m. Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

70a. Lysimachia phyllocephala var. phyllocephala

叶头过路黄 (原变种) ye tou guo lu huang (yuán biàn zhòng)

Lysimachia cephalantha R. Knuth.

Stems with dense multicellular hairs 1–1.5 mm. Leaf blade ovate to ovate-lanceolate, rarely ovate-lanceolate, with appressed articulate hairs. Calyx lobes lanceolate, pilose. Corolla 1.3 cm; tube ca. 3 mm; lobes obovate-oblong, 4–6 mm wide. Fl. May–Jun.

* Broad-leaved forests, streamside; 600–2600 m. Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.


短毛叶头过路黄 duan mao ye tou guo lu huang


Stems pubescent or glabrescent. Leaf blade ovate-lanceolate, 4–8.5 × 1.4–3 cm, abaxially glabrescent except for minutely bristly veins, adaxially sparsely bristly. Calyx lobes lanceolate, 7–8 mm, bristly. Corolla yellow, ca. 1.2 cm; tube ca. 4.5 mm; lobes obovate-oblong, apex acute.

* Wet forest margins; 1100–2100 m. E Sichuan.


石棉过路黄 shi mian guo lu huang

Herbs perennial, 20–60 cm tall. Stems erect, terete, branched in upper part, rust-colored pilose. Branches usually shorter than subtending leaves, leafy only near apex. Leaves opposite; petiole 0.7–2 cm, narrowly winged, densely pilose;
leaf blade ovate, 2.5–5 × 1.4–3 cm, sparsely bristly, densely transparent glandular punctate, base subrounded, apex acute to short acuminate; veins 5 or 6 pairs. Racemes terminal, abbreviated or capitate, 2–6-flowered; bracts leaflike, ovate. Pedicel 2–4 mm, densely pubescent. Calyx lobes lanceolate, ca. 5.5 × 1 mm, sparsely pubescent, transparent glandular punctate. Corolla yellow; tube ca. 2.5 mm; lobes oblong, ca. 7.5 × 4 mm, sparsely transparent glandular punctate, apex acute to subobtuse. Filaments connate basally into a tube ca. 2 mm high, free parts ca. 3 mm; anthers dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary pubescent apically. Style ca. 5 mm. Capsule globose, ca. 3 mm in diam.

* Grassy banks. W Sichuan (Shimian Xian).


腾冲过路黄 teng chong guo lu huang

Herbs perennial, 15–50 cm tall. Stems ascending-erect from prostrate base, suberetere, branched in upper part, tawny villous. Leaves opposite, rarely in whorls of 3, or alternate in upper part of stem, upper 2 pairs crowded; petiole 2–10 mm; leaf blade ovate, 1.1–3.7 × 0.7–2.5 cm, with appressed articulate hairs, base subrounded, apex acute; veins 2 or 3 pairs, prominent abaxially. Flowers 2 or 3, solitary in axis of aggregated upper leaves, forming a loose terminal capitale cluster. Pedicel 3–8 mm, pubescent. Calyx lobes linear-lanceolate, 7.10 × 1.5–2.2 mm, abaxially fulvous pilose, transparent glandular punctate. Calyx yellow; tube 3–4 mm; lobes broadly lanceolate, 1–1.1 cm × 5–6 mm, transparent glandular punctate, adaxially dull red at base, apex acute. Filaments connate basally into a tube ca. 2 mm high, free parts ca. 3 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary pubescent. Style ca. 8 mm, sparsely pilose. Capsule subglobose, ca. 4 mm in diam. Fl. May–Jul.

* Under shrubs, streamsides, banks of rice paddies; ca. 2400 m. SW Yunnan (Tengchong Xian).


泰国过路黄 tai guo guo lu huang

Herbs perennial, 15–35 cm tall. Stems prostrate, ascending, often branched in upper part, with grayish brown multicellular hairs. Leaves opposite, upper 2 pairs ± crowded; petiole 1/3–1/2 as long as leaf blade, narrowly winged, pilose; leaf blade ovate to elliptic-ovate, 1.5–4 × 1–2.2 cm, with multicellular hairs, base broadly cuneate, apex acute. Inflorescences at apex of stems and branches, in loose or compact capitale clusters, 2–4-flowered. Pedicel 3–8 mm, densely pubescent. Calyx lobes lanceolate, 6–7 mm, abaxially pilose. Corolla yellow; tube ca. 2 mm; lobes elliptic to elliptic-lanceolate, 0.9–1.2 cm, epunctate, apex acute. Filaments connate basally into a tube ca. 2.5 mm high, free parts 2–3 mm; anthers dorsifixed, opening by lateral slits, 1.6–1.8 mm. Ovary pubescent apically. Style ca. 7 mm. Capsule globose, shorter than persistent calyx. Fl. Apr–May.

Grassy mountain slopes; 300–500 m. S Yunnan [Myanmar, Thailand, Vietnam].

Lysimachia siamensis is superficially similar to L. debilis Wallich, with which it has been confused. However, it differs by having larger, eglandular corollas, stamens forming a thin tube at base, and ascending fruiting pedicels.


黔阳过路黄 qian yang guo lu huang

Herbs perennial, 18–40 cm tall. Stems erect, simple or weakly branched, glabrous. Branches leafy only at apex. Leaves opposite, upper 3 or 4 pairs compactly crowded; lower leaves smaller; petiole very short, base auriculate, semiclasping; leaf blade narrowly elliptic, 1.8–3 × 0.9–1.2 cm, base attenuate, apex acute. Middle and upper leaves subsessile, narrowly lanceolate, 3.5–7 cm × 4–9 mm, abaxially glabrous or pilose on midvein, densely transparent glandular punctate, adaxially pilose, base attenuate, apex acuminate; veins inconspicuous. Inflorescences terminal, capitale, 4– to many flowered; bracts ovate-lanceolate, longer than calyx, margin rust-colored pubescent. Pedicel 0.5–2.5 mm. Calyx lobes subulate, ca. 8 mm, glabrous, with scattered raised transparent glands. Corolla yellow; tube ca. 4 mm; lobes elliptic-obovate, ca. 8 × 4.5 mm, apex acute. Filaments connate basally into a tube ca. 3 mm high, free parts 2–5 mm; anthers linear, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary glabrous. Style to 1 cm. Capsule unknown. Fl. Apr–May.

* Woodland margins, under shrubs. SW Hunan (Qianyang Xian).


管茎过路黄 guan jing guo lu huang

Herbs perennial, 20–35 cm tall. Stems erect or arcuate at base, quadrangular, simple or weakly branched, pubescent or glabrous. Leaves opposite, upper 2 or 3 pairs crowded; petiole indistinct in upper leaves, to 3 cm in lower leaves; leaf blade lanceolate, 4–9 × 1–2.5–(5) cm, abaxially pilose or glabrescent, sparsely transparent glandular punctate, adaxially sparsely bristly, base attenuate, apex acuminate; veins 3–5 pairs, veinlets inconspicuous. Inflorescences terminal, capitale, 6–10-flowered; bracts elliptic to lanceolate, ca. as long as calyx. Pedicel 1–2.5–(5) mm. Calyx lobes lanceolate, 0.9–1.5 cm, apex acuminate-subulate, costate. Corolla yellow, 0.9–1.3 cm; lobes ovate-oblong, transparent glandular punctate, apex rounded to apiculate. Filaments connate basally into a tube 4–5 mm high, free parts 3–5 mm; anthers ovate-lanceolate, dorsifixed, opening by lateral slits, 1.5–2 mm. Ovary ovoid. Style ca. 8.5 mm. Capsule subglobose, 3–5 mm in diam.

* Open forests, valley trailsides, damp areas in forests, streamsides; 500–1700 m. N Guangdong, Guangxi, Guizhou, W Hubei, Hunan, S Jiangxi, E Sichuan, NE Yunnan.

1a. Stems pubescent; leaves pilose abaxially ........................................... 75a. var. fistulosa
1b. Stems glabrous; leaves glabrescent abaxially ........................................ 75b. var. wulingensis
75a. Lysimachia fistulosa var. fistulosa

管茎过路黄 (原变种) guan jing guo lu huang (yu an bian zhong)

Stems obtusely quadrangular, with multicellular hairs 1–1.5 mm. Leaves pilose abaxially, bristly or glabrescent adaxially. Calyx lobes 0.9–1.5 cm, with sparse multicellular hairs. Ovary densely pubescent. Fl. May–Jul.

* Open forests, valley trailsides; 500–1700 m. W Hubei, NW Hunan, E Sichuan.


五岭管茎过路黄 wu ling guan jing guo lu huang

Stems quadrangular, glabrous. Leaves glabrescent abaxially, initially sparsely bristly adaxially. Calyx lobes 0.9–1.2 cm, glabrous or sparsely ciliate near apex. Ovary glabrescent.

* Damp areas in forests, streamsides; 500–1100 m. N Guangdong, Guangxi, Guizhou, Hunan, S Jiangxi, NE Yunnan.


巴东过路黄 ba dong guo lu huang

Herbs perennial, 10–30 cm tall. Stems prostrate, rooting at nodes; branches ascending to 20 cm. Leaves opposite, upper 2 pairs smaller, closely crowded; petiole 1/2 to as long as leaf blade; leaf blade broadly ovate to suborbicular, rarely subelliptic, 1.3–3.8 × 0.8–3 cm, pilose or glabrous, transparent glandular striate near margin, base broadly truncate, rarely cuneate, apex obtuse, rounded, or occasionally slightly emarginate. Flowers 2–4, crowded at apex of stems and branches, without bracts. Pedicel 0.6–2.5 cm, pubescent or glabrous. Calyx lobes lanceolate, 6–7 × 1–1.5 mm, narrowly hyaline margined. Corolla yellow; tube 2–3 mm; lobes oblong, 1–1.1 cm × 3–5 mm, sparingly transparent glandular striate, stripes becoming brownish when dry, adaxially dull red at base, apex obtuse. Filaments connate basally into a tube, free parts 2–3 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary glabrous. Style ca. 6 mm. Capsule subglobose, 4–5 mm in diam. Fl. May–Jun.

* Sparse mixed forests, streamsides; 500–1000 m. Anhui, Fujian, Guangdong, Hubei, Hunan, Jiangxi, Zhejiang.


英德过路黄 ying de guo lu huang

Herbs perennial, 30–40 cm tall. Stems prostrate, slightly swollen at nodes; internodes 0.7–1.5 cm, initially sparsely pilose, glabrescent or nearly so. Leaves opposite, upper 2 pairs closely crowded, subverticillate; petiole 2–3.5 cm, narrowly winged, sparsely pilose; leaf blade broadly ovate to triangular-ovate, 3.5–6 × 3–5 mm, abaxially glabrescent except pilose along veins, adaxially sparsely pilose, base truncate to cordulate, apex obtuse. Racemes terminal, abbreviated, appearing as a subcapitate cluster, 5–15-flowered; rachis 5–8 mm, with bracts. Pedicel 2–3 mm. Calyx lobes lanceolate, ca. 7 mm, keeled abaxially, pilose on ridge, glabrous in fruit, narrowly hyaline margined. Corolla yellow; tube 3–4 mm; lobes oblong, 8–9 × 4–5 mm, apex obtuse. Filaments connate basally into a tube ca. 2.5 mm high, free parts 3–5 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1.3 mm. Ovary glabrous. Style ca. 7 mm. Capsule grayish white, subglobose, ca. 4 mm in diam. Fl. May.


点叶落地梅 dian ye luo di mei

Herbs perennial, to 45 cm tall. Stems ascending-erect from prostrate lower part, terete, subfleshy, simple or branched, scurfy glandular on upper part. Leaves opposite, upper 2 pairs ± crowded; petiole 1–2 cm, narrowly winged; leaf blade ovate to ovate-elliptic, 3.5–8 × 1.8–5 cm, abaxially glabrous and densely minutely black glandular punctate, adaxially sparsely strigillose or glabrescent, base broadly cuneate to subrounded, apex acute; veins 4–6 pairs, veinlets invisible. Inflorescences terminal, subcapitate, 2–6-flowered; bracts ovate, longer than calyx. Pedicel ca. 3 mm, scurfy glandular. Calyx lobes lanceolate, 0.8–1.3 cm × 2.5–3.5 mm, densely black glandular punctate; veins 3, midvein distinctly raised. Corolla yellow; tube ca. 5 mm; lobes oblong, 8–11 × 3–6 mm, adaxially glandular, apex rounded. Filaments connate basally into a tube ca. 4 mm high, free parts 2–3 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary glabrous. Style 7–8 mm. Capsule subglobose, ca. 7 mm in diam. Fl. May–Jul.

* Dense forests, streamsides; 1300–1900 m. W Hubei, SE Yunnan (Pingbian Xian).

Lysimachia punctatilimba is disjunct in W Hubei and E Yunnan. In spite of this, the plants from both provinces are similar in all aspects.


大叶过路黄 da ye guo lu huang

Herbs perennial, glabrous, 30–50 cm tall. Stems erect, fleshy, usually simple, black glandular punctate. Lower leaves scalelike; upper leaves opposite, uppermost 2 pairs compactly crowded, appearing verticillate; petiole 0.5–2.5 cm; leaf blade elliptic to broadly elliptic or rhomboid-ovate, 6–18 × 3–10 (–12.5) cm, densely minutely black glandular punctate, base broadly cuneate, apex acute to short acuminate; veins 4–6 pairs, veinlets inconspicuous. Racemes terminal, abbreviated, appearing as a subcapitate cluster, 5–15-flowered; rachis 5–8 mm, with bracts. Pedicel 2–3 mm. Calyx lobes lanceolate, ca. 7 mm, keeled abaxially, pilose on ridge, glabrous in fruit, narrowly hyaline margined. Corolla yellow; tube 3–4 mm; lobes oblong, 8–9 × 4–5 mm, apex obtuse. Filaments connate basally into a tube ca. 2.5 mm high, free parts 3–5 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1.3 mm. Ovary glabrous. Style ca. 7 mm. Capsule grayish white, subglobose, ca. 4 mm in diam. Fl. May.
Herbs perennial, to 40 cm tall. Stems prostrate, ascending, suberete, usually branched, rust-colored pilose. Leaves opposite; petiole 1–2 cm, densely pubescent; leaf blade ovate to broadly ovate, rarely suborbicular, 1.5–3.5 × 1.2–2.5 cm, papery, strigillose, sparsely transparent or dark glandular pubescent, base subrounded to broadly cuneate, apex rounded to apiculate; veins 3 or 4 pairs, veinlets inconspicuous. Umbels in axils of middle leaves, 2–4-flowered; peduncle 1.8–3.5 cm; bracts ovate to orbicular-ovate, 5–14 × 3–9 mm. Pedicel 2–10 mm, densely rust-colored pubescent. Calyx lobes narrowly lanceolate, 8–9 × 1–1.2 mm, abaxially pubescent, apex acuminate. Corolla yellow; tube 3–4 mm; lobes elliptic, 7–10 × 5–6 mm, sparsely dull red glandular pubescent, apex obtuse to apiculate. Filaments connate basally into a tube ca. 3 mm high, free parts 3–5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 2 mm. Ovary rust-colored puberulent. Style 5–7 mm. Capsule unknown. Fl. Jul.

* Wet areas in ravines, woodland margins; 1800–3100 m. Sichuan (Emei Shan).


**Lysimachia congestiflora** Hemsley var. *atronervata* C. C. Wu; *L. gymnocephala* Handel-Mazzetti; *L. hui* Diels ex Handel-Mazzetti; *L. japonica* Thunberg var. *cephalantha* Francetich; *L. nigropunctata* Masamune; *L. rubroglandulosa* C. Y. Wu; *L. smithiana* Craib; *L. taiwaniana* Suzuki ex M. T. Kao.

Herbs perennial, 6–50 cm tall. Stems prostrate, rooting at nodes, upper part and branches ascending, fulvous pilose. Branches often with leaves only at apex. Leaves opposite, upper 2 pairs crowded; petiole 1/3–1/2 as long as leaf blade, narrowly winged; leaf blade ovate to broadly ovate or suborbicular, (0.7–)1.4–3–(4.5) × (0.6–)1.3–2.2–(3) cm, with appressed articulate hairs, rarely glabrescent, reddish or black glandular pubescent mainly near margin, base subrounded to short attenuate, apex acute to obtuse; veins 2–4 pairs, veinlets inconspicuous. Racemes terminal, abbreviated, capitulate, 2–4-flowered, rarely with solitary flowers in axils of leaf pairs below inflorescences. Pedicel to 2 mm. Calyx lobes lanceolate, 5–8.5 × 1–1.5 mm, abaxially sparsely pubescent. Corolla yellow; tube 2–3 mm; lobes ovate-elliptic to oblong, 7–8 × 3–6.5 mm, sparsely dull red or black glandular pubescent, abaxially dull red at base, apex acute to obtuse. Filaments connate basally into a tube ca. 2.5 mm high, free parts 2.5–4.5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary pubescent. Style 5–7 mm. Capsule subglobose, 3–4 mm in diam. Fl. May–Jun. 2n = 48.

Ditches, roadsides, banks of rice paddies, damp forest margins; 200–1200 m. Anhui, Fujian, S Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Qinghai, S Shaanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, NE India, Myanmar, Nepal, Sikkim, Thailand, Vietnam].

Used for injuries, fractures, contusions, and strains.


Herbs perennial. Stems erect, 15–30 cm, simple or often branched above, with reddish multicellular hairs. Leaves opposite; petiole 4–10 mm, narrowly margined, ± clasping; leaf blade ovate-lanceolate to lanceolate, 1.5–7 × 1–2.2 cm, sparsely setulose on both surfaces, rarely glabrescent, translucent glandular punctate throughout and densely so at margin, base narrowly cuneate, apex acuminate; lateral veins 3 pairs, slender, oblique. Flowers 4–10, congested at stem apex; bracts ovate, ciliate. Pedicel ca. 5 mm. Calyx parted nearly to base; lobes lanceolate, 5–6 × 0.6–1 mm, pubescent outside. Corolla yellow; tube ca. 1 mm; lobes glandular red to dark purple, oblong-elliptic, 8–9 × 5–5.5 mm, apex obtuse. Filaments connate into a tube ca. 2 mm high, free parts 2–3 mm; anthers oblong, ca. 1.2 mm. Ovary pilose on upper half. Style 5–6 mm. Capsule brown, subglobeose, 3.5–4 mm in diam. Fl. May–Jun.

* Streamsidcs, on rocks in valleys, roadsides near water, shaded places; 200–700 m. N Guangdong, Hunan.

In its habit and foliage, *Lysimachia kwangtungensis* shows some affinity to *L. hemsleyi* Franchet and *L. fistulosa* Handel-Mazzetti. It is readily distinguished from these by its red or dark purple glandular punctate corolla lobes.


Herbs perennial, to 20 cm tall. Stems many, terete, rigid, simple or with few branches, sparsely pilose. Leaves opposite, sessile, upper 2 pairs crowded, forming a whorl; leaf blade lanceolate, 2–3.5 cm × 4–8 mm, abaxially stigilllose on midvein, otherwise glabrescent, adaxially densely bristly, tapered toward dilated, auriculate, semiclasping base, apex acuminate; veins 4 or 5 pairs. Inflorescences terminal, capitate, 4–8-flowered; bracts leaflike, ovate to suborbicular, 6–8 mm, margin membranous, abaxially pubescent, black glandular striate. Corolla yellow; tube 3–5 mm; lobes lanceolate, 7–10 mm, densely black glandular striate, apex obtuse to acute. Filaments connate basally into a tube ca. 3 mm high, free parts 3–5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary pubescent on upper part. Style ca. 7 mm. Capsule subglobeose, ca. 3 mm in diam. Fl. May.

* Damp areas in forests, streamsides; 1000–1500 m. Guangxi, Guizhou, Hubei, Hunan, Sichuan, NE and SE Yunnan, Zhejiang.


Herbs perennial, 6–30(–45) cm tall. Stems erect or prostrate in lower part, ± rust-colored villous. Branches usually shorter than subtending leaves at stem apex. Leaves opposite; petiole 0.8–2 cm, narrowly winged; leaf blade ovate to ovate-lanceolate, 4–9.5 × 2–3.8 cm, ciliate, sparsely stigilllose, densely black or brown glandular striate, base subrounded to broadly cuneate, apex acute to short acuminate; veins 4 or 5 pairs, veinlets inconspicuous. Inflorescences subcapitate, terminal on branches, seldom on main axis, 3–5-flowered; bracts leaflike, ovate to suborbicular, 8–12 × 6–10 mm, apex apiculate. Pedicel 1–2 mm. Calyx lobes lanceolate, 8–9 × 1.2–1.5 mm, glabrous or sparsely puberulent, black glandular striate. Corolla yellow; tube 3–4 mm; lobes narrowly oblong, 1–1.1 cm × 3.5–5 mm, black or brown glandular striate, apex obtuse to acute. Filaments connate basally into a tube ca. 3 mm high, free parts 3–5 mm; anthers oblong, dorsifixed, opening by lateral slits, ca. 1.5 mm. Ovary pubescent on upper part. Style ca. 7 mm. Capsule subglobeose, 4–5 mm in diam.

* Wet areas, streamsides, woodlands, under shrubs, open forests; 200–900 m. SW Fujian, Guangdong, Guangxi, Guizhou, S Hunan, S Jiangxi.

1a. Stems usually simple; leaf blade ovate to ovate-lanceolate, apex acute to acuminate .......................... 87a. var. *alfredii*

1b. Stems usually branched from base; leaf blade ovate to suborbicular, apex obtuse to rounded........ 87b. var. *chrysosplenioiides*

87a. *Lysimachia alfredii* var. *alfredii*

广西过路黄 (原变种) guang xi guo lu huang (yuán biàn zhòng)

Stems 10–30(–45) cm tall, simple, rarely branched. Leaf blade ovate to ovate-lanceolate, 3.5–11 × 1–5.5 cm, apex acute to acuminate. Fl. Apr–May.

*Grassy mountain slopes; ca. 1700 m. S Xizang [India, solitaire, axillary. Pedicel 2–4 mm, densely pubescent. Calyx 1.5–2.8 × 1–1.6 cm, strigillose, minutely reddish glandular opposite; petiole 4–8 mm, narrowly winged; leaf blade ovate, occasionally suborbicular, 2–5 × 1.3–3.5 cm, reddish when young, apex obtuse to rounded. Fl. May.*

* Open forests. Guangxi, Guizhou.


*Grassy banks near rice paddies. Guangxi (Yangshuo Xian).*

89. *Lysimachia debilis* Wallich in Roxburgh, Fl. Ind. 2: 25. 1824.


*Grassy mountain slopes; ca. 1700 m. S Xizang [India, solitaire, axillary. Pedicel 2–4 mm, densely pubescent. Calyx 1.5–2.8 × 1–1.6 cm, strigillose, minutely reddish glandular opposite; petiole 4–8 mm, narrowly winged; leaf blade ovate, occasionally suborbicular, 2–5 × 1.3–3.5 cm, reddish when young, apex obtuse to rounded. Fl. May.*

* Open forests. Guangxi, Guizhou.


*Grassy mountain slopes; ca. 1700 m. S Xizang [India, solitaire, axillary. Pedicel 2–4 mm, densely pubescent. Calyx 1.5–2.8 × 1–1.6 cm, strigillose, minutely reddish glandular opposite; petiole 4–8 mm, narrowly winged; leaf blade ovate, occasionally suborbicular, 2–5 × 1.3–3.5 cm, reddish when young, apex obtuse to rounded. Fl. May.*


*Grassy banks near rice paddies. Guangxi (Yangshuo Xian).*


*Grassy mountain slopes; ca. 1700 m. S Xizang [India, solitaire, axillary. Pedicel 2–4 mm, densely pubescent. Calyx 1.5–2.8 × 1–1.6 cm, strigillose, minutely reddish glandular opposite; petiole 4–8 mm, narrowly winged; leaf blade ovate, occasionally suborbicular, 2–5 × 1.3–3.5 cm, reddish when young, apex obtuse to rounded. Fl. May.*

*Grassy banks near rice paddies. Guangxi (Yangshuo Xian).*

93. *Lysimachia debilis* is treated as a synonym of *L. japonica* in Fl. Bhutan.

* Grassy mountain slopes. E Sichuan.


* Forest margins; ca. 2100 m. W Sichuan, NE Yunnan.


* Streamsides; 1000–1600 m. NW Hubei, S Shaanxi, E Sichuan.


* Damp areas along streamsides, open forests, forest margins; 500–2300 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, Sichuan, Yunnan, Zhejiang.

锈毛过路黄 xiu mao guo lu huang

Lysimachia drymarifolia Franchet var. grandiflora Bonati.

Herbs perennial, 7–35 cm tall. Stems procumbent, simple to weakly branched, with dense rust-colored multicellular hairs. Leaves opposite; petiole 1/2–2/3 as long as leaf blade, rust-colored pilose or glabrescent; leaf blade broadly ovate to suborbicular or reniform, 1–2.5 × 0.8–2.2 cm, sparsely strigulose, densely black glandular striate, base rounded to cordate, apex obtuse to rounded; veins inconspicuous. Flowers solitary, axillary. Pedicel 1–4 cm, usually 1–2 × as long as subtending leaves, rust-colored pilose or occasionally glabrescent. Calyx lobes oblong-lanceolate, 5–6 mm, abaxially sparsely pilose, narrowly hyaline margined, glabrous, apex subobtuse. Corolla yellow; tube 1.5–2 mm; lobes ovate to oblong-ovate or obtuse, sparsely black glandular striate. Filaments connate basally into a tube, 1.5–2 mm high, free parts 2–3 mm; anthers ovate, dorsifixed, opening by lateral slits, ca. 1 mm. Ovary glabrous or occasionally pubescent. Style 4–5 mm. Capsule unknown. Fl. Apr–May.

* Damp areas in mountain valley forests, streamsides; 1400–3500 m. SW Sichuan, C and N Yunnan.

98. Lysimachia pentapetala (Bunge) Duby; Lysimachia unguiculata Diels.

Herbs annual, 30–60 cm tall, glabrous. Stems erect, terete, much branched, densely minutely brown glandular. Leaves alternate; petiole ca. 0.5 mm; leaf blade narrowly lanceolate to linear, 2–7 cm × 2–8 mm, abaxially glaucous, brown glandular, base cuneate, apex acute. Racemes initially coniform, gradually elongated to 4–13 cm in fruit, densely flowered; bracts subulate, 5–6 mm. Pedicel 5–10 mm. Calyx 2.5–3 mm, parted 1/2–2/3 length; lobes narrowly triangular, hyaline margined. Corolla white; lobes nearly free, spatulate to oblanceolate, ca. 5 mm, apex rounded. Stamens included; filaments adnate nearly to middle of corolla lobes, free parts ca. 0.5 mm; anthers ovate, dorsifixed, ca. 1 mm. Ovary glabrous. Style ca. 2 mm. Capsule subglobose, 2–3 mm in diam. Fl. Jul–Aug. 2n = 24.


滨海珍珠菜 bin hai zhen zhu cai

Lysimachia lineariloba Hooker & Arnott; L. nebeliana Gilg.

Herbs biennial, glabrous, 10–50 cm tall. Stems often many, erect, terete, usually branched in upper part. Leaves alternate; petiole 0.5–2.5 cm or upper leaves sometimes sessile; leaf blade spatulate to obovate or oblong-ovate, 6–12 × 0.5–2.5 cm, sparsely black glandular punctate, tapered at base, margin narrowly revolute, apex obtuse to subrounded. Racemes erect, initially coniform, gradually elongated, 3–12 cm; lower bracts spatulate, leaflike, gradually reduced upward. Pedicel ca. as long as to slightly shorter than bracts. Calyx lobes broadly lanceolate to elliptic, 4–7 mm, black glandular, margin membranous, apex acute to obtuse, costate. Corolla white; tube ca. 2 mm; lobes erect, ligulate-oblone, ca. 7 mm, apex obtuse. Stamens included; filaments adnate to lower part of corolla lobes, free parts ca. 1.5 mm; anthers oblong, dorsifixed, ca. 1.2 mm. Ovary conical, narrowed upward to style. Capsule pyriform, ca. 5 mm in diam. Fl. May–Jun. 2n = 20*.

Rock crevices, beaches in coastal regions; less than 100 m. Fujian, Guangdong, Jiangsu, Liaoning, Shandong, Taiwan, Zhejiang [Japan, Korea, Philippines; Indian Ocean Islands (Mauritius, Reunion), Pacific Islands].


江西珍珠菜 jiang xi zhen zhu cai

Herbs perennial, to 1 m tall, without creeping rhizomes. Stems erect, to 8 mm in diam. at base, branched in upper part, pubescent pubescent. Leaves alternate; petiole 6–10 mm, pubescent; leaf blade narrowly elliptic to elliptic-lanceolate, 10–16 × 3.5–6 cm, densely puberulent, epunctate, base cuneate-attenuate, apex acuminate; veins 7–9 pairs, veinlets inconspicuous. Racemes to 27 cm in fruit; rachis densely pubescent; bracts linear-lanceolate, 4–5 mm, ciliate. Pedicel 2–2.5 mm, densely pubescent. Calyx lobes elliptic to oblong, ca. 3 mm, glandular ciliate, margin membranous, apex obtuse. Corolla white; tube ca. 1.5 mm; lobes elliptic, ca. 2.5 × 1.2 mm, apex obtuse or acute. Stamens included; filaments adnate to corolla tube, free parts ca. 1 mm; anthers ovate, dorsifixed, ca. 0.7 mm. Ovary glabrous. Style ca. 1 mm. Capsule subglobose, ca. as long as persistent calyx.

* Shrubs on low hills; 300–500 m. NE Jiangxi (Yushan Xian).


矮桃 ai tao

Herbs perennial, 40–100 cm tall, with creeping rhizomes. Stems erect, simple, sparsely pubescent or glabrescent, dull red at base. Leaves alternate, subsessile or petiole 2–10 mm; leaf blade narrowly elliptic to broadly lanceolate, 6–16 × 2–5 cm, ± pubescent, sparsely black glandular punctate, base attenuate, apex acuminate. Racemes densely flowered, ca. 6 cm at anthesis, to 20–40 cm in fruit; rachis densely fulvous pubescent; bracts linear-subulate, slightly longer than pedicels. Flowers usually secund. Pedicel 4–6 mm. Calyx lobes ovate-elliptic, 2.5–3 mm, ciliate, margin membranous, apex rounded. Corolla white; tube ca. 1.5 mm; lobes narrowly oblong, 3.5–4.5 mm, apex obtuse. Stamens included; filaments adnate to corolla tube, free parts ca. 2 mm, glandular; anthers oblong, dorsifixed, ca. 1 mm. Ovary ovoid.
Damp woodland margins, wet ravines, grassy mountain slopes; 300–2100 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Sichuan, Taiwan, Yunnan, Zhejiang [Japan, Korea, E Russia].


L. H. Bailey, Gentes Herb. 1: 40. 1920.

Herbs perennial, 30–100 cm tall, with creeping rhizomes. Stems erect, simple or branched in upper part, with dense multicellular tangled hairs. Leaves alternate or subopposite, subsessile; leaf blade oblong-lanceolate to oblanceolate or linear, 4–10 × 0.6–2.2 cm, abaxially more densely so, epinicate, adaxially pubescent, tapered at base, apex obtuse to acute. Racemes 4–6 cm, elongated to 30 cm in fruit, densely flowered; bracts linear-subulate, ciliate. Flowers often secund. Pedicel 4–6 mm, usually slightly shorter than bracts, pubescent. Calyx lobes oblong, 3–4 mm, margin membranous, apex rounded. Corolla white; tube ca. 2 mm; lobes oblong-spicate, 5–8 × ca. 2 mm, often dark purple glandular striate, abaxially with 2 vertical glandular stripes, at apex obtuse. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 3 mm, glandular puberulent; anthers elliptic, dorsifixed, ca. 1 mm. Ovary glabrous. Style 3–3.5 mm. Capsule subglobose, 2.5–3 mm in diam. Fl. May–Jun. 2n = 24.

Mountain meadows, grassy mountain slopes, among shrubs; 800–2000 m. Fujian, Guizhou, Hebei, Heilongjiang, Jiangsu, Jilin, Liaoning, Nei Mongol, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan, Zhejiang [Japan, Korea, E Russia].


Herbs perennial, glabrous, 30–70 cm tall. Rhizomes creeping, reddish. Stems erect, terete, usually simple, glabrescent, black glandular punctate. Leaves alternate, subsessile; leaf blade oblong-lanceolate to narrowly elliptic, 4–11 × 1–2.5 cm, with many scattered glandular dots, slightly raised when dry, base attenuate, apex short acuminate. Racemes 10–20 cm; bracts lanceolate, 2–3 mm. Pedicel ca. as long as to slightly shorter than bracts. Calyx lobes ovate-elliptic, ca. 1.5 mm, ciliate, thick black glandular, margin membranous, apex obtuse. Corolla white, ca. 3 mm, parted slightly below middle; lobes elliptic to ovate-elliptic, black glandular punctate, apex rounded. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 1 mm; anthers ovate, dorsifixed, ca. 0.5 mm. Ovary ovoid. Style ca. 1 mm. Capsule globose, 2–2.5 mm in diam. Fl. Jun–Aug. 2n = 24.

Wet areas, ditches, banks of rice paddies, roadsides; sea level to 1500 m. Fujian, Guangdong, Guangxi, Hainan, Hunan, Jiangsu, Jiangxi, Taiwan, Zhejiang [Japan, Korea, Vietnam].


Herbs perennial, glabrous, 35–80 cm tall, without creeping rhizomes. Stems erect, purplish at base, subterete, simple or branched. Basal leaves early deciduous; leaf blade spatulate to oblanceolate or oblong, 4–10 × 2.5–3.5 cm, base cuneate, apex obtuse to acute; stem leaves alternate, sessile or subsessile, narrowly lanceolate to linear, 6–13 × 0.4–1.7 cm, densely red glandular punctate near margin, base cuneate, apex acute to acuminate. Racemes 10–25 cm; bracts subulate, 3–5 mm. Pedicel 3–6 mm. Calyx lobes ovate-elliptic, ca. 1.7 mm, glandular ciliate, red glandular striate abaxially and at apex, margin membranous, apex acute. Corolla white; tube ca. 1 mm; lobes ovate to ovate-elliptic, ca. 3 × 1.6 mm, red glandular punctate, apex obtuse. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 0.5 mm; anthers dorsifixed. Ovary ovoid. Style ca. 2 mm. Capsule subglobose, 2–3 mm in diam. Fl. May–Jun.

* Streamsides, woodland margins, ravines; 600–1000 m. NW Zhejiang.


Herbs perennial, glabrous, 30–70 cm tall. Rhizomes creeping, reddish. Stems erect, terete, usually simple, glabrescent, black glandular punctate. Leaves alternate, subsessile; leaf blade oblong-lanceolate to narrowly elliptic, 4–11 × 1–2.5 cm, with many scattered glandular dots, slightly raised when dry, base attenuate, apex short acuminate. Racemes 10–20 cm; bracts lanceolate, 2–3 mm. Pedicel ca. as long as to slightly shorter than bracts. Calyx lobes ovate-elliptic, ca. 1.5 mm, ciliate, thick black glandular, margin membranous, apex obtuse. Corolla white, ca. 3 mm, parted slightly below middle; lobes elliptic to ovate-elliptic, black glandular punctate, apex rounded. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 1 mm; anthers ovate, dorsifixed, ca. 0.5 mm. Ovary ovoid. Style ca. 1 mm. Capsule globose, 2–2.5 mm in diam. Fl. Jun–Aug. 2n = 24.

Wet areas, ditches, banks of rice paddies, roadsides; sea level to 1500 m. Fujian, Guangdong, Guangxi, Hainan, Hunan, Jiangsu, Jiangxi, Taiwan, Zhejiang [Japan, Korea, Vietnam].


Herbs perennial, 30–60 cm tall, without creeping rhizomes. Stems erect, terete, often branched in upper part, densely puberulent and short-stalked glandular. Leaves alternate; petiole indistinct or leaves sessile; leaf blade narrowly lanceolate to linear-lanceolate, 4–6 cm × 5–7(–9) mm, ± glandular and obscurely punctate, base cuneate, margin narrowly revolute, apex acute; midvein raised abaxially, veins inconspicuous. Racemes to 25 cm in fruit; bracts subulate, 2.5–3.5 mm. Pedicel 1–2 mm. Calyx lobes elliptic, ca. 1.5 mm, glandular ciliate, margin membranous. Corolla white, 2–3 mm, parted slightly below middle; lobes

Herbs annual, glabrous, 7–50 cm tall. Stems erect or arcuate at base, quadrangular, usually much branched. Leaves alternate, rarely subopposite on lower part of stems; petiole 5–10 mm, narrowly winged; leaf blade ovate to rhomboid-ovate, 0.5–3.5 × 0.5–1.5 cm, sparsely dark purple or brown glandular punctate and striate, base attenuate, apex acuminate to acute. Flowers solitary, in axils of upper leaves. Pedicel 1–2 mm. Calyx lobes lanceolate, 3–4 mm, dark red glandular striate outside except on apex, margin membranous, apex ± recurved. Corolla white or pink; tube ca. 1 mm; lobes oblong-lanceolate, 2–3 mm, reddish brown glandular striate, apex obtuse. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 1 mm; anthers ovate, dorsifixed, ca. 0.5 mm. Ovary globose. Style ca. 1.5 mm. Capsule globose, ca. 4 mm in diam. Fl. Jun.

Margins of cultivated fields, grassy mountain slopes; 200–3200 m. SE Xizang, C and N Yunnan [Bhutan, India, Kashmir, N Myanmar, Nepal, Pakistan].


Herbs annual, glabrous, 30–50 cm tall. Stems erect, angular, branched in upper part. Leaves alternate; petiole 1/3–1/2 as long as leaf blade, narrowly winged; leaf blade ovate-lanceolate to elliptic-lanceolate, 2–6 × 1–2 cm, thick black glandular striate near margin, base cuneate, apex acuminate. Racemes 8–15 cm, lax; bracts subulate-lanceolate, lowest bracts leaflike, gradually reduced upward. Pedicel 1.5–2.5 mm, slightly shorter than bracts. Calyx lobes lanceolate, ca. 3 mm, glandular ciliate, thick brown glandular striate outside, margin membranous, apex obtuse, costate. Corolla white, 3.5–5 mm, parted to 2/3; lobes elliptic, apex obtuse. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 0.5 mm; anthers dorsifixed. Ovary globose. Style ca. 1 mm. Capsule subglobose, 4–5 mm in diam. Fl. Jun–Jul.

* Margins of mountain woodlands, among shrubs; 2400–3500 m. SW Sichuan (Jiulong Xian, Muli Xian), NW Yunnan.


Herbs perennial, 20–50 cm tall, smooth except for sparingly glandular inflorescences. Stems erect to erect-ascending, quadrangular, usually branched at base, dark purple or black glandular striate. Leaves alternate; petiole 1/5–1/3 as long as leaf blade; leaf blade elliptic, 1.5–3.8 × 0.6–1.7 cm, densely dark purple or black glandular punctate, base short attenuate, margin obscurely undulate, apex acute. Racemes 15–50 cm, lax; bracts subulate. Pedicel erect to spreading, ca. 2 mm, slightly shorter than bracts. Calyx lobes oblong, 3–4.5 mm, dark purple or black glandular striate outside, margin membranous, apex obtuse to subacute. Corolla white; tube 2–2.5 mm; lobes reflexed, spatulate, 5–6 × 1.5–2 mm, dark purple striate, apex obtuse. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 1 mm; anthers elliptic, dorsifixed, ca. 1 mm. Ovary globose. Style ca. 1 mm. Capsule globose, 5–6 mm in diam.

* Grassy mountain slopes; 1700–2200 m. SW Sichuan (Muli Xian).


Herbs annual, glabrous, to 50 cm tall. Stems erect, obtusely quadrangular, usually simple. Leaves alternate; petiole 0.5–2 cm, narrowly winged; leaf blade lanceolate, 2.5–5.5 × 0.9–1.8 cm, black glandular striate along midvein and margin, base attenuate, apex acuminate; veins 5 or 6 pairs, slightly raised abaxially. Racemes initially coniform, gradually elongated to 15 cm in fruit, densely flowered; bracts linear, 4–7 mm, black striate on margin. Pedicel slightly angular, ca. 5 mm, elongated to 8 mm in fruit. Calyx lobes lanceolate, ca. 3.5 × 0.8 mm, abaxially with 2 vertical glandular stripes, margin membranous, apex subacute. Corolla pink; tube ca. 1.5 mm; lobes obovate, 4.5–5.5 × 2.5–3.5 mm, with 2 parallel red glandular stripes at middle, apex rounded. Stamens included; filaments adnate to base of corolla lobes, free parts ca. 1 mm; anthers elliptic, dorsifixed, ca. 1 mm. Ovary ovoid. Style ca. 2 mm. Capsule subglobose, 3–3.5 mm in diam. Fl. May–Jun.

* Grassy mountain slopes, roadsides; ca. 2000 m. SW Sichuan (Jiulong Xian).


Herbs perennial, glabrous, 45–70 cm tall. Stems erect, obtusely quadrangular, branched in upper part. Leaves opposite, sometimes alternate in upper part of stem; petiole 0.5–1.5 cm, narrowly winged; leaf blade lanceolate to elliptic-lanceolate or elliptic, 5–10 × 1.5–3 cm, abaxially very densely and minutely rust-colored glandular and sparsely dull red or black glandular punctate near margin, base cuneate, apex acute; veins 6 or 7 pairs, veinlets inconspicuous. Racemes 5–15 cm; lanceolate, lower bracts often longer than pedicels, gradually reduced upward to subulate, 2.5–4 mm. Calyx lobes ovate-lanceolate, 3–4 mm, ciliate, abaxially with 2–4 thick glandular stripes, apex acute. Corolla white; tube ca. 2 mm; lobes rhomboid-ovate, 2.5–3.5 mm, brown glandular.
Herbs perennial, glabrous, 40–60 cm tall. Stems erect, obliquely quadrangular, usually branched in upper part. Leaves opposite, sometimes alternate in upper part of stem, sessile; leaf blade ovate to ovate-lanceolate or linear, 4–10 × 0.2–2.5 cm, densely dull red glandular punctate near margin, base auriculate and clasping, apex acuminate to acute; veins 6 or 7 pairs, veinlets inconspicuous. Racemes 10–15 cm; bracts subauriculate and clasping, apex acuminate to acute; veins 6 or 7; petals ca. 3 mm in diam. Fl. May–Jun.

* Damp areas in mountain stream valleys; 600–1200 m. Guizhou, Hubei, Hunan, Jiangxi, Sichuan.


Herbs perennial, glabrous, 30–65 cm tall. Stems erect, quadrangular and usually branched in upper part. Leaves opposite, sometimes alternate in upper part of stem, sessile; leaf blade lanceolate to linear-lanceolate, rarely oblong-lanceolate, 4–13 × 1–3 cm, densely minutely black glandular punctate, base obtuse to auriculate and semi-clasping, apex acute to obtuse. Racemes terminal; bracts leaflike. Pedicel 3–5 mm, as long as to shorter than bracts. Calyx lobes linear-lanceolate, 4–5 mm, black glandular punctate and striate outside. Corolla white, ca. 7 mm; tube ca. 2.5 mm; lobes ovate-oblong. Stamens ca. as long as corolla; filaments adnate to middle of corolla, free parts ca. 3 mm; anthers linear, dorsifixed, ca. 1.5 mm, with a callus at apex. Ovary glabrous. Style ca. 6 mm. Capsule subglobose, ca. 3 mm in diam. Fl. May–Jul.


Herbs perennial, glabrous, 30–65 cm tall. Stems erect, quadrangular and usually branched in upper part. Leaves opposite, often alternate in upper part of stem, sessile or petiole 5–10 mm; leaf blade lanceolate to elliptic-lanceolate or elliptic, 4–10 × 0.8–4 cm, base attenuate, margin obscurely repand, apex acute to acuminate; veins 4–6 pairs, veinlets inconspicuous. Racemes 5–15 cm, bracts linear-lanceolate, 3–5 mm. Pedicel 2–7 mm, elongated slightly in fruit. Calyx lobes linear-lanceolate, ca. 5 mm, hyaline margined, apex subulate-acuminate. Corolla white, 4–8 mm, parted 1/2–2/3; lobes ovate-oblong to spatulate or elliptic. Stamens included; filaments adnate to lower part of corolla lobes, free parts 2–2.5 mm; anthers linear, dorsifixed, ca. 1.5 mm, apex red glandular. Ovary glabrous. Style to 5 mm. Capsule subglobose, ca. 3 mm in diam. 2n = 24.

* Damp woodland margins, streamsides, grassy mountain slopes, scrub; 900–2500 m. Guizhou, Hubei, Hunan, Shaanxi, Sichuan, Yunnan, Zhejiang.

1a. Corolla parted below middle; leaves glaucous abaxially .......... 115a. var. stenosepala
1b. Corolla parted to middle; leaves minutely rust-colored glandular abaxially .................................. 115b. var. flavescens

115a. Lysimachia stenosepala var. stenosepala

黑腺珍珠菜 黑腺珍珠菜 黑腺珍珠菜 黑腺珍珠菜 黑腺珍珠菜

Lysimachia candida Lindley subsp. oppositifolia R. Knuth; L. miltandra Franchet.

Leaf blade lanceolate to oblong-lanceolate or oblong, abaxially glaucous, sparsely dark purple or black glandular
punctate and striate near margin. Corolla 6–8 mm, deeply parted; lobes ovate-oblong to spatulate, 4–5 × 1.5–2 mm, usually epunctate. Fl. May–Jun.

* Damp woodland margins, streamsides, grassy mountain slopes; 900–2500 m. Guizhou, Hubei, Hunan, Shaanxi, Zhejiang.


云贵腺药珍珠菜 yun gui xian yao zhen zhu cai

Leaf blade usually narrowly lanceolate, very densely minutely rust-colored glandular abaxially. Corolla 4–6 mm, parted to middle; tube 2–3 mm; lobes elliptic to broadly elliptic, 2–3 mm wide, sparsely black glandular striate. Fl. May–Jun.

* Damp streamsides, scrub; 1100–1900 m. Guizhou, S Sichuan, Yunnan.


北延叶珍珠菜 bei yan ye zhen zhu cai


Herbs annual, glabrous, 30–75 cm tall. Stems erect, terete, simple or branched in upper part. Leaves opposite; petiole 1–3 cm; blade ovate-lanceolate to elliptic, rarely ovate, 3–7 × 1–3.5 cm, submembranous when dry, dark glandular striate near margin, base attenuate, apex acuminate; veins 4 or 5 pairs, veinlets inconspicuous. Racemes 4–10 cm; lowest bracts leaflike, subulate, ca. 6 mm, smaller above. Pedicel erect to spreading, 1–2 cm. Calyx lobes lanceolate, ca. 6 mm, dark glandular striate outside, more densely so near apex, apex often recurved, acuminate. Corolla white, ca. 6 mm, ca. as long as calyx; tube ca. 2 mm; lobes oblong-ovate, apex obtuse to acute. Stamens included or anther tips exserted from corolla; filaments adnate to base of corolla lobes, free parts ca. 2 mm; anthers narrowly elliptic, dorsifixed, ca. 1 mm. Ovary glabrous. Style ca. 4 mm. Capsule subglobose, 3–4 mm in diam. Fl. May–Jul.

* Gullies, open forests, grassy mountain slopes; 1400–3000 m. SE Gansu, Hubei, Hunan, Jiangxi, S Shaanxi, NE Sichuan.


延叶珍珠菜 yan ye zhen zhu cai

*Lysimachia consobrina* Hance; *L. decurrens* var. *eudecurrens* R. Knuth; *L. decurrens* var. *recurvata* Matsumura; *L. recurvata* (Matsumura) Masamune; *L. sinica* Miquel.

Herbs perennial, glabrous, 40–90 cm tall. Stems erect, with raised lines descending from base of leaf petioles, woody at base, usually much branched. Leaves alternate, sometimes subopposite; petiole 1–4 cm, narrowly winged; leaf blade lanceolate to elliptic-lanceolate, 6–13 × 1.5–4 cm, submembranous when dry, sparsely black glandular punctate or striate, especially near margin, base cuneate, apex acute to acuminate. Racemes terminal, 10–25 cm; bracts subulate, 2–3 mm. Pedicel 2–9 mm, elongated to 1–1.8 cm in fruit. Calyx lobes narrowly lanceolate, 3–4 mm, glandular ciliate, abaxially black striate. Corolla white or tinged with purple; tube ca. 1.5 mm; lobes oblong-spataulate, 1–2.5 mm, apex rounded; sinus between lobes subrounded. Stamens long exserted; filaments adnate to base of corolla lobes; anthers ovate, purple, dorsifixed, ca. 1 mm. Ovary ovoid. Style ca. 5 mm. Capsule globose or slightly depressed, 3–4 mm in diam. Fl. Apr–May.

Wastelands near villages, roadsides, open forests near streams. Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Taiwan, Yunnan [Bhutan, India, Indonesia, Japan, Laos, Philippines, Sikkim, Thailand, Vietnam; Pacific Islands].


短花珍珠菜 duan hua zhen zhu cai

Herbs perennial, to 1 m tall. Stems erect, obliquely quadrangular, branched in upper part, apex and young shoots densely glandular. Leaves alternate; petiole 1.5–3.5 mm, narrowly winged; leaf blade lanceolate, 5–10 × 0.8–2 cm, glabrous, reddish brown or black glandular punctate or striate near margin, base cuneate-attenuate, margin obscurely undulate, apex acute to subacuminate; veins 4 or 5 pairs, veinlets conspicuous abaxially. Racemes terminal, 8–13 cm; bracts subulate. Pedicel slightly angular, 5–7.5 mm, elongated to 1 cm in fruit. Calyx lobes lanceolate, 4–4.5 mm, with 4 vertical brown glandular stripes outside, margin membranous. Corolla pale purple, ca. 3.5 mm, shorter than calyx; tube ca. 1.5 mm; lobes narrowly oblong, ca. 2 × 0.8 mm, epunctate, apex obtuse, sinus between lobes obtuse. Stamens exserted; filaments adnate to base of corolla lobes, free parts ca. 3.5 mm; anthers ovate, dorsifixed, ca. 0.5 mm. Ovary glabrous. Style to 4 mm. Capsule subglobose, slightly shorter than persistent calyx. Fl. Jun.

* Grassy mountain slopes; 1700–1800 m. NW Yunnan (Fugong Xian).


阔瓣珍珠菜 kuo ban zhen zhu cai

*Lysimachia decurrens* var. *platypetala* (Franchet) R. Knuth.

Herbs perennial, 30–70 cm tall. Stems erect, terete, usually branched above middle. Leaves alternate, sometimes opposite on lower part of stem; petiole ca. 1 cm; leaf blade lanceolate, 5–8 × 1–1.2 cm, abaxially very densely minutely rust-colored glandular, base attenuate, apex acuminate. Racemes terminal, densely flowered; bracts subulate. Pedicel 5–7 mm, ca. as long as to longer than bracts, densely glandular. Calyx lobes lanceolate, 5–6 mm, abaxially black striate, margin membranous, apex slightly recurved. Corolla white or pink; tube ca. 2 mm; lobes suborbicular, ca. 4 mm, base clawed, occasionally with 2 dark purple glandular stripes

* Grassy mountain slopes, 2900–3200 m. N Yunnan.


123b. *Lysimachia lichiangensis* var. *xerophylla* C. Y. Wu.


干生珍珠菜 gan sheng zhen zhu cai

丽江珍珠菜 li jiang zhen zhu cai

丽江珍珠菜(原变种) li jiang zhen zhu cai (yuan bian zhong)

* Grassy slopes, river valleys; 500–1800 m. W Sichuan, N Yunnan.


大理珍珠菜 da li zhen zhu cai

Lysimachia taliensis var. breviloba C. Y. Wu.

Herbs perennial, glabrous, 35–80 cm tall. Stems erect, simple or branched in upper part; branches subverticillate. Leaves in whorls of 3 or 4, opposite on branches, subsessile; leaf blade lanceolate to linear, 4–11 × 0.5–1(-2.3) cm, abaxially glaucous, with many scattered dark purple to black glandular dots or stripes, or sometimes obscure and slightly raised, adaxially dark green, base cuneate-attenuate, subauriculate dilated. Racemes terminal, 4–7 cm, elongated to 25 cm in fruit; bracts linear, 3–6(-9) mm. Pedicel 5–7 mm, elongated to 1 cm in fruit. Calyx lobes linear-lanceolate, 4–5(-7) mm, dark purple wide glandular striate outside, hyaline margined, apex acute, costate. Corolla white or pink; tube 2–2.5 mm; lobes obovate to oblong-elliptic, 4–6(-8.5) × 2–4 mm, apex rounded; sinus between lobes obtuse. Stamens ca. as long as to slightly shorter than corolla lobes; filaments adnate to base of corolla lobes, free parts 4–5 mm; anthers elliptic, ca. 1 mm. Ovary globose. Style 5–6 mm. Capsule subglobose, 4–5 mm in diam. Fl. Apr.

* Grassy mountain slopes, scrub forests; 2600–3800 m. W Sichuan, N Yunnan.

The corolla lobes in Lysimachia taliensis are typically obovate, which make the species distinctive, but when they are oblange and only 2 mm wide, this species is difficult to distinguish from L. delavayi Franchet.


波缘珍珠菜 bo yuan zhen zhu cai

Herbs perennial, glabrous, 30–50 cm tall. Stems erect, distinctly quadrangular, often branched and glandular above. Leaves subopposite; petiole ca. 5 mm, narrowly margined; leaf blade lanceolate to linear-lanceolate, 2.5–7 cm × 3–14(-18) mm, glabrous, paler green abaxially, glandular punctate and striate near margin, margin entire or obscurely undulate, apex acute; midvein keeled near base abaxially; veins 6–9 pairs, midvein elevated abaxially. Racemes terminal, 3–8 cm; bracts subulate-lanceolate, as long as to slightly longer than pedicel. Pedicel 2.5–3.5 mm, to 5 mm in fruit, glandular. Calyx ca. 5 mm, parted to base; lobes linear-lanceolate, dark brown striate. Corolla rose, 7.5–8.5 mm; tube ca. 2 mm; lobes oblong-lanceolate, 3–3.2 mm wide, often glandular striate, apex rounded, sinus between lobes subtornate. Stamens ca. as long as corolla or slightly longer; filaments adnate to base of corolla lobes, free parts glabrous; anthers elliptic, ca. 1 mm. Ovary globose. Style ca. 7 mm. Capsule brown, globose, ca. 2.5 mm in diam. Fl. Jun.

* Streamsides; ca. 3000 m. NW Yunnan (Lanping Xian).


粗壮珍珠菜 cu zhuang zhen zhu cai

Herbs perennial, 1–1.5 m tall. Stems erect, quadrangular, usually branched in upper part. Leaves opposite, suberect, sessile; leaf blade linear-lanceolate, 5–11 × 1–1.5 cm, subleathery, abaxially glaucous, densely minutely dark glandular punctate, base short attenuate, semiclasping, apex acute. Racemes terminal, initially coniform, gradually elongated to 24 cm; bracts acuminately-subulate, ca. 6.5 × 1 mm, densely glandular punctate. Pedicel spreading, to 1 cm, glandular. Calyx lobes purplish, ovate, ca. 4 × 1.2 mm, sparsely dark glandular striate and punctate near apex, base dark green, margin membranous. Corolla reddish or pale purple; tube ca. 1.5 mm; lobes obovate, ca. 5 × 4 mm, red striate near apex, base slightly clawed, margin crenulate, apex rounded. Stamens exserted, to 8.5 mm; filaments adnate to base of corolla lobes; anthers elliptic, dorsifixed, ca. 1 mm. Ovary ovoid. Style filiform, 5–8 mm. Capsule subglobose, ca. 4 mm in diam. Fl. Jul.

* Among shrubs on mountain slopes; 2400–2700 m. SW Yunnan (Tengchong Xian).


金江珍珠菜 jin jiang zhen zhu cai

Herbs perennial, glabrous, 25–50 cm tall. Stems erect, quadrangular, simple or branched. Leaves alternate, rarely subopposite or verticillate, sessile; leaf blade narrowly lanceolate to linear, 6–8 cm × 4–10 mm, tapered to slightly dilated base, abaxially glaucous, with many scattered dark purple glandular dots and stripes, sometimes obscure and slightly raised, apex acute. Racemes terminal, initially coniform, to 13 cm in fruit; bracts subulate. Pedicel ca. 5 mm, elongated to 1 cm in fruit, ca. as long as to slightly shorter than bracts. Calyx lobes narrowly lanceolate, ca. 4 mm, ciliate, with 4 vertical glandular stripes outside, margin membranous, apex acuminate. Corolla pink; tube ca. 2 mm; lobes spatulate-oblong, 4–6 × 1.5–2 mm, epunctate, apex rounded, sinus between lobes obtuse. Stamens exserted; filaments adnate to lower part of corolla lobes, free parts 4–5 mm; anthers oblong, dorsifixed, ca. 1 mm. Ovary ovoid. Style filiform, to 6.5 mm. Capsule subglobose, 4–5 mm in diam.

* Among shrubs on mountain slopes; 2400–2700 m. NW Yunnan (Heqing Xian).


墨脱珍珠菜 mo tuo zhen zhu cai

Herbs perennial, 40–80 cm tall. Stems erect, distinctly quadrangular, branched above middle, glabrescent. Leaves alternate or subopposite on lower part of stem, sessile; leaf blade oblong-lanceolate, 7–12 × 1.8–2.6 cm, tapered towards subauriculate-dilated base, glabrescent, red glandular punctate and striate near margin, margin entire or obscurely undulate, apex acute; midvein keeled near base abaxially; veins 6–9...
pairs, veinlets inconspicuous. Racemes terminal, to 8 cm in fruit; bracts subulate, 3.5–8 mm. Pedicel angular, 1–1.5 cm in fruit. Calyx lobes lanceolate, ca. 5.5 × 1.7 mm, red glandular striate outside, margin membranous, costaate. Corolla pink; tube ca. 3 mm; lobes oblong, ca. 5 × 2 mm, sparsely red glandular striate, apex obtuse, sinus between lobes acute. Stamens ca. as long as corolla lobes, adnate to their bases; anthers oblong, dorsifixed, ca. 1.5 mm. Capsule subglobose, ca. 3 mm in diam.

* Mountain meadows; ca. 3100 m. SE Xizang (Mêdog Xian).


中甸珍珠菜 zhong dian zhen zhu cai

Herbs perennial, 30–80 cm tall. Stems erect, suberete to slightly angular, ± glandular on upper part. Leaves opposite; petiole 2–4 mm; leaf blade elliptic to ovate, 1.5–4.5 × 0.9–2 cm, glabrescent, minutely glandular, base cuneate, apex acute. Racemes terminal, 6–30 cm, glandular; bracts linear. Pedicel 6–10 mm in fruit, ca. 2 × as long as bracts. Calyx lobes lanceolate, ca. 3.5 mm, enlarged to 5 mm in fruit, red glandular striate outside, margin membranous. Corolla ca. 6.5 mm, parted to 2/3; lobes oblong, ca. 1.5 mm wide, sinus between lobes acute. Stamens ca. as long as corolla lobes, adnate to them; anthers dorsifixed. Ovary ovoid, glabrous. Style to 5 mm. Immature capsules subglobose, ca. 3.5 mm in diam. Fl. Aug.

* Open woodlands, among shrubs; 2000–3200 m. SW Sichuan, Yunnan.


长蕊珍珠菜 chang rui zhen zhu cai

Herbs annual, glabrous, 25–50 cm tall. Stems erect to ascending, obscurely quadrangular, simple or branched from base, sparsely black glandular punctate. Leaves alternate, occasionally opposite at base of stem; petiole 1/4–2/3 as long as leaf blade, narrowly winged; leaf blade ovate to rhomboid-ovate, rarely ovate-lanceolate, 1.5–5 × 1–1.3 cm, submembranous when dry, sparsely dark purple or black glandular striate near margin or along midvein, base short attenuate to subrounded, rarely cuneate, apex acute. Racemes terminal; bracts subulate, usually 1/2 to rarely as long as pedicel. Pedicel 5–12 mm, elongated slightly in fruit. Calyx lobes ovate-lanceolate, ca. 3 mm, black striate outside, margin membranous, apex acute. Corolla white or pink; tube ca. 2 mm; lobes spatulate to oblong obovate, 4–4.5 × 1.6–2 mm, apex obtuse. Stamens long exserted; filaments adnate to base of corolla lobes, free parts to 6 mm; anthers ovate, dorsifixed, ca. 1 mm. Ovary sparsely puberulent. Style ca. 7 mm. Capsule subglobose, ca. 4 mm in diam. Fl. Apr.–May.

* Rock crevices of mountain slopes. NE Yunnan.


总花珍珠菜 zong hua zhen zhu cai

Herbs biennial or perennial, to 37 cm tall. Stems erect, slightly angular, often branched at base, glandular on upper part. Basal leaves early deciduous; stem leaves alternate; petiole ca. 1 cm, narrowly winged; leaf blade broadly ovate (lower leaves) to ovate-lanceolate (upper leaves), 2–3 × 1.4–1.7 cm, abaxially glaucous, glandular pulverulent, sparsely red glandular punctate near margin, base cuneate, apex acute; veins 3 or 4 pairs, veinlets inconspicuous. Racemes terminal, to 9 cm, 2.5–3 cm in diam., apex rounded; bracts subulate-acuminate, ca. 5 mm; margin membranous. Pedicel to 6 mm. Calyx ca. 5 mm; lobes lanceolate, ca. 4 × 1.2 mm, margin membranous, glandular striate outside, apex long acuminate, ± blunt. Corolla white or tinged with red, to 1 cm, deeply parted; lobes oblong, ca. 6.5 × 2 mm, sparsely red striate, sinus between lobes acute. Stamens ca. as long as corolla lobes and adnate to them; anthers dorsifixed. Ovary ovoid, glabrous. Style to 5 mm. Immature capsules subglobose, ca. 3.5 mm in diam. Fl. Aug.

* Wet streamside meadows. SE Xizang (Tsarong Xian).


洋珍珠菜 ze zhen zhu cai

*Lysimachia candida* var. *depauperata* Merrill; *L. inconstipula* Miqel.

Herbs annual or biennial, glabrous, 10–30 cm tall. Stems erect, simple or branched. Basal leaves blade spatulate to oblong obovate, 2.6–6 × 0.5–2 cm, with winged petioles, usually withered before anthesis; stem leaves alternate, rarely opposite, sessile or subsessile; leaf blade obvate to oblong lanceolate or linear, 1–5 cm × 2–12 mm, sparsely black or reddish glandular punctate, base attenuate, apex acuminate to obtuse. Racemes terminal, initially coniform, to 5–10 cm in
**L. humifusa**

Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, Shandong, Sichuan, Guangdong, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan.

**L. stolonifera**

Herbs perennial, 10–28 cm tall. Stems often many, ascend- ing to erect, often prostrate at base; leaves alternate, often opposite in lower part of stem; petiole ca. as long as to shorter than leaf blade, narrowly winged; leaf blade spatulate to obovate or broadly ovate, 5–10(–20) × 3–7 mm, glabrous, sparsely dark purple or black glandular punctate and striate, base attenuate, apex rounded. Inflorescences capitulate to apex, 4–8-flowered; bracts leaflike, ca. 4 mm. Pedicel 1–3 mm, glabrous. Calyx lobes oblong-lanceolate, ca. 3 mm, dark glandular striate outside, apex blunt. Corolla pink; tube ca. 2 mm; lobes spatulate or obovate, ca. 3 mm, epunctate, apex rounded. Stamens exserted; filaments adnate to base of corolla lobes; anthers purple, ovate, dorsifixed, ca. 0.7 mm. Ovary glabrous; style ca. 5 mm. Capsule ovoid, 3–4 mm in diam. Fl. May–Jun.

* Moist meadows, damp woodland margins; 3500–4000 m. W Sichuan, NW and W Yunnan.

**L. microphylla**

L. microphylla Franchet; *Bernardina microphylla* Migo.


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fruit; bracts linear, 4–6 mm. Pedicel 0.8–1.2(–1.5) cm. Calyx lobes lanceolate, 3–5 mm, black glandular striate outside, hyaline margined. Corolla white, narrowly campanulate, 6–12 mm, parted to middle; lobes oblong to oblong-ovobate, epunctate, apex rounded. Stamens slightly shorter than corolla lobes; filaments ca. 1.5 mm; anthers sublinear, dorsifixed, ca. 1.5 mm. Ovary glabrous. Style ca. 5 mm. Capsule subglobose, 2–3 mm in diam. Fl. Mar–Jun.

Wet areas near cultivated fields, ditches, streamsides, roadsides; 100–2100 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, Shandong, Sichuan, Taiwain, Xizang, Yunnan, Zhejiang [Japan, Myanmar, Vietnam].

**L. candida** Lindley var. microphylla Franchet; *Naumburgia candida* var. microphylla Hemsley in F. B. Forbes & Hemsley, J. Linn. Soc., Bot. 26: 50. 1889.

**L. stolonifera** R. Knuth; *Bernardina stolonifera* Naumburg.


**Naumburgia thyrsiflora** (Linnaeus) Reichenbach.
Herbs perennial, 30–80 cm tall, with horizontal rhizomes. Stems erect, usually simple, black glandular punctate, glabrous on lower part, puberulent on upper. Lowest leaves scalelike, reduced; leaves opposite, sessile, rarely indistinctly petiolate; leaf blade lanceolate to elliptic-lanceolate, 5–15 × 0.6–2 cm, lower part tapered toward obtuse or semiclaspig base, abaxially glabrous except for sparingly villous midvein, sparsely black glandular punctate, adaxially glabrous, apex acute to acuminate. Racemes dense, capitulate or spikelike, pedunculate, 1–3 cm, confined in axils of middle and upper leaves; peduncle 1.5–3 cm, glabrous or sparingly villous. Pedicel 1–3 mm, glabrous or sparingly villous. Calyx 2–3.5 mm, parted nearly to base; lobes usually 6 or 7, linear-lanceolate, black glandular punctate. Corolla cream-yellow, parted nearly to base; lobes usually same number as calyx lobes, linear, 5–6 × 0.5–1 mm, black glandular punctate and striate. Stamens ca. as long as to longer than corolla; filaments 4–5 mm, nearly free, adnate to base of corolla; anthers oblong, dorsifixed, ca. 1 mm. Ovary sparingly puberulent. Style 4.5–6 mm. Capsule subglobose, ca. 2.5 mm in diam. Fl. May–Jun. 2n = 20, 40, 42.

Bog margins, marshes, moist meadows. Heilongjiang, Jilin, Nei Mongol, Shaanxi, Yunnan [Circumboreal].