

- 16b. Flowers 2–6; carpels 5 (rarely 4).
 17a. Spur conic or narrowly so, less than 2 cm, base 4–5 mm in diam.
 18a. Filaments glabrous 17. *D. glaciale*
 18b. Filaments pilose 18. *D. pseudoglaciale*
 17b. Spur subulate or cylindrical-subulate, more than 2 cm, base ca. 3 mm in diam.
 19a. Inflorescence with yellow, glandular hairs; petal apex emarginate; staminode limb
 suboblong, 2-cleft; filaments glabrous 32. *D. pylzowii*
 19b. Inflorescence without glandular hairs; petal apex entire; staminode limb
 suborbicular, emarginate; filaments sparsely pilose 33. *D. motingshanicum*
- 11b. Carpels 3.
 20a. Leaf lobes separate for less than 90% of blade radius.
 21a. Carpels hairy only on ventral suture, glabrous elsewhere 24. *D. wardii*
 21b. Carpels evenly hairy throughout exposed surfaces.
 22a. Spur conic or conic-tubular, base 5–12 mm in diam.
 23a. Bracteoles blue-purple, navicular-lanceolate 41. *D. purpurascens*
 23b. Bracteoles not blue-purple, flat.
 24a. Bracteoles more than 0.5 mm from flowers; spur base 7–12 mm in diam. 16. *D. chrysotrichum*
 24b. Bracteoles ca. 0.5 mm from flowers; spur base ca. 5 mm in diam. 19. *D. viscosum*
 22b. Spur cylindrical or subulate, base 2–4(–4.5) mm in diam.
 25a. Bracteoles ca. 1 mm from flowers.
 26a. Bracteoles elliptic 39. *D. albocoeruleum*
 26b. Bracteoles linear or narrowly so.
 27a. Stamines yellow barbate 27. *D. chenii*
 27b. Stamines white barbate.
 28a. Spur less than 1 cm 12. *D. pulanense*
 28b. Spur more than 1 cm 61. *D. wentsaii*
 25b. Bracteoles more than 1 mm from flowers.
 29a. Staminode limb emarginate at apex 28. *D. yangii*
 29b. Staminode limb 2-lobed to middle.
 30a. Sepal margin white 27. *D. chenii*
 30b. Sepal margin not white.
 31a. Lateral and lower sepals obovate or broadly so 30. *D. pseudopulcherrimum*
 31b. Lateral and lower sepals elliptic or ovate.
 32a. Stem less than 50 cm 25. *D. smithianum*
 32b. Stem ca. 50 cm 40. *D. siwanense*
- 20b. Leaf lobes separate for at least 90% of blade radius.
 33a. Bracteoles ca. 1 mm from flower.
 34a. Bracteoles linear, 1–1.7 mm wide 29. *D. batangense*
 34b. Bracteoles narrowly elliptic, 3–3.5 mm wide 38. *D. henryi*
 33b. Bracteoles more than 1 mm from flower.
 35a. Bracteoles leaflike, 3-cleft.
 36a. Spur longer than lateral sepals.
 37a. Sepals 2–3 cm, spur subulate 35. *D. candelabrum*
 37b. Sepals 1.4–1.5 cm, spur cylindrical 37. *D. calophyllum*
 36b. Spur shorter than or equaling lateral sepals.
 38a. Inflorescence 1-flowered; staminodes undivided 23. *D. chungbaense*
 38b. Inflorescence 2- or 3-flowered; staminodes 2-lobed.
 39a. Sepals 1.9–2 cm, spur subcylindrical, shorter than sepals, ca. 1.2 cm; filaments
 pilose 36. *D. pseudocandelabrum*
 39b. Sepals 1.2–1.5 cm, spur subulate, subequaling sepals, 1.2–1.4 cm; filaments
 glabrous 22. *D. qinghaiense*
- 35b. Bracteoles undivided, linear or lanceolate.
 40a. Inflorescence 1-flowered; spur shorter than lateral sepals.
 41a. Spur cylindrical, 1–1.3 cm 21. *D. tangkulaense*
 41b. Spur cylindrical-subulate or subulate, 1.7–2.6 cm 35. *D. candelabrum*
 40b. Inflorescence 2–7-flowered; spur longer than lateral sepals.
 42a. Lower sepals obovate, apex rounded 30. *D. pseudopulcherrimum*
 42b. Lower sepals ovate, elliptic-ovate, or narrowly elliptic, apex narrowed.

- 69a. Raceme rachis without glandular hairs; bracteoles lanceolate-oblong or lanceolate, 8–10 mm 50. *D. winklerianum*
- 69b. Raceme rachis with yellow, glandular hairs; bracteoles linear, 10–14 mm 64. *D. tabatae*
- 65b. Bracteoles ca. 1 mm wide.
- 70a. Sepals abaxially without yellow, glandular hairs.
- 71a. Carpels glabrous 63. *D. eglandulosum*
- 71b. Carpels pubescent.
- 72a. Pedicels and sepals abaxially strigose; carpels densely strigose ... 54. *D. tianshanicum*
- 72b. Pedicels and sepals abaxially puberulent; carpels puberulent.
- 73a. Petals sparsely ciliate, apex 2-lobed 47. *D. aktoense*
- 73b. Petals glabrous, apex emarginate 66. *D. trisectum*
- 70b. Sepals abaxially with yellow, glandular hairs.
- 74a. Central primary leaf lobes and secondary lobes of lateral primary lobes long acuminate or caudate at apex 60. *D. shawurensis*
- 74b. Central primary leaf lobes and secondary lobes of lateral primary lobes acute or acuminate at apex.
- 75a. Bracteoles contiguous to flowers.
- 76a. Petals 2-lobed; carpels densely puberulent 52. *D. tarbagataicum*
- 76b. Petals entire; carpels glabrous 53. *D. elatum*
- 75b. Bracteoles remote from flowers.
- 77a. Spur shorter than or equaling lateral sepals 55. *D. wuqiaense*
- 77b. Spur longer than lateral sepals 56. *D. kunlunshanicum*
- 3b. Petals and staminodes not black to brown, similar in color to sepals (blue, purple, or white) (3. *D.* sect. *Delphinastrum*).
- 78a. Cauline leaf petiole sheath 8–15 mm wide 139. *D. coleopodum*
- 78b. Cauline leaf petiole sheath less than 8 mm wide, or cauline leaves absent.
- 79a. Carpels at least 4.
- 80a. Staminode limb cleft for at least 30% of its length.
- 81a. Inflorescence less than 3 × as long as wide 162. *D. caeruleum*
- 81b. Inflorescence at least 3 × as long as wide.
- 82a. Stem at least 40 cm 154. *D. pseudomosoyense*
- 82b. Stem less than 40 cm.
- 83a. Spur less than 1 cm 8. *D. nordhagenii*
- 83b. Spur at least 1 cm 69. *D. humilius*
- 80b. Staminode limb cleft for less than 30% of its length.
- 84a. Inflorescence more than 3 × as long as wide.
- 85a. Staminode limb white barbate 68. *D. kingianum*
- 85b. Staminode limb yellow barbate 153. *D. sinopentagynum*
- 84b. Inflorescence less than 3 × as long as wide.
- 86a. Staminode limb narrowly obovate; spur at least 2.4 cm, base at least 3 mm in diam. 161. *D. beesianum*
- 86b. Staminode limb broadly obovate or suborbicular; spur to 2.6 cm, base to 4 mm in diam.
- 87a. Staminodes white barbate 163. *D. huangzhongense*
- 87b. Staminodes yellow barbate 162. *D. caeruleum*
- 79b. Carpels 3.
- 88a. Sepals abaxially corniculate near apex.
- 89a. Corniculate projection 2.5–3.5 mm, 2-cleft 105. *D. campylocentrum*
- 89b. Corniculate projection less than 2.5 mm, not 2-cleft.
- 90a. Spur ca. 1.3 cm 111. *D. sparsiflorum*
- 90b. Spur more than 1.3 cm.
- 91a. Sepals yellow pubescent abaxially 132. *D. leiostachyum*
- 91b. Sepals white pubescent abaxially.
- 92a. Inflorescence pubescent 106. *D. sutchuenense*
- 92b. Inflorescence glabrous.
- 93a. Petals apically 2-lobate 117. *D. taliense*
- 93b. Petals apically entire or emarginate.
- 94a. Spur ca. 2.4 cm.
- 95a. Filaments pilose 120. *D. ceratophoroides*
- 95b. Filaments glabrous 131. *D. dolichocentroides*

- 120b. Spur ca. 1.8 cm; pedicels ca. 1 cm 89. *D. pseudocyananthum*
- 116b. Bracteoles more than 1 mm from flowers.
- 121a. Leaf cleft less than 60% of blade radius.
- 122a. Raceme glabrous 121. *D. hamatum*
- 122b. Raceme puberulent.
- 123a. Inflorescence yellow glandular puberulent; ovaries pubescent 122. *D. hueizeense*
- 123b. Inflorescence white puberulent; ovaries glabrous 123. *D. calthifolium*
- 121b. Leaf cleft ca. 60% of blade radius.
- 124a. Leaf blade lobed more than 85% of blade radius.
- 125a. Pedicels glabrous.
- 126a. Staminode limb 2-cleft to middle.
- 127a. Middle cauline leaves with central lobe broadly rhombic, 3-cleft; pedicels ascending-spreading, forming an obtuse angle with rachis 134. *D. tenii*
- 127b. Middle cauline leaves with central lobe lanceolate, often undivided, or with 1 or 2 lobules; pedicels erect-spreading, forming an acute angle with rachis.
- 128a. Raceme laxly 3–10-flowered; spur 1.7–2.4 cm; petals glabrous, emarginate at apex 136. *D. yunnanense*
- 128b. Raceme densely 18–30-flowered; spur 1.3–1.5 cm; petals ciliate at margin, 2-lobed at apex 137. *D. pseudoyunnanense*
- 126b. Staminode limb entire or emarginate at apex.
- 129a. Stem at least 80 cm, ca. 10-leaved 74. *D. cheilanthum*
- 129b. Stem less than 80 cm, up to 6-leaved.
- 130a. Sepals ca. 1.8 cm, spur 2.6–3 cm; staminode limb entire at apex 119. *D. liangshanense*
- 130b. Sepals 1–1.4 cm, spur 1.8–2.5 cm; staminode limb emarginate at apex 134. *D. tenii*
- 125b. Pedicels hairy.
- 131a. Raceme rachis glabrous.
- 132a. Stem ca. 70 cm; raceme to 22 cm, ca. 8-flowered 156. *D. obcordatilimbum*
- 132b. Stem 11–30 cm; raceme 3–16 cm, 1–5-flowered.
- 133a. Stem ca. 30 cm; raceme 3–5-flowered; sepals 0.75–0.9 cm, spur ca. 1.9 cm; staminode limb 2-parted for more than 50% of its length 85. *D. yanwaense*
- 133b. Stem 11–18 cm; raceme 1- or 2-flowered; sepals 1.6–1.7 cm, spur ca. 2.8 cm; staminode limb entire 124. *D. pseudohamatum*
- 131b. Raceme rachis hairy.
- 134a. Pedicels without glandular hairs.
- 135a. Stem 75–95 cm; basal and lower cauline leaves wilted at anthesis.
- 136a. Staminode limb emarginate 73. *D. hsinganense*
- 136b. Staminode limb 2-lobed.
- 137a. Bracteoles narrowly lanceolate 79. *D. delavayi*
- 137b. Bracteoles subulate 136. *D. yunnanense*
- 135b. Stem 3–17 cm; basal leaves present at anthesis.
- 138a. Stem 15–17 cm; leaf blade central lobe 3-parted; raceme 2–5-flowered 129. *D. yulungshanicum*
- 138b. Stem 3–8 cm; leaf blade central lobe 3-dentate or 3-lobed; raceme 1- or 2-flowered 130. *D. hui*
- 134b. Pedicels with yellow, glandular hairs.
- 139a. Leaf blade central lobe lanceolate, undivided or indistinctly 3-lobed 87. *D. hirtifolium*
- 139b. Leaf blade central lobe rhombic or obovate-rhombic, usually distinctly 3-lobed.
- 140a. Leaf blade primary lobes dissected, ultimate lobules narrowly ovate to linear-lanceolate; carpels glabrous 140. *D. kantzeense*
- 140b. Leaf blade primary lobes less divided, ultimate lobules triangular; carpels puberulent.
- 141a. Stem 11–30 cm; raceme 3- or 4-flowered 126. *D. pergameneum*
- 141b. Stem more than 40 cm; raceme 5–15-flowered.
- 142a. Stem long hispid proximally 79. *D. delavayi*
- 142b. Stem puberulent proximally 144. *D. incisolobulatum*
- 124b. Leaf blade lobed ca. 85% of blade radius.

- 143a. Stem glabrous below inflorescence.
 - 144a. Pedicels glabrous 92. *D. potaninii*
 - 144b. Pedicels hairy.
 - 145a. Pedicels with only yellow, glandular hairs.
 - 146a. Inflorescence less than 3 × as long as wide 93. *D. eriostylum*
 - 146b. Inflorescence ca. 3 × as long as wide 118. *D. lasiantherum*
 - 145b. Pedicels with only white hairs or with both white hairs and yellow, glandular hairs.
 - 147a. Pedicels with only appressed, white hairs 78. *D. altissimum*
 - 147b. Pedicels with both appressed, white hairs and spreading, yellow, glandular hairs.
 - 148a. Leaf blade central lobe with lateral lobules less than 2 × as long as neighboring lobules.
 - 149a. Staminode hairs white; spur ca. 1.5 cm 82. *D. handelianum*
 - 149b. Staminode hairs yellow; spur 2–2.1 cm 83. *D. honanense*
 - 148b. Leaf blade central lobe with lateral lobules ca. 2 × as long as neighboring lobules.
 - 150a. Leaf blade to 6.8 cm wide; raceme ca. 4-flowered; staminode limb emarginate at apex 102. *D. ninglangshanicum*
 - 150b. Leaf blade to 12 cm wide; raceme 6–16(–25)-flowered; staminode limb 2-cleft to middle.
 - 151a. Pedicels with dense, spreading, yellow, glandular hairs and a few retrorse, white hairs; sepals 1.4–1.7 cm 86. *D. tongolense*
 - 151b. Pedicels with dense, retrorse, white hairs and sparse, spreading, yellow, glandular hairs; sepals 1–1.5 cm 101. *D. bulleyanum*
- 143b. Stem hairy below inflorescence.
 - 152a. Inflorescence less than 3 × as long as wide 94. *D. laxicymosum*
 - 152b. Inflorescence ca. 3 × as long as wide.
 - 153a. Pedicels glabrous 91. *D. hirticaule*
 - 153b. Pedicels hairy.
 - 154a. Leaf blade central lobes undivided or indistinctly 3-lobed.
 - 155a. Bracteoles less than 2 mm from flowers 79. *D. delavayi*
 - 155b. Bracteoles ca. 2 mm from flowers 82. *D. handelianum*
 - 154b. Leaf blade central lobes distinctly 3-lobed to 3-parted.
 - 156a. Stem with appressed hairs.
 - 157a. Stem ca. 30 cm; raceme rachis glabrous; pedicels 3.5–10 cm 85. *D. yanwaense*
 - 157b. Stem 57–65 cm; raceme rachis puberulent; pedicels 1–2.9 cm 84. *D. omeiense*
 - 156b. Stem with spreading or retrorse hairs.
 - 158a. Stem hairs 1.2–3 mm.
 - 159a. Stem hairs yellowish 84. *D. omeiense*
 - 159b. Stem hairs white 91. *D. hirticaule*
 - 158b. Stem hairs less than 1 mm or absent.
 - 160a. Bracteoles subulate or filiform, 2–5 × 0.2–0.4 mm, glabrous 90. *D. sherriffii*
 - 160b. Bracteoles lanceolate, 4.5–11 × 1.2–1.7 mm, hairy.
 - 161a. Cauline leaf 1, leaf blade to 10 cm wide 144. *D. incisolobulatum*
 - 161b. Cauline leaves at least 2, leaf blade 8–16(–22) cm wide.
 - 162a. Stem glabrous proximally; sepals less than 1 cm .. 81. *D. latirhombicum*
 - 162b. Stem puberulent proximally; sepals ca. 1 cm.
 - 163a. Filaments glabrous to sparsely hairy 79. *D. delavayi*
 - 163b. Filaments pilose 72. *D. gyalanum*
 - 107b. Leaf blade lobed more than 90% to base.
 - 164a. Leaves all basal.
 - 165a. Sepals adaxially puberulent.
 - 166a. Lateral sepals more than 1.7 cm 148. *D. chayuense*
 - 166b. Lateral sepals ca. 1.7 cm 143. *D. thibeticum*
 - 165b. Sepals adaxially glabrous.

- 167a. Stem sparsely spreading pubescent; bracteoles more than 1 mm from flowers.
 168a. Staminode limb suborbicular, entire; sepals elliptic-obovate or oblong, 1.5–1.8 cm 125. *D. autumnale*
 168b. Staminode limb broadly ovate, 2-cleft; sepals lanceolate, ca. 2.5 cm 165. *D. saxatile*
 167b. Stem retrorsely puberulent; bracteoles ca. 1 mm from flowers.
 169a. Spur pendulous; sepals villous abaxially 147. *D. pomeense*
 169b. Spur horizontal; sepals puberulent abaxially 149. *D. sinoscaposum*
 164b. Leaves both basal and cauline, sometimes basal and lower cauline leaves wilted at anthesis (in some alpine plants, lower internodes are very short and leaves may falsely appear to be all basal).
 170a. Leaf blade primary lobes lobed for ca. 50% of their length, ultimate lobules ovate or narrowly so.
 171a. Inflorescence less than 3 × as long as wide, or 1-flowered.
 172a. Leaf blade 1.3–2.6 cm wide.
 173a. Stem subglabrous; bracteoles leaflike, palmately 3-sect 35. *D. candelabrum*
 173b. Stem hispid; bracteoles linear, undivided 145. *D. pseudothibeticum*
 172b. Leaf blade 2.8–7 cm wide.
 174a. Pedicels 3.5–10 cm 164. *D. davidii*
 174b. Pedicels 1–2 cm.
 175a. Spur ca. 2 cm; filaments glabrous 38. *D. henryi*
 175b. Spur ca. 1.5 cm; filaments sparsely hairy 109. *D. conaense*
 171b. Inflorescence or branches ca. 3 × as long as wide.
 176a. Staminode limb entire or emarginate at apex.
 177a. Bracteoles ca. 1 mm from flowers, narrowly lanceolate; raceme with yellow, glandular hairs 143. *D. thibeticum*
 177b. Bracteoles more than 1 mm from flowers, narrowly linear or subulate; raceme without glandular hairs.
 178a. Raceme rachis and pedicels densely retrorsely puberulent 155. *D. majus*
 178b. Raceme rachis glabrous, pedicels puberulent only at apex 156. *D. obcordatilimum*
 176b. Staminode limb 2-lobed to 2-parted.
 179a. Bracteoles ca. 1 mm from flowers.
 180a. Staminode limb with white hairs; leaf blade central segment undivided or indistinctly 3-lobed 114. *D. trifoliolatum*
 180b. Staminode limb with yellow or yellowish hairs; leaf blade central segment distinctly 3-lobed or 3-cleft.
 181a. Stem ca. 10-leaved; basal leaves wilted at anthesis; carpels glabrous . 115. *D. wangii*
 181b. Stem 1–3-leaved; basal leaves green at anthesis; carpels hairy.
 182a. Stem spreading hispid 127. *D. yongningense*
 182b. Stem retrorsely pubescent or puberulent.
 183a. Leaf blade 4.5–6 cm; raceme 7–10-flowered; filaments with a few hairs 142. *D. medogense*
 183b. Leaf blade 2.5–4 cm; raceme 2–4-flowered; filaments glabrous 146. *D. taipaicum*
 179b. Bracteoles more than 1 mm from flowers.
 184a. Pedicels glabrous.
 185a. Stem hispid 108. *D. rangtangense*
 185b. Stem glabrous.
 186a. Spur 1.8–2 cm, longer than sepals 110. *D. giraldii*
 186b. Spur 0.6–1.1 cm, subequaling sepals 111. *D. sparsiflorum*
 184b. Pedicels hairy.
 187a. Pedicels with only yellow, glandular hairs 107. *D. pseudocampylocentrum*
 187b. Pedicels with white hairs (yellow, glandular hairs present or not).
 188a. Inflorescence glabrous; sepals 0.7–0.8 cm 112. *D. angustipaniculatum*
 188b. Inflorescence hairy; sepals (0.9–)1.1–1.8 cm.
 189a. Spur subulate-cylindric, 0.9–1 cm 71. *D. caudatolobum*
 189b. Spur subulate, 1.3–2.2 cm 104. *D. muliense*
 170b. Leaf blade primary lobes lobed for more than 50% of their length, ultimate lobules lanceolate, narrowly so, or linear.
 190a. Inflorescence less than 3 × as long as wide, or 1-flowered.
 191a. Bracteoles elliptic or elliptic-ovate; calyx urceolate; sepals longer than spur 152. *D. likiangense*

- 191b. Bracteoles linear or subulate; calyx open; sepals shorter than spur.
- 192a. Bracteoles ca. 1 mm from flowers 147. *D. pomeense*
- 192b. Bracteoles more than 1 mm from flowers.
- 193a. Staminode limb 2-cleft to middle.
- 194a. Stem long branched proximally 171. *D. maximowiczii*
- 194b. Stem simple or shortly branched distally.
- 195a. Ultimate leaf lobules narrowly ovate; spur 1.8–3 cm 35. *D. candelabrum*
- 195b. Ultimate leaf lobules narrowly linear; spur ca. 2.5 cm.
- 196a. Stem simple; inflorescence 1-flowered; lateral sepals subequaling spur 150. *D. nortonii*
- 196b. Stem branched distally; inflorescence 2–5-flowered; lateral sepals shorter than spur.
- 197a. Lateral sepals at least 1.7 cm; bracteoles borne proximally on pedicel, or absent 164. *D. davidii*
- 197b. Lateral sepals less than 1.7 cm; bracteoles borne near middle of pedicel or distally 170. *D. pseudocaeruleum*
- 193b. Staminode limb emarginate or 2-lobulate at apex.
- 198a. Pedicels with spreading, white hairs (yellow, glandular hairs present or not).
- 199a. Pedicels white puberulent only 169. *D. mollipilum*
- 199b. Pedicels white puberulent and yellow glandular puberulent.
- 200a. Spur 2.5–3.1 cm; lateral sepals 2.4–3.6 cm; staminode limb ca. 13 × 10 mm 167. *D. grandilimbum*
- 200b. Spur 3.3–3.8 cm; lateral sepals 1.4–1.6 cm; staminode limb ca. 6 × 5 mm 168. *D. pumilum*
- 198b. Pedicels with retrorse or appressed, white hairs, or glabrous (yellow, glandular hairs present or not).
- 201a. Stem proximally branched.
- 202a. Stem base retrorsely puberulent 171. *D. maximowiczii*
- 202b. Stem base glabrous 134. *D. tenii*
- 201b. Stem simple or branched distally.
- 203a. Sepals slightly shorter than spur; pedicels bracteolate above middle 159. *D. grandiflorum*
- 203b. Sepals distinctly shorter than spur; pedicels bracteolate near middle 166. *D. tatsienense*
- 190b. Inflorescence ca. 3 × as long as wide.
- 204a. Lateral sepals longer than spur.
- 205a. Bracteoles ca. 1 mm from flowers, elliptic or elliptic-ovate; calyx urceolate; sepals 2–2.5 cm 152. *D. likiangense*
- 205b. Bracteoles more than 1 mm from flowers, subulate; calyx open; sepals 1.1–1.8 cm.
- 206a. Raceme puberulent; staminode limb broadly obovate 160. *D. kamaonense*
- 206b. Raceme glabrous; staminode limb obovate-oblong.
- 207a. Spur 1.3–1.5 cm; raceme 18–30-flowered 137. *D. pseudoyunnanense*
- 207b. Spur 1.8–2 cm; raceme 5–9-flowered 141. *D. pycnocentrum*
- 204b. Lateral sepals shorter than or equaling spur.
- 208a. Spur subequaling lateral sepals, 1–1.4 cm, abruptly upcurved 138. *D. yuanium*
- 208b. Spur usually longer than lateral sepals, (1.2–)1.5–3 cm, horizontal or recurved, rarely slightly upcurved.
- 209a. Staminode limb glabrous; sepals ± forward pointing 151. *D. souliei*
- 209b. Staminode limb barbate; sepals ± spreading.
- 210a. Bracteoles ca. 1 mm from flower.
- 211a. Raceme dense, pedicels densely yellow glandular puberulent 116. *D. aemulans*
- 211b. Raceme ± sparse, pedicels only white puberulent, rarely mixed with a few yellow, glandular hairs.
- 212a. Cauline leaf blade ultimate lobules pungent at apex 143. *D. thibeticum*
- 212b. Cauline leaf blade ultimate lobules acute or slightly obtuse at apex.
- 213a. Raceme at least 5-flowered; bracteoles lanceolate, 1–1.6 mm wide; spur 1.9–2.7 cm 143. *D. thibeticum*
- 213b. Raceme 2–4-flowered; bracteoles oblong-ovate, 3–3.5 mm wide; spur 1.4–2 cm 146. *D. taipaicum*

- 210b. Bracteoles more than 1 mm from flowers.
- 214a. Raceme glabrous.
- 215a. Carpels glabrous 135. *D. shuichengense*
- 215b. Carpels hairy.
- 216a. Stem glabrous 156. *D. obcordatilimum*
- 216b. Stem hairy proximally, glabrous distally.
- 217a. Pedicels yellow pubescent near apex 125. *D. autumnale*
- 217b. Pedicels glabrous 132. *D. leiostachyum*
- 214b. Raceme ± hairy.
- 218a. Raceme sparsely puberulent.
- 219a. Staminode limb suborbicular, apex entire 125. *D. autumnale*
- 219b. Staminode limb obovate, apex usually emarginate or 2-lobed, rarely entire.
- 220a. Raceme dense; ovary sparsely pubescent 141. *D. pycnocentrum*
- 220b. Raceme lax; ovary densely pubescent.
- 221a. Stem more than 50 cm 136. *D. yunnanense*
- 221b. Stem to 50 cm 160. *D. kamaonense*
- 218b. Raceme densely puberulent.
- 222a. Staminode limb broadly obovate or suborbicular 159. *D. grandiflorum*
- 222b. Staminode limb narrowly obovate or oblong.
- 223a. Bracteoles narrowly oblong, 11–18 × 3–4 mm 157. *D. weiningense*
- 223b. Bracteoles linear or subulate, 2.5–7 × 0.2–1 mm.
- 224a. Sepals abaxially only puberulent, spur 1.6–2.2 cm; petals glabrous; staminode limb emarginate at apex 155. *D. majus*
- 224b. Sepals abaxially puberulent and villous, spur 2.4–2.8 cm; petals ciliate at apex; staminode limb erose at apex 158. *D. nangchienenense*

1. Delphinium sect. **Aconitoides** W. T. Wang, Acta Phytotax. Sin. 10: 7. 1962.

短距翠雀花组 *duan ju cui que hua zu*

Herbs perennial, rhizomatous. Stem single from rootstock. Leaves mostly proximal on stem; leaf blade palmately divided; primary lobes 2- or 3-lobulate. Petals black-brown, not distally enlarged. Staminodes black-brown, indistinctly differentiated into a claw and a narrow limb; limb adaxially glabrous or ciliate. Carpels 3. Seeds narrowly winged along angles.

• Six species: SW China.

1. Delphinium forrestii Diels, Notes Roy. Bot. Gard. Edinburgh 5: 265. 1912.

短距翠雀花 *duan ju cui que hua*

Stem robust, 18–35 cm tall, hispid or puberulent, usually simple. Leaf blade 4.7–9 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe obovate-cuneate or obovate-rhombic, 3-lobed, distally irregularly dentate, apex acute; ultimate lobules ovate; proximal leaves withered. Raceme cylindrical-globose, (5–)10–15 cm, densely 9–19-flowered, retrorsely or spreading hispid; proximal bracts leaflike, distal ones elliptic or oblanceolate. Pedicels 1.5–2(–5) cm; bracteoles distal, lanceolate, 9–15 mm, strigose. Sepals bluish gray or green, abaxially strigose and yellow glandular puberulent; spur pendulous, conic-subulate, 1.3–1.6 cm, usually slightly shorter than upper sepal, base 3–5 mm in diam.; other sepals smaller, 1.1–1.5 cm. Petals emarginate at apex, glabrous. Staminode limb 3–4 mm, emarginate or 2-lobed, glabrous, rarely sparsely white ciliate. Filaments glabrous. Ovaries sparsely puberulent or subglabrous. Fl. Aug–Oct.

• Forest margins, stony places near *Rhododendron* thicket margins, grassy slopes, gravelly slopes, alpine slopes, screes, cliffs; 3100–4900 m. SW Sichuan, SE Xizang, N Yunnan.

- 1a. Stem densely retrorsely hispid; sepals bluish gray or tinged greenish, abaxial hairs 1.2–2 mm 1a. var. *forrestii*
- 1b. Stem distally glabrous, proximally sparsely puberulent, often glabrescent; sepals green, abaxial hairs 0.1–0.2 mm 1b. var. *viride*

1a. Delphinium forrestii var. **forrestii**

短距翠雀花(原变种) *duan ju cui que hua* (yuan bian zhong)

Delphinium aconitoides Chen; *D. fengii* W. T. Wang; *D. mairei* Ulbrich.

Stem densely retrorsely hispid. Sepals bluish gray or tinged greenish, abaxial hairs 1.2–2 mm.

• Stony places near *Rhododendron* thicket margins, gravelly slopes, cliffs; 3800–4900 m. SW Sichuan, N Yunnan.

1b. Delphinium forrestii var. **viride** (W. T. Wang) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 352. 1979.

光茎短距翠雀花 *guang jing duan ju cui que hua*
Delphinium mairei Ulbrich var. *viride* W. T. Wang,
Acta Bot. Sin. 10: 73. 1962, based on *D. viride* Chen,

Bull. Fan Mem. Inst. Biol., n.s., 1: 165. 1948, not Watson (1888).

Stem distally glabrous, proximally sparsely puberulent, often glabrescent. Sepals green, abaxial hairs 0.1–0.2 mm.

• Forest margins, grassy slopes; 3100–4100 m. SE Xizang (Chawalong), NW Yunnan (Dêqên Xian).

2. *Delphinium leiophyllum* (W. T. Wang) W. T. Wang, Bull. Bot. Lab. N. E. Forest. Inst., Harbin 8: 23. 1980.

光叶翠雀花 *guang ye cui que hua*

Delphinium forrestii Diels var. *leiophyllum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 611. 1979.

Stem 30–50 cm tall, proximally sparsely yellow glandular puberulent or glabrous, simple. Leaf blade 7–10 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe rhombic-obovate, 3-lobed, distally incised dentate, apex acute; ultimate lobules ovate; proximal leaves withered.

Raceme 11–20 cm, densely 15–20-flowered, yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 0.8–5 cm; bracteoles distal, linear-lanceolate, 12–15 mm. Sepals purplish blue, abaxially puberulent; spur cylindrical-subulate, 1–1.9 cm, base 3–4 mm in diam.; other sepals 1.1–1.7 cm. Petals 2-lobed, ciliate. Staminode limb narrowly ovate, 2-lobed, ciliolate. Filaments glabrous. Ovaries sparsely puberulent. Fl. Aug–Oct.

• Scrub, gravelly slopes; 4400–4700 m. SE Xizang.

3. *Delphinium xichangense* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 1. 1986.

西昌翠雀花 *xi chang cui que hua*

Stem ca. 5.5 cm tall, spreading pubescent and yellow glandular puberulent, simple. Leaf blade 2.5–4.5 cm wide, base deeply cordate; primary lobes separate for less than 60% of blade radius; central lobe flabellate-obtrapezoid or obtrapezoid, 3-lobulate, distally entire or 1-dentate, apex acute; ultimate lobules ovate; proximal leaves withered or not. Corymb ca. 2.2 cm, ca. 4-flowered, spreading puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones long elliptic. Pedicels 0.8–1.2 cm; bracteoles distal, lanceolate-linear, ca. 8 mm. Sepals purplish, abaxially pilose and yellow glandular puberulent; spur narrowly conic, ca. 1.1 cm, base ca. 5.5 mm in diam.; other sepals ca. 1.2 cm. Petals 2-lobulate, glabrous. Staminode limb oblanceolate-spatulate, 2-lobulate, glabrous. Filaments glabrous. Ovaries distally puberulent. Fl. Oct.

• Alpine meadows; ca. 3800 m. SW Sichuan (Xichang Shi).

4. *Delphinium wrightii* Chen, Bull. Fan Mem. Inst. Biol., n.s., 1: 166. 1948.

狭序翠雀花 *xia xu cui que hua*

Stem (30–)40–50(–70) cm tall, hispid and yellow glandular puberulent, simple. Leaf blade 6–10 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe obtrapezoid, 3-lobulate, distally few dentate, apex acute; ultimate lobules ovate;

proximal leaves usually not withered. Raceme 10–24 cm, ± remotely 6–13-flowered, hispid and yellow glandular puberulent; proximal bracts leaflike, distal ones ovate-lanceolate or oblong. Pedicels 0.2–1.8 cm; bracteoles distal, narrowly ovate or broadly lanceolate, 8–11 mm. Sepals purple, abaxially hispid; spur subhorizontal, subulate or conic-tubular, 1.1–2 cm, recurved, base 2.5–6 mm in diam.; other sepals 1.4–1.6 cm. Petals emarginate and ciliate or glabrous at apex. Staminode limb ovate, 2-lobed, ciliate. Filaments glabrous. Ovaries densely puberulent. Fl. Aug–Oct.

• Scrub, grassy slopes; ca. 3400 m. SW Sichuan, NE Yunnan.

1a. Spur subulate, 1.6–2 cm, base 2.5–4 mm in diam.; petals distally ciliate 4a. var. *wrightii*

1b. Spur conic-tubular, 1.1–1.5 cm, base 4–6 mm in diam.; petals glabrous 4b. var. *subtubulosum*

4a. *Delphinium wrightii* var. ***wrightii***

狭序翠雀花(原变种) *xia xu cui que hua* (yuan bian zhong)

Spur subulate, 1.6–2 cm, base 2.5–4 mm in diam. Petals distally ciliate. Fl. Aug–Sep.

• Grassy slopes; ca. 3400 m. SW Sichuan (Muli Zang Zu Zizhixian).

4b. *Delphinium wrightii* var. ***subtubulosum*** W. T. Wang, Bull. Bot. Res., Harbin 16: 155. 1996.

粗距狭序翠雀花 *cu ju xia xu cui que hua*

Spur conic-tubular, 1.1–1.5 cm, base 4–6 mm in diam. Petals glabrous. Fl. Sep–Oct.

• NE Yunnan (Qiaojia Xian).

5. *Delphinium oxycentrum* W. T. Wang, Acta Bot. Sin. 10: 73. 1962.

尖距翠雀花 *jian ju cui que hua*

Stem 45–70 cm tall, glabrous, simple or 1-branched distally. Leaf blade 6–11 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules ovate; proximal leaves usually not withered. Raceme subglobose, 5.5–7.5 cm, densely 9–12-flowered, glabrous; proximal bracts leaflike, distal ones spatulate-oblong or narrowly oblong. Pedicels 2–4 cm; bracteoles distal, lanceolate to lanceolate-linear, 8–10 mm, glabrous or sparsely strigose. Sepals greenish and purple along veins, subglabrous or sparsely ciliate; spur pendulous, subulate, 2.6–4.2 cm; other sepals 1.4–1.8 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-lobed, glabrous. Filaments glabrous. Ovaries glabrous. Fl. Aug–Sep.

• Grassy slopes near forests; ca. 4000 m. SW Sichuan (Daocheng Xian, Gongga Shan).

6. *Delphinium trichophorum* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 166. 1893.

毛翠雀花 *mao cui que hua*

Stem (25–)30–65 cm tall, hispid or subglabrous, usually simple. Leaf blade 4–20 cm wide, base cordate; primary

lobes separate for less than 60% of blade radius; central lobe obovate-rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules ovate; proximal leaves usually not withered. Raceme tapered cylindric, (6–)14–24 cm, 11–50- or more flowered, hispid, white and yellow glandular puberulent, or subglabrous; proximal bracts leaflike, distal ones narrowly ovate or lanceolate, small. Pedicels 0.5–4 cm; bracteoles distal, colored like sepals, ovate or broadly lanceolate, 8–13 mm, strigose. Sepals bluish or purple, abaxially strigose; spur pendulous, cylindric-subulate or conic-subulate, 1.7–2.4 cm, base 3–8 mm in diam.; other sepals 1–1.8 cm. Petals emarginate or 2-lobed, usually glabrous. Staminode limb ovate, 3–4 mm, 2-lobed, glabrous or white ciliate. Filaments glabrous. Ovaries glabrous or densely puberulent. Fl. Jul–Oct. $2n = 16^*$.

• Grassy slopes; 2100–4600 m. C and S Gansu, E Qinghai, W Sichuan, E Xizang.

- 1a. Spur conic-subulate, base 6–8 mm in diam. 6c. var. *platycentrum*
- 1b. Spur cylindric-subulate, base 3–5 mm in diam.
 - 2a. Stem and raceme ± densely hispid; ovary densely puberulent 6a. var. *trichophorum*
 - 2b. Stem and raceme subglabrous or with sparse hairs; ovary glabrous 6b. var. *subglaberrimum*

2. Delphinium sect. *Elatopsis* Huth, Bot. Jahrb. Syst. 20: 391. 1895.

密花翠雀花组 mi hua cui que hua zu

Herbs perennial, rhizomatous. Stem single (or multiple) from rootstock. Leaves mostly on proximal 1/2 of stem, near middle, or distal; leaf blade palmately divided; primary lobes 2- or 3-lobulate. Petals black-brown, distally not enlarged. Staminoles black-brown, distinctly differentiated into a claw and an expanded, broad limb; limb adaxially yellow or white barbate. Carpels 3–5(–7). Seeds narrowly winged along angles or transversely squamulose winged. About 85 species: temperate regions of Asia and Europe; 61 species (49 endemic) in China.

7. Delphinium densiflorum Duthie ex Huth, Bot. Jahrb. Syst. 20: 393. 1895.

密花翠雀花 mi hua cui que hua

Delphinium brunonianum Royle var. *densum* Maximowicz.

Stem 30–46 cm tall, sparsely pubescent or glabrescent, simple. Leaf blade 6–7 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe rhombic-ovate, 3-lobulate, distally dentate, apex acute; ultimate lobules ovate; proximal leaves usually not withered. Raceme 5–14 cm, densely 10–40-flowered, pubescent; bracts lanceolate. Pedicels 2–2.5 cm; bracteoles distal, linear-oblong, 1.4–1.5 cm. Sepals persistent, bluish gray, abaxially pubescent; spur conic, 8–10 mm, base 4–5 mm in diam.; other sepals 2–2.4 cm. Petals 2-lobed, ciliate distally. Staminode limb ovate, 2-cleft, long barbate. Filaments glabrous. Carpels 3; ovaries pubescent. Fl. Jul–Aug.

Scrub, river banks, alluvial fans; 3300–4500 m. C Gansu (Tianzhu Zang Zu Zizhixian), Qinghai, ?Xizang [N India, Nepal].

6a. Delphinium trichophorum var. *trichophorum*

毛翠雀花(原变种) mao cui que hua (yuan bian zhong)

Delphinium pellucidum Busch; *D. purdomii* Craib.

Stem and raceme ± densely hispid. Spur cylindric-subulate, base 3–5 mm in diam. Ovaries densely puberulent.

• Grassy slopes; 2100–4600 m. C and S Gansu, E Qinghai, W Sichuan, E Xizang.

6b. Delphinium trichophorum var. *subglaberrimum*

Handel-Mazzetti, Acta Horti Gothob. 13: 48. 1939.

光果毛翠雀花 guang guo mao cui que hua

Stem and raceme subglabrous or with sparse hairs. Spur cylindric-subulate, base 3–5 mm in diam. Ovaries glabrous.

• Grassy slopes; 4000–4400 m. W Sichuan.

6c. Delphinium trichophorum var. *platycentrum* W. T.

Wang, Acta Bot. Sin. 10: 75. 1962.

粗距毛翠雀花 cu ju mao cui que hua

Stem, raceme rachis, and pedicels hispid. Spur conic-subulate, base 6–8 mm in diam. Ovaries densely puberulent.

• Grassy slopes; ca. 4000 m. SW Sichuan (Muli Zang Zu Zizhixian).

8. Delphinium nordhagenii Wendelbo, Nytt Mag. Bot. 3: 227. 1954.

叠裂翠雀花 die lie cui que hua

Stem ca. 28 cm tall, puberulent and yellowish glandular puberulent, simple. Leaf blade 8–10 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe flabellate-obovate, 3-lobulate, distally few dentate, apex acute; ultimate lobules ovate; proximal leaves usually withered. Raceme 4–13 cm, 4–6-flowered, puberulent and yellowish glandular puberulent; bracts leaflike or lanceolate. Pedicels 2.8–6.8 cm; bracteoles distal, oblong-lanceolate, 1–1.8 cm. Sepals blue, abaxially puberulent; spur conic or saccate, 5–6 mm, base 6–7 mm in diam.; other sepals ca. 2 cm. Petals 2-lobed, glabrous, sometimes not black-brown. Staminode limb narrowly elliptic, 2-cleft, yellow barbate. Filaments pilose or glabrous. Carpels (3–)5(–10); ovaries puberulent. Fl. Jul.

Gravelly slopes; 4700–5500 m. SW Xinjiang, W Xizang [N Pakistan].

1a. Leaf blade teeth broadly triangular

or deltoid 8a. var. *nordhagenii*

1b. Leaf blade teeth triangular . 8b. var. *acutidentatum*

8a. *Delphinium nordhagenii* var. *nordhagenii*

叠裂翠雀花(原变种) die lie cui que hua (yuan bian zhong)

Leaf blade teeth broadly triangular or deltoid.

Gravelly slopes; 4900–5500 m. SW Xinjiang (Hotan Xian), W Xizang [N Pakistan].

8b. *Delphinium nordhagenii* var. *acutidentatum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 611. 1979.

尖齿翠雀花 jian chi cui que hua

Leaf blade teeth triangular.

• Gravelly slopes; ca. 4700 m. SW Xizang (Burang Xian).

9. *Delphinium tetragynum* W. T. Wang, Bull. Bot. Res., Harbin 3(1): 26. 1983.

四果翠雀花 si guo cui que hua

Stem 30–38 cm tall, sparsely pubescent, branched. Leaf blade 5–8 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally lobulate-dentate, apex acute; ultimate lobules ovate; proximal leaves usually not withered. Raceme ca. 6 cm, ca. 5-flowered, pubescent; proximal bracts leaflike, 3-parted, distal ones linear, undivided, ca. 1 cm. Pedicels 1–3.5 cm; bracteoles distal, lanceolate-linear, ca. 1 cm. Sepals blue, abaxially pubescent; spur conic, ca. 8 mm, base ca. 4 mm in diam.; other sepals ca. 1.8 cm. Petals 2-lobed, long ciliate. Staminode limb oblong, 2-cleft, densely yellow barbate, margin long ciliate. Filaments glabrous. Carpels 4, glabrous. Fl. Jul–Aug.

• Gravelly slopes; ca. 4500 m. SW Xinjiang (Taxkorgan Tajik Zizhixian).

10. *Delphinium taxkorganense* W. T. Wang, Acta Bot. Yunnan. 15: 349. 1993.

塔什库尔干翠雀花 ta shi ku er gan cui que hua
Stem 20–30 cm tall, branched. Leaf blade 3–5 cm wide, base deeply cordate; primary lobes separate for less than 60% of blade radius; central lobe cuneate-obovate, 3-lobulate, distally with 1 or 2 rounded teeth, apex rounded; ultimate lobules ovate; proximal leaves usually withered. Raceme ca. 9 cm, ca. 6-flowered, puberulent and sparsely glandular puberulent; bracts leaflike, proximal ones long petiolate. Pedicels 1.5–6.5 cm; bracteoles distal, narrowly obovate, elliptic, or linear, 1.1–1.8 cm. Sepals blue, abaxially puberulent; spur saccate-conic, 6–7 mm, base 4–5 mm in diam.; other sepals 1.4–1.6 cm. Petals 2-lobed, pubescent. Staminode limb ovate, 2-cleft, densely yellow barbate. Filaments glabrous. Carpels 4 or 5, glabrous. Fl. Aug.

• Rocks near glaciers; ca. 4700 m. SW Xinjiang (Taxkorgan Tajik Zizhixian).

11. *Delphinium vestitum* Wallich ex Royle, Ill. Bot. Himal. Mts. 1: 55. 1834.

浅裂翠雀花 qian lie cui que hua

Stem 26–35 cm tall, retrorsely hispidulous and hispid, simple or 1-branched. Leaf blade 4–9 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally lobulate and dentate, apex acute; ultimate lobules lanceolate-linear or linear; proximal leaves usually not withered. Raceme 8–15 cm, 4–9-flowered, hispidulous, sparsely yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 1.9–2.9 cm; bracteoles distal, narrowly lanceolate, 6–8 mm. Sepals persistent, purplish blue, abaxially hispidulous; spur tubular-conic, 1.1–1.3 cm, base 5–6 mm in diam.; other sepals ca. 1.5 cm. Petals 2-lobed, glabrous. Staminode limb narrowly ovate, 2-cleft, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

Forest margins; ca. 3400 m. S Xizang (Nyalam Xian) [?Bhutan, NW India, Kashmir, Nepal].

12. *Delphinium pulanense* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 611. 1979.

普兰翠雀花 pu lan cui que hua

Stem ca. 15 cm tall, puberulent and yellow glandular puberulent, simple. Leaf blade 4–9 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obovate, 3-cleft to middle, distally few dentate, apex acute; ultimate lobules lanceolate-linear or linear; proximal leaves usually not withered. Raceme ca. 6 cm, densely ca. 15-flowered, puberulent and yellow glandular puberulent; bracts leaflike. Pedicels to 2 cm; bracteoles distal, linear, 1.2–2 cm. Sepals deep blue, abaxially pubescent; spur cylindrical, 7–8 mm, base ca. 3 mm in diam.; other sepals 1.4–1.5 cm. Petals emarginate, glabrous. Staminode limb obovate, 2-lobed, white barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Jul–Aug.

• Gravelly slopes; ca. 5000 m. SW Xizang (Burang Xian).

13. *Delphinium lacostei* Danguy, J. Bot. (Morot), sér. 2, 1: 50. 1908.

帕米尔翠雀花 pa mi er cui que hua

Stem 6–10 cm tall, pubescent distally, simple. Leaf blade 2–4 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly cuneate or broadly obovate, 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Corymb ca. 2 cm, 2- or 3-flowered; bracts lanceolate, 3-lobed or undivided. Pedicels ca. 1.5 cm, pubescent; bracteoles borne near middle of pedicel, linear, 8–10 mm. Sepals blue, abaxially pubescent; spur conic, 4–6 mm, base 3–5 mm in diam.; other sepals 1.5–2.3 cm. Petals 2-lobed, long ciliate. Staminode limb suboblong, 2-cleft nearly to middle, yellow barbate, long ciliate. Filaments glabrous. Carpels 5; ovaries densely pubescent. Fl. Sep. Gravelly slopes; ca. 4500 m. SW Xinjiang [Kyrgyzstan, N Pakistan].

14. *Delphinium brunonianum* Royle, Ill. Bot. Himal. Mts. 1: 56. 1834.

囊距翠雀花 nang ju cui que hua

Stem 10–22(–34) cm tall, puberulent, often mixed with yellow, glandular hairs, simple. Leaf blade 5–9 cm wide, base abruptly cuneate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Corymb 4–9 cm, 2–4-flowered, puberulent and yellow glandular puberulent; bracts leaflike or oblong. Pedicels 5.5–7 cm; bracteoles distal, elliptic or oblong, 1.7–2 cm. Sepals persistent, blue-purple, abaxially sericeous; spur saccate or conic, 6–10 mm, base 6–9 mm in diam.; other sepals 2–2.5 cm. Petals 2-lobed, pilose. Staminode limb oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 4 or 5; ovaries sparsely puberulent. Fl. Aug.

Grassy or gravelly places; 4500–6000 m. S Xizang [Afghanistan, Kashmir, Nepal, N Pakistan].

15. *Delphinium ychengense* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 82. 1992.

叶城翠雀花 ye cheng cui que hua

Stem 40–50 cm tall, sparsely puberulent, branched. Leaf blade 6–10 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe obovate-rhombic or flabellate-obovate, 3-lobulate, distally lobulate-dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Corymb ca. 8 cm, 2–4-flowered, sparsely puberulent and sparsely glandular puberulent; proximal bracts leaflike, distal ones undivided, lanceolate or linear. Pedicels 2.5–10 cm; bracteoles distal, lanceolate, 6–8 mm. Sepals purple-blue, abaxially pubescent and sparsely glandular puberulent; spur conic, 1.1–1.4 cm, base ca. 7 mm in diam.; other sepals 2–2.5 cm. Petals 2-lobed, long ciliate. Staminode limb elliptic-ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 5; ovaries densely puberulent. Fl. Jul–Aug.

• Slopes; 3800–4300 m. SW Xinjiang.

16. *Delphinium chrysotrichum* Finet & Gagnepain, Bull. Soc. Bot. France 51: 488. 1904.

黄毛翠雀花 huang mao cui que hua

Stem (5–)11–20 cm tall, puberulent, simple or 1- or 2-branched. Leaf blade 2–8 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe flabellate-obovate, 3-lobulate, distally incised dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Corymb 4–8 cm, 2–4-flowered, puberulent, sometimes mixed with yellow, glandular hairs; bracts leaflike. Pedicels 3.4–8 cm; bracteoles distal, shortly petiolate, broadly rhombic or elliptic, 0.7–2 cm, 3-lobed or undivided. Sepals persistent, purple, abaxially yellow pubescent; spur conic or conic-subulate, 1.3–2.4 cm, base 7–12 mm in diam.; other sepals 1.5–2.5 cm. Petals 2-lobed, glabrous or pilose. Staminode limb oblong, 2-cleft, yellow

barbate. Filaments glabrous. Carpels 3, ovaries puberulent. Fl. Aug–Sep.

• Grassy or gravelly slopes; 3000–5000 m. W Sichuan, E Xizang, NW Yunnan.

- 1a. Stem and petioles spreading puberulent; pedicels spreading puberulent and yellow glandular puberulent 16a. var. *chrysotrichum*
- 1b. Stem and petioles retrorsely appressed puberulent; pedicels appressed puberulent, not glandular puberulent 16b. var. *tsarongense*

16a. *Delphinium chrysotrichum* var. *chrysotrichum*

黄毛翠雀花(原变种) huang mao cui que hua (yuan bian zhong)

Delphinium tsarongense Handel-Mazzetti var.

patentipilum W. T. Wang.

Stem and petioles spreading puberulent. Leaf blade to 3.2 × 5.2 cm. Pedicels spreading puberulent and yellow glandular puberulent.

• Gravelly slopes; 4200–5000 m. W Sichuan, E Xizang.

16b. *Delphinium chrysotrichum* var. *tsarongense* (Handel-Mazzetti) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 367. 1979.

察瓦龙翠雀花 cha wa long cui que hua

Delphinium tsarongense Handel-Mazzetti, Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl., Abt. 1, 59: 245. 1922.

Stem and petioles retrorsely appressed puberulent. Leaf blade to 4 × 8 cm. Pedicels appressed puberulent, not glandular puberulent.

• Grassy or gravelly slopes; 3000–4600 m. SE Xizang (Chawalong, Zayü Xian), NW Yunnan (Dêqên Xian).

17. *Delphinium glaciale* J. D. Hooker & Thomson, Fl. Ind. 53. 1855.

冰川翠雀花 bing chuan cui que hua

Stem ca. 6 cm tall, puberulent, simple. Leaf blade 1–4 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic, 2 × dissected, distally dentate, apex apiculate; ultimate lobules oblong or triangular; proximal leaves usually not withered. Corymb 3.3–9 cm, 2- or 3-flowered; rachis nearly absent; bracts leaflike. Pedicels 2.8–3.5 cm, densely spreading puberulent; bracteoles borne near middle of pedicel, leaflike or undivided, elliptic, 1–1.2 cm. Sepals persistent, blue-purple, abaxially puberulent; spur conic or narrowly conic, 1–1.4 cm, base 4–5 mm in diam.; other sepals 2.2–2.8 cm. Petals 2-lobed, adaxially yellow pilose. Staminode limb suboblong, long ciliate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 5; ovaries puberulent. Fl. Aug–Sep.

Gravelly slopes; ca. 5300 m. C Xizang (Xainza Xian) [Bhutan, Nepal, Sikkim].

18. *Delphinium pseudoglaciale* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 612. 1979.

拟冰川翠雀花 ni bing chuan cui que hua

Stem ca. 5 cm tall, puberulent, few branched. Leaf blade 2–4 cm wide, base abruptly cuneate; primary lobes separate for at least 90% of blade radius; central lobe broadly obovate-rhombic, ca. 3 × dissected, distally dentate, apex apiculate; ultimate lobules narrowly ovate or lanceolate-linear; proximal leaves usually not withered. Corymb 5–9 cm, 2–4-flowered; rachis nearly absent; bracts leaflike. Pedicels 3.5–9 cm, densely puberulent, sparsely yellow glandular puberulent; bracteoles borne near middle of pedicel, leaflike or linear, ca. 1 cm. Sepals persistent, white, abaxially puberulent and yellow glandular puberulent; spur conic-subulate, ca. 1.9 cm, base ca. 4 mm in diam.; other sepals ca. 2 cm. Petals emarginate, adaxially yellow pilose. Staminode limb trapezoid, 2-cleft nearly to middle, sparsely yellow barbate. Filaments pilose. Carpels 5, puberulent. Fl. Aug–Sep.

• Gravelly slopes; ca. 4900 m. S Xizang (Namling Xian).

19. *Delphinium viscosum* J. D. Hooker & Thomson var. *chrysotrichum* Brühl ex Huth, Bot. Jahrb. Syst. 20: 401. 1895.

黄粘毛翠雀花 huang zhan mao cui que hua

Stem ca. 30 cm tall, retrorsely puberulent and yellow glandular puberulent, branched. Leaf blade 5–8 cm wide, base broadly cordate; primary lobes separate for less than 60% of blade radius; central lobe cuneate-obovate, 3-lobulate or 3-dentate, distally dentate, apex acute; ultimate lobules narrowly ovate or lanceolate-linear; proximal leaves usually not withered. Corymb 4–7.5 cm, 3- or 4-flowered; rachis short or absent, puberulent; bracts leaflike or linear. Pedicels 2.5–5 cm, retrorsely puberulent and yellow glandular puberulent; bracteoles contiguous to flower or nearly so, lanceolate or narrowly oblong, 7–10 mm. Sepals blue-purple, abaxially pubescent; spur conic-tubular, ca. 1.7 cm, straight, base 5–6 mm in diam.; other sepals 1.8–1.9 cm. Petals 2-lobed, distally ciliate. Staminode limb oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Sep.

Grassy slopes; ca. 3200 m. SE Xizang [?Bhutan, Nepal, Sikkim].

Delphinium viscosum var. *viscosum* occurs in India and Nepal.

20. *Delphinium chumulangmaense* W. T. Wang, Acta Phytotax. Sin., Addit. 1: 98. 1965.

珠峰翠雀花 zhu feng cui que hua

Stem ca. 6.5 cm tall, puberulent, simple. Leaf blade 1–2 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly ovate or lanceolate-linear; proximal leaves usually not withered. Flower solitary, terminal, nearly closed; bracteoles ca. 3.5 cm from flower, linear-lanceolate, ca. 8 mm. Sepals purplish, abaxially puberulent; spur conic-subulate, ca. 1.3 cm, base ca. 4 mm in diam.; other sepals 1.5–1.9 cm. Petals 2-lobed, glabrous. Staminode limb oblong, 2-parted, long ciliate, yellow barbate. Filaments glabrous. Carpels 4; ovaries densely puberulent. Fl. Jul.

• Gravelly slopes; ca. 5000 m. S Xizang (Qomolangma Feng).

21. *Delphinium tangkulaense* W. T. Wang, Acta Phytotax. Sin., Addit. 1: 99. 1965.

唐古拉翠雀花 tang gu la cui que hua

Delphinium chrysotrichum Finet & Gagnepain var. *pygmaeum* Ostenfeld; *D. tangkulaense* f. *xanthanthum* W. T. Wang & S. K. Wu.

Stem 4.8–10 cm tall, puberulent, simple or 1-branched. Leaf blade 1–4 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe flabellate-rhombic, 3-cleft, distally few lobulate or few dentate, apex acute; ultimate lobules narrowly ovate or lanceolate-linear; proximal leaves usually not withered. Flower solitary, terminal, nearly closed; pedicel 3–4 cm, puberulent, sometimes with yellow, glandular hairs; bracteoles borne near middle of pedicel, lanceolate, 7–9 mm. Sepals blue-purple, sometimes yellow, abaxially puberulent; spur cylindrical or cylindrical-subulate, 1–1.3 cm, base ca. 3.5 mm in diam.; other sepals 1.6–2.7 cm. Petals 2-lobed, pilose. Staminode limb trapezoid, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Jul–Aug. $2n = 16^*$.

• Slopes, sandy lake banks; 4700–5500 m. SW Qinghai, N Xizang.

22. *Delphinium qinghaiense* W. T. Wang, Acta Phytotax. Sin. 29: 458. 1991.

青海翠雀花 qing hai cui que hua

Stem 6–10 cm tall, puberulent, branched. Leaf blade 1–2 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 2- or 3-sect, distally dentate, apex acute; ultimate lobules lanceolate-linear or linear; proximal leaves usually withered. Corymb 5–6 cm, 2- or 3-flowered; bracts leaflike. Pedicels 3.5–6 cm, puberulent; bracteoles borne near middle of pedicel, leaflike or lanceolate-linear, ca. 5 mm. Sepals blue, abaxially puberulent; spur subulate, 1.2–1.4 cm, base ca. 3 mm in diam.; other sepals 1.4–1.8 cm. Petals emarginate, glabrous. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Sep.

• Slopes; 4300–5000 m. SW Qinghai.

23. *Delphinium chungbaense* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 612. 1979.

仲巴翠雀花 zhong ba cui que hua

Stem ca. 13 cm tall, glabrous or distally puberulent, simple or 1-branched. Leaf blade 1–2 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 2 or 3 × dissected, distally dentate, apex acute; ultimate lobules narrowly oblong or lanceolate; proximal leaves usually not withered. Flower solitary, terminal, nearly closed. Pedicel robust, 7–10 cm, puberulent; bracteoles proximal, leaflike, ca. 8 mm. Sepals purplish blue, abaxially puberulent; spur cylindrical, 0.9–1.4 cm, base ca. 3 mm in diam.; other sepals 1.2–1.7 cm. Petals acute, glabrous. Staminode limb oblong, undivided, yellow barbate, margin ciliate, apex rounded, denticulate.

Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Jul–Aug.

• Gravelly slopes; ca. 5600 m. SW Xizang (Zhongba Xian).

24. *Delphinium wardii* C. Marquand & Airy Shaw, J. Linn. Soc., Bot. 48: 157. 1929.

堆拉翠雀花 *dui la cui que hua*

Stem 9–15 cm tall, puberulent, simple. Leaf blade 2–4 cm wide, base cordate-subtruncate; primary lobes separate for less than 60% of blade radius; central lobe shortly obtrapezoid, 3-lobulate, distally few rounded dentate, apex acute; ultimate lobules narrowly oblong or lanceolate; proximal leaves usually not withered. Flowers solitary, or 2 in a monochasium. Pedicels ca. 7 cm, puberulent and yellowish glandular puberulent; bracteoles borne near middle of pedicel, oblong, ca. 9 mm. Sepals blue, abaxially puberulent; spur subulate, 1.7–2 cm, base ca. 4 mm in diam.; other sepals 2.5–2.8 cm. Petals unequally 2-lobed, pilose. Staminode limb elliptic, 2-lobed, barbate, margin ciliate. Filaments glabrous. Carpels 3; ovaries pubescent only along ventral suture. Fl. Sep.

• Scrub; ca. 4200 m. S Xizang (Yadong Xian).

25. *Delphinium smithianum* Handel-Mazzetti, Acta Horti Gothob. 13: 49. 1939.

宝兴翠雀花 *bao xing cui que hua*

Stem 10–15 cm tall, puberulent, simple or 1-branched. Leaf blade 2–5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly oblong or lanceolate; proximal leaves usually not withered. Corymb ca. 4 cm, 2–4-flowered; bracts leaflike. Pedicels 3–4 cm, densely retrorsely puberulent distally; bracteoles borne near middle of pedicel or distally, 3-cleft or undivided, lanceolate, 0.9–1.3 cm. Sepals persistent, blue, abaxially puberulent; spur cylindrical, 2–2.3 cm, base ca. 4 mm in diam.; other sepals 1.5–2.3 cm. Petals emarginate, glabrous. Staminode limb oblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul–Aug.

• Gravelly slopes; 3500–4600 m. W Sichuan, NW Yunnan (Zhongdian Xian).

26. *Delphinium malacophyllum* Handel-Mazzetti, Acta Horti Gothob. 13: 52. 1939.

软叶翠雀花 *ruan ye cui que hua*

Stem 10–30 cm tall, puberulent, simple or few branched. Leaf blade 2–6 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-lobulate, distally entire or 1-denticulate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Corymb 4–8 cm, 2–5-flowered; bracts leaflike. Pedicels 2.5–7 cm, retrorsely puberulent; bracteoles proximal, linear, ca. 4 mm. Sepals deep blue, abaxially sericeous puberulent; spur subulate, 3.5–3.8 cm, base ca. 2.5 mm in diam.; other sepals 2–2.3 cm. Petals undivided or 2-lobed, glabrous. Staminode limb suboblong, 2-cleft, yellow barbate.

Filaments glabrous or sparsely ciliate. Carpels 3; ovaries densely sericeous. Fl. Aug.

• Alpine meadows; 3900–4300 m. SW Gansu, NW Sichuan.

27. *Delphinium chenii* W. T. Wang, Acta Phytotax. Sin. 6: 369. 1957.

白缘翠雀花 *bai yuan cui que hua*

Delphinium albomarginatum Chen, Bull. Fan Mem. Inst. Biol., Peiping, n.s., 1: 170. 1948, not Simonova (1924).

Stem 14–38 cm tall, puberulent or sometimes glabrescent, few branched or simple. Leaf blade 2–5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe cuneate-rhombic, 3-cleft, distally few dentate, apex acute; ultimate lobules narrowly oblong or lanceolate; proximal leaves withered. Corymb 3.5–7 cm, 2–4-flowered; bracts leaflike. Pedicels 2.4–3.8 cm, retrorsely puberulent; bracteoles distal, oblong or linear, 4–6 mm. Sepals persistent, abaxially sparsely puberulent; upper sepal bluish, spur subulate, 1.6–2.2 cm, base 2–3 mm in diam.; other sepals white at margin, 1.4–1.8 cm. Petals obtuse or emarginate, glabrous, Staminode limb oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Aug.

• Forest margins; 3900–5000 m. SW Sichuan (Daocheng Xian), NW Yunnan (Zhongdian Xian).

28. *Delphinium yangii* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 3. 1986.

竟生翠雀花 *jing sheng cui que hua*

Stem ca. 9 cm tall, retrorsely appressed puberulent, branched. Leaf blade 2–3.5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic or obovate-rhombic, 3-lobulate, distally 1- or 2-dentate or entire, apex acute; ultimate lobules narrowly oblong or lanceolate; proximal leaves usually withered. Corymb 3–6 cm, 1–3-flowered; bracts leaflike. Pedicels 3.2–7 cm, appressed puberulent; bracteoles distal, linear, 6–10 mm. Sepals blue, abaxially densely puberulent; spur narrowly cylindrical, 1.9–2.1 cm, nearly straight, base 3–4.5 mm in diam.; other sepals 2.1–2.6 cm. Petals undivided, glabrous. Staminode limb narrowly obovate, emarginate, white barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul–Aug.

• Alpine meadows; 4200–4500 m. NW Yunnan (Zhongdian Xian).

29. *Delphinium batangense* Finet & Gagnepain, Bull. Soc. Bot. France 51: 478. 1904.

巴塘翠雀花 *ba tang cui que hua*

Delphinium pulcherrimum W. T. Wang, Acta Phytotax. Sin. 6: 370. 1957.

Stem 15–35 cm tall, puberulent or glabrescent, usually 1-branched. Leaf blade 3–4 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate, apex long acuminate; ultimate lobules linear or triangular; proximal leaves withered. Corymb 4–9

cm, 2–4-flowered; bracts leaflike. Pedicels 4–8 cm, appressed puberulent; bracteoles distal, lanceolate, 0.8–1.2 cm. Sepals blue-purple, abaxially sparsely puberulent; spur subulate, 2.1–2.4 cm, base 2.5–3 mm in diam.; other sepals 1.8–2.3 cm. Petals emarginate, glabrous. Staminode limb elliptic, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely pubescent. Fl. Aug–Sep.

• Grassy slopes; 3400–4200 m. SW Sichuan, NW Yunnan (Dêqên Xian).

30. *Delphinium pseudopulcherrimum* W. T. Wang, Acta Phytotax. Sin., Addit. 1: 100. 1965.

宽萼翠雀花 kuan e cui que hua

Stem 20–25 cm tall, sparsely puberulent, branched. Leaf blade 4–6 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, subpinnately parted, distally dissected, apex acute; ultimate lobules linear-lanceolate; proximal leaves withered. Corymb 7.5–12 cm, (1 or) 2–6-flowered, densely retrorsely puberulent; bracts leaflike. Pedicels 1.4–5.5 cm; bracteoles distal, linear or narrowly oblong, 4–12(–18) mm. Sepals persistent, blue-purple, abaxially sparsely puberulent; spur subulate, 1.8–2.2 cm, base ca. 3 mm in diam.; other sepals 2–2.4 cm. Petals emarginate, glabrous. Staminode limb broadly elliptic, 2-lobed, yellowish barbate. Filaments glabrous or pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

• Grassy slopes; 4000–5000 m. S Xizang (Lhasa Shi).

31. *Delphinium yajiangense* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 5. 1986.

雅江翠雀花 ya jiang cui que hua

Stem 28–30 cm tall, appressed puberulent, simple or branched. Leaf blade 2–4 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally sparsely incised lobulate or 1–3-dentate, apex acute; ultimate lobules linear-lanceolate; proximal leaves usually withered. Corymb ca. 9 cm, 4- or 5-flowered, densely retrorsely puberulent; bracts leaflike. Pedicels 2.5–7 cm; bracteoles distal, narrowly elliptic, oblanceolate, or linear, 2.5–3 mm. Sepals blue, white at margin, abaxially yellow pilose; spur subulate, 2–2.4 cm, nearly straight or slightly recurved, base 3–3.2 mm in diam.; other sepals 0.9–1.1 cm. Petals undivided, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely appressed puberulent. Fl. Aug.

• Alpine meadows; ca. 4400 m. W Sichuan (Yajiang Xian).

32. *Delphinium pylzowii* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, Sér. 3, 23: 307. 1877.

大通翠雀花 da tong cui que hua

Stem (10–)20–55 cm tall, puberulent, branched or rarely simple. Leaf blade 2–5 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic, 2- or 3-subpinnately dissected, distally incised, apex acute;

ultimate lobules lanceolate or linear; proximal leaves withered. Corymb 3–12 cm, 2–6-flowered, densely puberulent, often mixed with yellow, glandular hairs; bracts leaflike or undivided, subulate. Pedicels 4.5–9 cm; bracteoles borne near middle of pedicel, linear or subulate, 3–7 mm. Sepals blue-purple or bluish gray, persistent, abaxially puberulent; spur subulate, 2.1–2.4 cm, base ca. 3 mm in diam.; other sepals 1.5–2 cm. Petals emarginate, glabrous. Staminode limb suboblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3 or 5; ovaries puberulent. Fl. Jul–Aug. $2n = 16^*$.

• Grassy slopes, alpine meadows; 2300–4500 m. W Gansu, E and S Qinghai, NW Sichuan, E Xizang.

1a. Carpels 5; sepals blue-purple 32a. var. *pylzowii*

1b. Carpels 3; sepals bluish gray 32b. var. *trigynum*

32a. *Delphinium pylzowii* var. *pylzowii*

大通翠雀花(原变种) da tong cui que hua (yuan bian zhong)

Sepals blue-purple. Carpels 5.

• Grassy slopes; 2300–3000 m. W Gansu, E Qinghai.

32b. *Delphinium pylzowii* var. *trigynum* W. T. Wang, Acta Bot. Sin. 10: 78. 1962.

三果大通翠雀花 san guo da tong cui que hua

Delphinium labrungense Ulbrich ex Rehder & Kobuski.

Sepals bluish gray. Carpels 3.

• Alpine meadows; 3500–4500 m. SW Gansu, S Qinghai, NW Sichuan, E Xizang.

33. *Delphinium motingshanicum* W. T. Wang & M. J. War-nock, Guihaia 17: 3. 1997.

磨顶山翠雀花 mo ding shan cui que hua

Stem ca. 45 cm tall, proximally densely appressed puberulent, distally sparsely so, 2-branched. Leaf blade 3–5 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe narrowly oblanceolate, 3-parted, distally incised, apex acute; ultimate lobules oblong-linear; proximal leaves usually not withered. Raceme 5–25 cm, 5–8-flowered; rachis sparsely puberulent. Pedicels 7–11.5 cm, proximally sparsely puberulent, distally densely puberulent and mixed with sparse, spreading, longer hairs; bracteoles borne near middle of pedicel, shortly petiolate, oblong or long elliptic, 1–1.4 cm. Sepals purple-blue, abaxially appressed puberulent and pubescent, base villous; spur cylindrical-subulate, ca. 2.2 cm, base ca. 3 mm in diam.; other sepals 1.4–1.6 cm. Petals entire, glabrous. Staminode limb suborbicular, distally emarginate, yellow barbate. Filaments sparsely pilose. Carpels 4 or 5, ovaries densely pubescent. Fl. Jun.

• Gravelly slopes; ca. 4600 m. NW Yunnan (Dêqên Xian).

34. *Delphinium lingbaoense* S. Y. Wang & Q. S. Yang, Acta Bot. Bor.-Occid. Sin. 9: 42. 1989.

灵宝翠雀花 ling bao cui que hua

Stem ca. 1.4 m tall, glabrous proximally, very sparsely puberulent distally, branched. Leaf blade 10–12 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or rhombic-

obovate, 3-lobulate, distally incised, apex acuminate; ultimate lobules oblong-linear; proximal leaves withered. Corymb 2–8 cm in diam., 2–5-flowered; bracts 3-lobed. Pedicels 2–3.5 cm, densely pubescent; bracteoles borne near middle of pedicel, subulate, 2–3.5 mm. Sepals blue-purple, abaxially appressed puberulent; spur subulate, 1.7–2.2 cm, straight or slightly recurved, base ca. 2.5 mm in diam.; other sepals 2–2.2 cm. Petals 2-lobed, glabrous. Staminode limb elliptic, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 4 or 5; ovaries pubescent. Fl. Aug–Sep.

• Scrub; 1700–2000 m. W Henan (Lingbao Xian).

35. *Delphinium candelabrum* Ostenfeld in Hedin, South Tibet, 6: 80. 1922.

奇林翠雀花 *qi lin cui que hua*

Stem 6–20 cm tall, glabrous proximally, puberulent distally, simple or 1–3-branched. Leaf blade 1–4 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally incised, apex acute; ultimate lobules narrowly ovate, lanceolate, or broadly linear; proximal leaves usually withered. Corymb 4–6 cm, 1–3(–6)-flowered; bracts leaflike. Pedicels 2.5–5 cm, densely puberulent; bracteoles borne near middle of pedicel or distally, leaflike or undivided, linear, 6–12 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 1.8–3 cm, nearly straight or slightly recurved, base 2.5–3(–4) mm in diam.; other sepals 1.8–3 cm. Petals 2-lobed or undivided, glabrous. Staminode limb orbicular-ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul–Aug.

• Grassy or gravelly slopes; 4100–5300 m. SW Gansu, E and SE Qinghai, NW Sichuan, NE and S Xizang

- 1a. Corymb 2- or 3(–6)-flowered; upper sepal 1.5–1.8 × 0.8–1.1 cm, spur 2–2.1 cm, other sepals 1.8–2 cm; petals distally 2-lobed 35a. var. *candelabrum*
- 1b. Corymb 1(or 2)-flowered; upper sepal 1.8–2.5 × 1.2–2.2 cm, spur 1.8–3 cm, other sepals 2.2–3 cm; petals undivided 35b. var. *monanthum*

35a. *Delphinium candelabrum* var. *candelabrum*

奇林翠雀花(原变种) *qi lin cui que hua (yuan bian zhong)*

Corymb 2- or 3(–6)-flowered. Upper sepal 1.5–1.8 × 0.8–1.1 cm, spur 2–2.1 cm; other sepals 1.8–2 cm. Petals distally 2-lobed.

• Grassy or gravelly slopes; 5100–5300 m. S Xizang.

35b. *Delphinium candelabrum* var. *monanthum* (Handel-Mazzetti) W. T. Wang, Acta Bot. Sin. 10: 78. 1962.

单花翠雀花 *dan hua cui que hua*

Delphinium monanthum Handel-Mazzetti, Acta Horti Gothob. 13: 50. 1939.

Corymb 1(or 2)-flowered. Upper sepal 1.8–2.5 × 1.2–2.2 cm, spur 1.8–3 cm; other sepals 2.2–3 cm. Petals undivided. Staminodes sometimes blue. $2n = 16^*$.

• Gravelly slopes; 4100–5000 m. SW Gansu, E and SE Qinghai, NW Sichuan, NE Xizang.

36. *Delphinium pseudocandelabrum* W. T. Wang, Bull. Bot. Res., Harbin 3(1): 28. 1983.

石滩翠雀花 *shi tan cui que hua*

Stem ca. 15 cm tall, pilose distally, densely leafy and branched. Leaf blade 3–4 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic or subcuneate, 3-cleft, distally 2- or 3-cleft, apex acute; ultimate lobules narrowly triangular or linear; proximal leaves usually withered. Corymb ca. 7 cm, ca. 3-flowered; bracts leaflike. Pedicels ca. 7 cm, puberulent; bracteoles distal, petiolate, blade 3-cleft, ca. 1.5 cm. Sepals yellowish, abaxially pubescent; spur cylindrical, ca. 1.2 cm, base ca. 2.5 mm in diam.; other sepals 1.9–2 cm. Petals undivided, obtuse, glabrous. Staminode limb elliptic-ovate, 2-lobed, yellowish barbate. Filaments sparsely pilose. Carpels 3; ovaries pubescent. Fl. Jul.

• Stony and gravelly slopes; ca. 5000 m. S Qinghai (Nangqên Xian).

37. *Delphinium calophyllum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 613. 1979.

美叶翠雀花 *mei ye cui que hua*

Stem ca. 15 cm tall, puberulent, 1-branched. Leaf blade 2.5–4 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic-cuneate, 2- or 3-cleft, distally 3-lobulate, apex acute; ultimate lobules lanceolate or lanceolate-linear; proximal leaves usually withered. Corymb ca. 4 cm, ca. 3-flowered; bracts leaflike. Pedicels 2.2–4 cm, densely spreading puberulent; bracteoles distal, leaflike, ca. 1 cm. Sepals blue-purple, abaxially puberulent, yellowish puberulent; spur cylindrical-subulate, ca. 1.7 cm, base ca. 2.5 mm in diam.; other sepals 1.3–1.5 cm. Petals emarginate, glabrous. Staminode limb suboblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Jul.

• Alpine slopes. E Qinghai (Henan Mongol Zu Zizhixian).

38. *Delphinium henryi* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 177. 1893.

川陕翠雀花 *chuan shan cui que hua*

Delphinium henryi f. *concolor* W. T. Wang.

Stem 15–40(–70) cm tall, densely retrorsely puberulent, simple or branched. Petiole densely retrorsely puberulent; leaf blade 2–7 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-lobulate, distally 2 or 3 × dissected, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves usually withered. Corymb 2–7 cm, 2–4-flowered; bracts leaflike. Pedicels 1.7–3.4(–5) cm, densely retrorsely puberulent; bracteoles distal, elliptic or lanceolate, 8–10 mm. Sepals persistent, blue-purple, abaxially puberulent; spur subulate, 1.5–2.2 cm, base 2.5–4 mm in diam.; other sepals 1.3–2.1 cm. Petals 2-lobed, glabrous. Staminode limb rarely blue-purple, 2-cleft, yellow barbate.

Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Sep.

• Grassy slopes; 1400–2200 m. SW Henan, W Hubei, S Shaanxi, NE Sichuan.

39. *Delphinium albocoeruleum* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, Sér. 3, 23: 307. 1877.

白蓝翠雀花 *bai lan cui que hua*

Stem (10–)30–60(–100) cm tall, puberulent or mixed with yellow, glandular hairs, usually branched. Leaf blade 2–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, subpinnately cleft, distally 1- or 2-denticulate, apex acute; ultimate lobules narrowly triangular or narrowly ovate; proximal leaves usually withered. Corymb 3–8 cm, 3–7-flowered; proximal bracts leaflike. Pedicels 3–12 cm; bracteoles distal, spatulate-linear, 0.6–1.4 cm. Sepals persistent, abaxially puberulent; spur cylindrical-subulate or subulate, 1.7–3.3 cm, base 2.5–4 mm in diam.; other sepals 1.4–2.5 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed or 2-cleft, yellow barbate. Filaments pilose. Carpels 3; ovaries densely puberulent, Fl. Jul–Sep. $2n = 16^*$.

• *Juniperus* forests, scrub, grassy slopes, alpine meadows; 1500–4900 m. Gansu, N Ningxia, E Qinghai, NW Sichuan, NE Xizang.

1a. Stem and pedicels retrorsely puberulent only; spur cylindrical-subulate or subulate, 1.7–3.3 cm 39a. var. *albocoeruleum*

1b. Stem and pedicels retrorsely puberulent and yellowish glandular puberulent; spur shorter, subulate, 1.7–2 cm 39b. var. *przewalskii*

39a. *Delphinium albocoeruleum* var. *albocoeruleum*

白蓝翠雀花(原变种) *bai lan cui que hua* (*yuan bian zhong*)

Delphinium albocoeruleum var. *pumilum* Huth; *D. caucasicum* C. A. Meyer var. *tanguticum* Maximowicz ex Huth; *D. rockii* Munz; *D. tanguticum* Huth.

Stem and pedicels retrorsely puberulent. Spur cylindrical-subulate or subulate, 1.7–3.3 cm.

• *Juniperus* forests, grassy slopes; 3600–4900 m. Gansu, E Qinghai, NW Sichuan, NE Xizang.

39b. *Delphinium albocoeruleum* var. *przewalskii* (Huth) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 381. 1979.

贺兰翠雀花 *he lan cui que hua*

Delphinium przewalskii Huth, Bot. Jahrb. Syst. 20: 407. 1895.

Stem and pedicels retrorsely puberulent and yellowish glandular puberulent. Spur subulate, 1.7–2 cm.

• Slopes; 1500–2000 m. N Ningxia (Helan Shan).

40. *Delphinium siwanense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 162. 1893.

细须翠雀花 *xi xu cui que hua*

Stem 35–150 cm tall, spreading pubescent or glabrous, branched or simple. Leaf blade 4–14 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or narrowly so, 3-lobulate, distally undivided, apex acute; ultimate lobules lanceolate or linear; proximal leaves usually

withered. Corymb umbelliform, 2–4 cm, 2–5-flowered; bracts 3-sect or undivided, linear. Pedicels 1.8–3 cm, spreading puberulent and yellow glandular puberulent or only appressed puberulent; bracteoles borne near middle of pedicel, subulate, 2.5–9 mm. Sepals purple-blue or blue, abaxially puberulent; spur subulate (subcylindrical), 1.6–2.1(–2.4) cm, straight or slightly recurved, base 2.6–4 mm in diam.; other sepals 1.3–1.7(–2) cm. Petals entire or emarginate, glabrous. Staminode limb ovate, 2-lobed, yellowish barbate, long ciliate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul–Sep.

• Forest margins, scrub, grassy slopes; 1300–2100 m. C and S Gansu, N Hebei, S Nei Mongol, S Ningxia, S Shaanxi, Shanxi.

1a. Stem spreading pubescent; pedicels spreading puberulent and yellow glandular puberulent; bracteoles 3.5–9 mm 40a. var. *siwanense*

1b. Stem glabrous; pedicels only appressed puberulent; bracteoles 2.5–5 mm 40b. var. *albopuberulum*

40a. *Delphinium siwanense* var. *siwanense*

细须翠雀花(原变种) *xi xu cui que hua* (*yuan bian zhong*)

Delphinium leptopogon Handel-Mazzetti; *D. siwanense* var. *leptopogon* (Handel-Mazzetti) W. T. Wang.

Stem spreading pubescent. Pedicels spreading puberulent and yellow glandular puberulent; bracteoles 3.5–9 mm.

• Forest margins, scrub, grassy slopes; 1900–2000 m. C and S Gansu, N Hebei, S Nei Mongol, S Ningxia, S Shaanxi, Shanxi.

40b. *Delphinium siwanense* var. *albopuberulum* W. T. Wang, Acta Phytotax. Sin. 31: 208. 1993.

冀北翠雀花 *ji bei cui que hua*

Stem glabrous. Pedicels only appressed puberulent; bracteoles 2.5–5 mm.

• Scrub by rivers, grassy slopes; 1300–2100 m. N Hebei (Longguan).

41. *Delphinium purpurascens* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 612. 1979.

紫苞翠雀花 *zi bao cui que hua*

Stem 24–60 cm tall, sparsely puberulent, simple or 1-branched distally. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe cuneate-rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Corymb 5–8 cm, 2–4-flowered, puberulent; bracts leaflike or narrowly ovate. Pedicels 3.4–8 cm; bracteoles distal, blue-purple, navicular-lanceolate, 1.2–1.8 cm. Sepals bluish, abaxially pubescent; spur tubular-conic, 1.3–1.6 cm, or saccate and ca. 1 cm, base 5–8 mm in diam.; other sepals 1.8–2 cm. Petals emarginate, adaxially yellow pilose. Staminode limb narrowly obovate, 2-cleft to

middle, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Sep.

• Slopes; 3800–4700 m. S Xizang (Nyalam Xian).

42. *Delphinium subspathulatum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 612. 1979.

匙苞翠雀花 *chi bao cui que hua*

Stem 42–53 cm tall, hispidulous, simple. Leaf blade 7–10 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe subrhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme 13–16 cm, 5–8-flowered, appressed puberulent; proximal bracts leaflike, distal ones oblong. Pedicels 1.7–8 cm; bracteoles distal, narrowly oblong or spatulate-oblong, 0.9–1.1 cm.

Sepals persistent, blue-purple, abaxially sparsely puberulent; spur subulate-cylindric, 1.1–1.3 cm, base 2.6–3 mm in diam.; other sepals 1.2–1.4 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

• Forest margins; ca. 3800 m. S Xizang (Nyalam Xian).

43. *Delphinium nangziense* W. T. Wang, Acta Phytotax. Sin. 32: 467. 1994.

朗孜翠雀花 *lang zi cui que hua*

Stem ca. 65 cm tall, sparsely yellowish glandular puberulent, simple. Leaf blade 6–9 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe cuneate-rhombic or obovate-rhombic, 3-lobulate, distally rounded 2–4-dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme 13–14.5 cm, 4–8-flowered, yellowish glandular puberulent and retrorsely puberulent; proximal bracts leaflike, distal ones lanceolate-linear. Pedicels 1.8–4.2 cm; bracteoles distal, linear, 9–10 mm. Sepals purple-blue, abaxially sparsely yellowish puberulent near apex; spur subulate, 1.9–2.6 cm, base 3–4 mm in diam.; other sepals 2–2.4 cm. Petals 2-lobed, pilose. Staminode limb suboblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent only along ventral suture. Fl. Sep–Oct.

• Scrub; ca. 4500 m. S Xizang (Lhasa Shi).

44. *Delphinium kansuense* W. T. Wang, Acta Phytotax. Sin., Addit. 1: 100. 1965.

甘肃翠雀花 *gan su cui que hua*

Stem 36–50 cm tall, puberulent, simple. Leaf blade 5–6 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obovate, inconspicuously 3-lobulate, distally few denticulate, apex acute; ultimate lobules ovate-lanceolate; proximal leaves not withered. Raceme elongated, 9–35 cm, 4–10-flowered, densely retrorsely appressed or spreading puberulent; bracts leaflike or linear-lanceolate. Pedicels 1–4.5 cm; bracteoles distal, lanceolate, 3.5–8.5 mm. Sepals persistent, blue-purple, abaxially puberulent; spur subulate, ca. 1.8 cm, base ca. 2.2 mm in diam.; other sepals 8–10 mm. Petals acuminate, glabrous.

Staminode limb oblong, 2-cleft, white barbate.

Filaments pilose. Carpels 3; ovaries densely puberulent. Fl. Jul–Sep.

• Grassy slopes; ca. 3000 m. SC Gansu, NE Qinghai.

1a. Raceme retrorsely appressed puberulent;

bracts and bracteoles densely puberulent abaxially 44a. var. *kansuense*

1b. Raceme spreading puberulent; bracts and bracteoles sparsely puberulent abaxially

..... 44b. var. *villosiusculum*

44a. *Delphinium kansuense* var. *kansuense*

甘肃翠雀花(原变种) *gan su cui que hua* (yuan bian zhong)

Raceme retrorsely appressed puberulent. Bracts and bracteoles densely puberulent abaxially. Fl. Jul–Aug.

• Grassy slopes; ca. 3000 m. SC Gansu

44b. *Delphinium kansuense* var. *villosiusculum* W. T. Wang & M. J. Warnock in W. T. Wang et al., Phytologia 79: 383. 1996.

粘毛甘肃翠雀花 *zhan mao gan su cui que hua*

Raceme spreading puberulent. Bracts and bracteoles sparsely puberulent abaxially. Fl. Sep.

• Grassy slopes; ca. 3000 m. NE Qinghai (Datong He).

45. *Delphinium hilcoatiae* Munz, J. Arnold Arbor. 49: 144. 1968.

毛茛叶翠雀花 *mao gen ye cui que hua*

Stem 50–70 cm tall, spreading puberulent and yellow glandular puberulent, branched. Leaf blade 5–7 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic or obtrapezoid-rhombic, 3-lobulate, distally few lobulate or few dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme 20–30 cm, 8–20-flowered, densely retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones oblong. Pedicels 1.2–5.5 cm; bracteoles distal, narrowly oblong, lanceolate, or oblanceolate, 6–11 mm. Sepals purplish, abaxially puberulent and glandular puberulent; spur cylindric-subulate, 1.5–1.7 cm, base 3–4 mm in diam.; other sepals 1–1.2 cm. Petals 2-lobed, glabrous. Staminode limb subdeltoid, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Sep.

• Grassy slopes; ca. 3700 m. SE Xizang.

46. *Delphinium iliense* Huth, Bot. Jahrb. Syst. 20: 402. 1895.

伊犁翠雀花 *yi li cui que hua*

Delphinium longiciliatum W. T. Wang; *D. turkestanicum* Huth.

Stem 22–80 cm tall, sparsely hispid, usually simple.

Leaf blade 5–11 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or cuneate-rhombic, 3-lobulate, distally dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme 6–20 cm, 5–12-flowered, glabrous or sparsely hispid proximally; proximal bracts 3-parted or undivided, lanceolate, distal

ones smaller, narrowly lanceolate. Pedicels 1–3.2 cm, glabrous; bracteoles distal, narrowly lanceolate, ca. 7 mm, long ciliate. Sepals blue-purple, glabrous or ciliate; spur cylindrical-subulate, 1.4–1.7 cm, base 2.5–3.5 mm in diam.; other sepals 0.9–1.5 mm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, subglabrous. Fl. Jul–Aug.

Scrub, gravelly slopes; ca. 2000 m. W Xinjiang [Kazakhstan, Mongolia].

47. *Delphinium aktoense* W. T. Wang in W. T. Wang et al., *Acta Phytotax. Sin.* 37: 216. 1999.

阿克陶翠雀花 a ke tao cui que hua

Stem ca. 45 cm tall, sparsely spreading hirsutulous, simple. Leaf blade 5–11 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe obovate-obtrapezoid, 3-lobulate, distally few dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme ca. 3 cm, ca. 3-flowered; rachis glabrous; bracts linear-lanceolate, undivided, 4–5 mm, hirsutulous. Pedicels 0.9–1.7 cm, hirsutulous; bracteoles distal, narrowly lanceolate, ca. 4 mm. Sepals blue-purple, abaxially sparsely pilose; spur cylindrical-subulate, ca. 1.3 cm, decurved; other sepals elliptic-ovate, 1.2–1.3 cm. Petals 2 lobed, sparsely long ciliate. Staminode limb broadly ovate, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3, appressed puberulous. Fl. Aug.

• Slopes; 3000–3300 m. SW Xinjiang (Akto Xian).

48. *Delphinium naviculare* W. T. Wang, *Acta Bot. Sin.* 10: 82. 1962.

船苞翠雀花 chuan bao cui que hua

Stem ca. 70 cm, hispid, glabrescent distally, simple. Leaf blade 5–11 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obtrapezoid or rhombic, 3-lobulate, distally dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme 13–28 cm, 10–28-flowered; rachis glabrous; proximal bracts 3-parted, distal ones navicular-ovate. Pedicels 1–3 cm; bracteoles distal, navicular-ovate, 4–5 cm. Sepals purple; spur cylindrical-subulate, 1.2–1.3 cm, base 2–2.5 mm in diam.; other sepals 0.9–1.3 cm. Petals obtuse, glabrous. Staminode limb oblong, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3. Fl. Aug.

• *Picea* forests, scrub margins, grassy slopes, along rivers; 1600–1700 m. W Xinjiang.

- 1a. Stem without yellow, glandular hairs; pedicel glabrous; sepals glabrous or ciliate; ovary glabrous 48a. var. *naviculare*
- 1b. Stem, pedicels, and sepals abaxially yellow glandular puberulent; ovary sparsely puberulent 48b. var. *lasiocarpum*

48a. *Delphinium naviculare* var. *naviculare*

船苞翠雀花(原变种) chuan bao cui que hua (yuan bian zhong)

Stem without yellow, glandular hairs. Pedicels glabrous. Sepals glabrous or ciliate. Ovary glabrous.

• Grassy slopes; ca. 1700 m. W Xinjiang (Zhaosu Xian).

48b. *Delphinium naviculare* var. *lasiocarpum* W. T. Wang, *Acta Bot. Sin.* 10: 83. 1962.

毛果船苞翠雀花 mao guo chuan bao cui que hua

Stem, pedicels, and sepals abaxially yellow glandular puberulent. Ovary sparsely puberulent.

• *Picea* forests, scrub margins, along rivers; 1600–1700 m. NW Xinjiang.

49. *Delphinium ellipticovatum* W. T. Wang, *Acta Bot. Sin.* 10: 83. 1962.

长卵苞翠雀花 chang luan bao cui que hua

Stem ca. 70 cm tall, hispid, 2-branched distally. Leaf blade ca. 8 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme ca. 9 cm, 7- or 8-flowered; rachis shortly strigose and hispid; proximal bracts 3-parted, distal ones lanceolate or narrowly ovate. Pedicels 1–2.7 cm, densely shortly strigose; bracteoles distal, elliptic-ovate or ovate, 5.5–7 mm. Sepals blue-purple, abaxially strigose; spur cylindrical-subulate, 1.1–1.2 cm, base 2–2.5 mm in diam.; other sepals ca. 1 cm. Petals obtuse, adaxially yellowish pilose. Filaments glabrous. Carpels 3, glabrous or sparsely puberulent. Fl. Aug.

• Slopes. NW Xinjiang (Wenquan Xian).

50. *Delphinium winklerianum* Huth, *Bot. Jahrb. Syst.* 20: 419. 1895.

温泉翠雀花 wen quan cui que hua

Delphinium kuanii W. T. Wang.

Stem 50–80 cm tall, hispidulous, branched or simple. Leaf blade ca. 10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe cuneate-obtrapezoid, 3-lobulate, distally dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme ca. 20 cm, ca. 8-flowered, shortly strigose; proximal bracts 3-parted, distal ones lanceolate. Pedicels 1–10 cm; bracteoles distal, lanceolate-oblong or lanceolate, 8–10 mm. Sepals blue-purple, abaxially densely shortly strigose; spur subulate-cylindric, 1.2–1.7 cm, base 3.5–4.5 mm in diam.; other sepals 1–1.5 cm. Petals obtuse, glabrous. Staminode limb broadly ovate, 2-lobed, yellowish barbate. Filaments pilose. Carpels 3; ovaries puberulent. Fl. Jul–Aug.

• Slopes. W Xinjiang [?Kazakhstan].

51. *Delphinium maackianum* Regel, *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 4: 9. 1861.*

宽苞翠雀花 kuan bao cui que hua

Delphinium maackianum f. *albiflorum* S. H. Li & Z. F. Fang; *D. maackianum* f. *lasiocarpum* (Regel) Kitagawa; *D. maackianum* var. *lasiocarpum* Regel. Stem 1.1–1.4 m tall, hispidulous proximally, glabrescent and few branched distally. Leaf blade 8–18 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe narrowly rhombic or rhombic-cuneate, 3-lobulate, distally lobulate-dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme 17–26 cm, 16–25-flowered, yellow glandular puberulent; proximal bracts leaflike, distal ones navicular-oblong or obovate. Pedicels 1.3–3.8 cm; bracteoles proximal, similar to bracts, blue-purple, 4–8.5 mm. Sepals blue-purple, rarely white, abaxially glabrous; spur subulate, 1.6–1.7 cm, base 3–3.5 mm in diam.; other sepals 0.9–1.4 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, glabrous, rarely sparsely puberulent proximally. Fl. Jul–Aug.

Forest margins, grassy slopes; 600–900 m. E Heilongjiang, E Jilin, E Liaoning [Korea, Russia (Far East)].

52. *Delphinium tarbagataicum* Chang Y. Yang & B. Wang, Bull. Bot. Res., Harbin 9(1): 24. 1989.

新塔翠雀花 *xin ta cui que hua*

Stem ca. 60 cm tall, puberulent and yellow glandular puberulent distally, simple. Leaf blade ca. 7.5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules lanceolate; proximal leaves withered. Raceme 7–10 cm, 8–10-flowered, densely puberulent and yellow glandular puberulent; proximal bracts 3-parted, distal ones undivided, linear. Pedicels 1–1.5 cm; bracteoles distal, narrowly lanceolate, ca. 7 mm. Sepals blue-purple, abaxially puberulent and sparsely glandular; spur cylindrical-subulate, ca. 1.2 cm, straight, base ca. 3 mm in diam.; other sepals ca. 1.3 cm. Petals 2-lobed, glabrous. Staminode limb dolabriform, 2-cleft, yellow barbate. Filaments sparsely pilose. Carpels 3; ovaries densely yellow puberulent. Fl. Jul.

• Slopes; ca. 1800 m. N Xinjiang (Tacheng Xian).

53. *Delphinium elatum* Linnaeus var. *sericeum* W. T. Wang, Acta Bot. Sin. 10: 81. 1962.

绢毛翠雀花 *juan mao cui que hua*

Stem 0.7–1.3 m tall, puberulent proximally, glabrous or subglabrous distally. Leaf blade ca. 10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-parted, distally few lobulate, apex acute; ultimate lobules lanceolate; proximal leaves withered. Raceme to 20 cm, 10–20-flowered, puberulent and yellow glandular puberulent; bracts linear. Pedicels 1–1.5 cm; bracteoles

distal, lanceolate or lanceolate-linear, 5–10 mm. Sepals purple-blue, abaxially sparsely puberulent and yellow glandular puberulent; spur cylindrical-subulate, 1.3–1.5 cm, base 2–3 mm in diam.; other sepals 0.8–1.5 cm. Petals obtuse, glabrous. Staminode limb ovate, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• Grassy slopes; 1900–2100 m. N Xinjiang (Altay Shan).

Delphinium elatum var. *elatum* occurs in Europe.

54. *Delphinium tianshanicum* W. T. Wang, Acta Bot. Sin. 10: 35. 1962.

天山翠雀花 *tian shan cui que hua*

Stem (40–)60–115 cm tall, hispid, shortly branched distally or simple. Leaf blade 9–14 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obtrapezoid or broadly rhombic, 3-parted, distally few dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme 10–15 cm, 8–15-flowered, shortly strigose; proximal bracts 3-parted, distal ones lanceolate-linear. Pedicels 2–6 cm; bracteoles distal, lanceolate-linear or linear, 5.5–9 mm. Sepals blue-purple, abaxially densely shortly strigose; spur cylindrical-subulate, 1.1–1.4 cm, base ca. 3 mm in diam.; other sepals 1–1.3 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely strigose. Fl. Jul–Sep.

• Scrub, grassy slopes, streamsides; 1700–2700 m. C Xinjiang (Tian Shan).

55. *Delphinium wuqiaense* W. T. Wang, Bull. Bot. Res., Harbin 3(1): 32. 1983.

乌恰翠雀花 *wu qia cui que hua*

Stem ca. 35 cm tall, spreading hispid, simple. Leaf blade 5–7 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally dentate, apex acute; ultimate lobules lanceolate; proximal leaves not withered. Raceme ca. 14 cm, ca. 10-flowered, spreading hispid; proximal bracts 3-parted, distal ones undivided, linear or narrowly so. Pedicels 1.2–4.5 cm; bracteoles borne near middle of pedicel or distally, linear, 4–6 mm. Sepals blue-purple, abaxially puberulent and very sparsely yellow glandular puberulent; spur subulate-cylindrical, 0.9–1.3 cm, nearly straight, base 3–4 mm in diam.; other sepals 1–1.2 cm. Petals 2-lobed, sparsely ciliate. Staminode limb broadly ovate, 2-cleft, yellow barbate, margin long ciliate. Filaments sparsely pilose. Carpels 3; ovary densely puberulent. Fl. Jul–Aug.

• Slopes; ca. 3300 m. SW Xinjiang (Wuqia Xian).

56. *Delphinium kunlunshanicum* Chang Y. Yang & B. Wang, Bull. Bot. Res., Harbin 9(1): 23. 1989.

昆仑翠雀花 *kun lun cui que hua*

Stem 30–40 cm tall, sparsely spreading hirsute, simple. Leaf blade 7–10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obovate, 3-lobulate, distally 1- or 2-dentate, apex acute; ultimate lobules lanceolate; proximal leaves

not withered. Raceme ca. 22 cm, ca. 10-flowered, puberulent and yellowish glandular puberulent; proximal bracts 3-parted, distal ones undivided, linear or lanceolate-linear. Pedicels 1.5–6 cm; bracteoles distal, linear, 5–9 mm. Sepals blue-purple, abaxially hispidulous and yellow glandular; spur subulate, ca. 2 cm, straight, base 2.5–3 mm in diam.; other sepals 1.3–1.5 cm. Petals emarginate, glabrous. Staminode limb broadly ovate, 2-lobed, white barbate. Filaments sparsely pilose. Carpels 3; ovaries densely puberulent. Fl. Jul–Aug.

• Grassy slopes; ca. 3800 m. SW Xinjiang (Yecheng Xian).

57. *Delphinium kaschgaricum* Chang Y. Yang & B. Wang, Bull. Bot. Res., Harbin 9(1): 21. 1989.

喀什翠雀花 ka shi cui que hua

Stem ca. 15 cm tall, sparsely retrorsely hispid, simple. Leaf blade 3–3.5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-obovate, 3-lobulate, distally entire or 1-denticulate, apex acute; ultimate lobules ovate; proximal leaves not withered. Raceme ca. 4 cm, 2–4-flowered, hispid and yellowish glandular puberulent; bracts lanceolate. Pedicels 2–2.5 cm; bracteoles distal, narrowly linear, ca. 4 mm. Sepals blue-purple, abaxially hispidulous and glandular; spur cylindrical-subulate, ca. 1 cm, straight, base ca. 2 mm in diam.; other sepals ca. 8 mm. Petals 2-lobed, ciliate. Staminode limb orbicular-ovate, 2-cleft, yellow barbate, ciliate. Filaments glabrous. Carpels 3; ovaries distally sparsely puberulent. Fl. Jul–Aug.

• Slopes; ca. 3300 m. SW Xinjiang (Artux Xian).

58. *Delphinium zhangii* W. T. Wang in W. T. Wang et al., Acta Phytotax. Sin. 37: 214. 1999.

亿里翠雀花 yi li cui que hua

Stem ca. 40 cm tall, sparsely hirsute, simple. Leaf blade 5–6 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic or rhombic-obovate, 3-lobulate, distally few dentate, apex acute; ultimate lobules lanceolate; proximal leaves not withered. Raceme 22–28 cm, ca. 12-flowered, hispid, simple or branched; bracts linear-lanceolate. Pedicels 2–5 cm; bracteoles distal, linear-lanceolate, 4–6 mm. Sepals blue-purple, abaxially puberulent; spur cylindrical-subulate, 1.3–1.5 cm, decurved, base ca. 2 mm in diam.; other sepals 1.3–1.4 cm × 5–8 mm. Petals 2-lobed, glabrous. Staminode limb orbicular-ovate, ca. 4 mm, 2-cleft, yellowish barbate, ciliate. Filaments glabrous. Carpels 3; ovaries distally densely puberulent. Fl. Aug.

• Near streams on slopes; ca. 3600 m. SW Xinjiang (Akto Xian).

59. *Delphinium sinoelatum* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 88. 1992.

新疆高翠雀花 xin jiang gao cui que hua

Stem 60–80 cm, sparsely pubescent proximally, glabrous distally, simple. Leaf blade 6–9 cm wide, base

cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-cleft, distally sparsely lobulate-dentate, apex acuminate; ultimate lobules lanceolate; proximal leaves usually withered. Raceme ca. 15 cm, ca. 16-flowered; rachis glabrous; proximal 3 bracts leaflike, others undivided, linear. Pedicels 1.5–2 cm, glabrous; bracteoles distal, narrowly linear, 7–9 mm. Sepals blue-purple, abaxially glabrous; spur cylindrical-subulate, 1.3–1.7 cm, straight, base 2.6–3 mm in diam.; other sepals 0.9–1.2 cm. Petals undivided, glabrous. Staminode limb broadly ovate, 2-lobed, yellow barbate, long ciliate near apex. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Forest margins, slopes; ca. 1900 m. N Xinjiang (Hoboksar Mongol Zizhixian).

60. *Delphinium shawurense* W. T. Wang, Fl. Reipubl. Popul. Sin. 27: 613. 1979.

萨乌尔翠雀花 sa wu er cui que hua

Stem ca. 1.2 m tall, sparsely hispidulous proximally and glabrous distally, or hispid proximally and sparsely puberulent distally, shortly branched distally. Leaf blade 11–19 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally unequally few lobulate, apex long acuminate; ultimate lobules lanceolate; proximal leaves usually withered. Raceme 20–28 cm, 20–40-flowered, glabrous or yellow glandular puberulent; proximal bracts leaflike, distal ones subulate. Pedicels 3–7.2 cm, yellow glandular puberulent throughout or only distally; bracteoles subulate, 7.5–9.5 mm. Sepals blue or white, abaxially sparsely glandular puberulent; spur subulate, 1.5–2.1 cm, base 2–3 mm in diam.; other sepals 1.1–1.5 cm. Petals obtuse or emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• *Pinus* forests, scrub by streams, grassy places in valleys, stream-sides; 1800–2200 m. N Xinjiang.

- 1a. Stem hispid proximally, sparsely puberulent distally 60c. var. *pseudoaemulans*
- 1b. Stem mostly glabrous, hispidulous only proximally.
 - 2a. Raceme rachis glabrous, pedicels glabrous proximally, yellow glandular puberulent distally; sepals blue 60a. var. *shawurense*
 - 2b. Raceme entirely yellow glandular puberulent; sepals white .. 60b. var. *albiflorum*

60a. *Delphinium shawurense* var. *shawurense*

萨乌尔翠雀花(原变种) sa wu er cui que hua (yuan bian zhong)

Stem mostly glabrous, hispidulous only near base. Raceme rachis glabrous. Pedicels glabrous proximally, yellow glandular puberulent distally. Sepals blue.

• *Pinus* forests, stream-sides; 1800–2200 m. N Xinjiang (Hoboksar Mongol Zizhixian).

60b. *Delphinium shawurense* var. *albiflorum* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 91. 1992.

白花萨乌尔翠雀花 bai hua sa wu er cui que hua

Stem mostly glabrous, hispidulous only near base. Raceme entirely yellow glandular puberulent. Sepals white.

• Grassy places in valleys; 1800–1900 m. N Xinjiang (Hoboksar Mongol Zizhixian).

60c. *Delphinium shawurense* var. *pseudoaemulans* (Chang Y. Yang & B. Wang) W. T. Wang & M. J. Warnock in W. T. Wang et al., Phytologia 79: 384. 1996.

毛茎萨乌尔翠雀花 mao jing sa wu er cui que hua

Delphinium pseudoaemulans Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 86. 1992.

Stem hispid proximally, sparsely puberulent distally. Raceme densely yellow glandular puberulent. Sepals blue.

• Scrub by streams; ca. 1900 m. N Xinjiang (Hoboksar Mongol Zizhixian).

61. *Delphinium wentsaii* Y. Z. Zhao, Acta Sci. Nat. Univ. In- tramongol. 20: 134. 1990.

文采翠雀花 wen cai cui que hua

Stem ca. 20 cm tall, densely spreading hirsute, simple. Leaf blade 5–10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme terminal and axillary, ca. 4 cm, densely ca. 6-flowered, densely hirsute; bracts leaflike, 3-sect, or undivided, lanceolate. Pedicels 1–1.5 cm; bracteoles distal, narrowly linear, 1.1–1.3 cm. Sepals blue-purple, abaxially densely hispid; spur cylindrical-subulate, ca. 1.2 cm, recurved, base ca. 2 mm in diam.; other sepals 1.1–1.2 cm. Petals emarginate, glabrous. Staminode limb broadly ovate, 2-cleft, white barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug.

• Alpine regions. W Xinjiang (Tekes Xian).

62. *Delphinium mollifolium* W. T. Wang, Bull. Bot. Res., Harbin 3(1): 31. 1983.

新源翠雀花 xin yuan cui que hua

Stem ca. 1.5 m tall, glabrous, branched. Leaf blade ca. 18 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate or few dentate, apex acuminate; ultimate lobules lanceolate; proximal leaves usually withered. Compound raceme ca. 55 cm, many flowered; bracts leaflike or lanceolate. Pedicels 0.6–3 cm, distally slightly curved; bracteoles distal, lanceolate-linear, 4–6 mm. Sepals blue, abaxially sparsely puberulent; spur cylindrical, 1.1–1.2 cm, straight, base 3–4 mm in diam.; other sepals 0.9–1.3 cm. Petals entire, glabrous. Staminode limb orbicular-ovate, 2-lobed, densely yellow barbate. Filaments glabrous.

Carpels 3; ovaries densely yellowish puberulent. Fl. Jun–Jul.

• Slopes; ca. 1700 m. Xinjiang (Xinyuan Xian).

63. *Delphinium eglandulosum* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 85. 1992.

无腺翠雀花 wu xian cui que hua

Stem 70–100 cm tall, densely appressed puberulent and glandular puberulent near base, glabrate on other parts, simple. Leaf blade 5–10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-cleft, distally sparsely lobulate-dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme ca. 28 cm, ca. 30-flowered, densely appressed puberulent; proximal bracts 3-sect, distal ones undivided, linear. Pedicels 1–3.5 cm; bracteoles distal, narrowly linear, 4–8 mm. Sepals purple, abaxially densely appressed puberulent; spur subcylindric or cylindric-subulate, 1.2–1.4 cm, straight, base 2.5–3.5 mm in diam.; other sepals 1–1.4 cm. Petals emarginate, glabrous. Staminode limb obovate, 2-cleft, yellow barbate, long ciliate. Filaments glabrous. Carpels 3, glabrous. Fl. Jun–Jul.

• Forest margins, meadows; ca. 1300 m. N Xinjiang (Burqin Xian).

64. *Delphinium tabatae* Tamura, Acta Phytotax. Geobot. 37: 156. 1986.

吉隆翠雀花 ji long cui que hua

Stem 34–80 cm tall, retrorsely hispidulous, simple or 1-branched. Leaf blade 7–13 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-cleft, distally sparsely lobulate or dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually not withered. Raceme 10–20 cm, 6–12-flowered, densely shortly strigose, mixed with sparse, spreading, rigid hairs; most proximal bract 3-parted, others undivided, linear. Pedicels 2–3.5 cm; bracteoles distal, lanceolate-linear, 7–12 mm. Sepals light blue, abaxially strigose; spur cylindrical-subulate, ca. 1.4 cm, straight, base ca. 2.2 mm in diam.; other sepals 1.3–1.6 cm. Petals undivided, glabrous. Staminode limb narrowly ovate, 2-cleft, yellowish barbate. Filaments sparsely pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

Forests; 3100–3600 m. S Xizang (Gyirong Xian) [Nepal].

65. *Delphinium korshinskyanum* Nevski in Komarov, Fl. URSS 7: 724. 1937.

东北高翠雀花 dong bei gao cui que hua

Stem 55–90 cm tall, hirsute proximally, glabrous distally, simple or few branched distally. Leaf blade 7–13 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic-cuneate or rhombic, 3-lobulate, distally lobulate and dentate, apex acute; ultimate lobules lanceolate; proximal leaves not withered. Raceme 13–22 cm, (12–)18–25-flowered, glabrous; bracts lanceolate-linear. Pedicels 0.8–3.5 cm; bracteoles distal, lanceolate or lanceolate-linear, 4–5

mm. Sepals blue-purple, glabrous or sparsely ciliate; spur cylindrical-subulate, 1.3–1.6(–1.9) cm, base 2.5–3 mm in diam.; other sepals 1–1.5 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

Grassy places in forests, meadows; 400–800 m. N and W Heilongjiang [Russia (Far East, C Siberia)].

66. *Delphinium trisectum* W. T. Wang, Acta Bot. Sin. 10: 80. 1962.

全裂翠雀花 *quan lie cui que hua*

Stem 30–50 cm tall, retrorsely puberulent, simple or 1-branched. Leaf blade 5–12 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate or dentate, apex acute; ultimate lobules lanceolate; proximal leaves not withered. Raceme 6–20 cm, (5–)10–14-flowered, retrorsely puberulent; bracts leaflike, lanceolate, or linear. Pedicels 2–7.5 cm; bracteoles distal, linear or subulate, 4–7 mm. Sepals blue-purple, abaxially appressed puberulent; spur cylindrical-subulate, 1.6–2.1 cm, base 3–3.5 mm in diam.; other sepals 1.3–1.7 cm. Petals emarginate, glabrous. Staminode limb

ovate, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Apr–May.

• Forest margins; 400–800 m. W Anhui, S Henan, N Hubei.

67. *Delphinium erlangshanicum* W. T. Wang, Acta Bot. Sin. 10: 86. 1962.

二郎山翠雀花 *er lang shan cui que hua*

Stem ca. 30 cm, retrorsely puberulent. Leaf blade 6–9 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic-ovate, 2 × dissected, distally 2 or 3 × dissected, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves not withered. Raceme ca. 14 cm, ca. 6-flowered, retrorsely puberulent; bracts lanceolate. Pedicels 1.8–6 cm; bracteoles distal, lanceolate, 1–1.1 cm. Sepals purplish, abaxially puberulent; spur subulate, 1.9–2.1 cm, base 3.5–4 mm in diam.; other sepals 1.5–1.7 cm. Petals 2-lobed, ciliate. Staminode limb ovate, 2-parted, white barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Sep.

• Rocky slopes; ca. 2300 m. W Sichuan (Erlang Shan, Tianquan Xian).

3. *Delphinium* sect. *Delphinastrum* de Candolle, Syst. Nat. 1: 351. 1817.

翠雀组 *cui que zu*

Herbs perennial, rhizomatous. Leaves mostly on proximal 1/2 of stem, near middle, or distal; leaf blade palmately divided; primary lobes 1- to many lobulate. Petals of same color as sepals, not black-brown. Staminoles of same color as sepals, not black-brown, distinctly differentiated into a claw and an expanded, broad limb; limb adaxially yellow or white barbate. Carpels 3(–5). Seeds mostly transversely squamulose winged, rarely narrowly winged only along angles.

About 170 species: mainly in the N hemisphere, a few species in Africa; 104 species (95 endemic) in China.

68. *Delphinium kingianum* Brühl ex Huth, Bot. Jahrb. Syst. 20: 469. 1895.

密叶翠雀花 *mi ye cui que hua*

Stem 22–60 cm tall, puberulent, rarely glabrous, usually simple. Leaf blade 3–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally 2-lobulate or entire, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves withered. Raceme 5–14 cm, 7- to many flowered; rachis puberulent; proximal bracts leaflike, distal ones linear. Pedicels 2.2–4.8 cm; bracteoles distal, linear, 8–11 mm. Sepals blue, abaxially puberulent; spur subulate or conic-subulate, slightly shorter than sepals, 1.2–1.5 cm, base 2.5–3 mm in diam.; other sepals 1.4–1.7 cm. Petals distally rounded, glabrous. Staminode limb obovate, emarginate, white barbate. Filaments pilose. Carpels 5; ovaries densely puberulent or subglabrous. Fl. Aug.

• Wooded and grassy slopes, scrub; 4600–4800 m. S and W Xizang.

- 1a. Stem glabrous; leaf segments apically long acuminate 68d. var. *acuminatissimum*
- 1b. Stem hairy; leaf segments apically acute.

2a. Stem and raceme densely spreading puberulent, mixed with a few yellow, glandular hairs 68c. var. *eglandulosum*

2b. Stem densely retrorsely puberulent and yellow glandular puberulent; raceme densely yellow glandular puberulent, mixed with a few retrorse, white, short hairs.

3a. Ovary densely puberulent 68a. var. *kingianum*

3b. Ovary mostly glabrous, with only a few hairs on ventral suture 68b. var. *leiocarpum*

68a. *Delphinium kingianum* var. *kingianum*

密叶翠雀花(原变种) *mi ye cui que hua* (yuan bian zhong)

Delphinium pachycentrum Hemsley subsp. *tsangense* Brühl var. *dasycarpum* Brühl.

Stem densely retrorsely puberulent and yellow glandular puberulent. Leaf segments apically acute. Raceme densely yellow glandular puberulent, mixed with a few retrorse, white, short hairs. Ovary densely puberulent.

• Slopes; ca. 4600 m. S Xizang.

68b. *Delphinium kingianum* var. *leiocarpum* Brühl ex Huth, Bot. Jahrb. Syst. 20: 469. 1895.

光果密叶翠雀花 *guang guo mi ye cui que hua*

Delphinium pachycentrum subsp. *tsangense* var.

leiocarpum (Brühl ex Huth) Brühl.

Stem densely retrorsely puberulent and yellow glandular puberulent. Leaf segments apically acute. Raceme densely yellow glandular puberulent, mixed with a few retrorse, white, short hairs. Ovary mostly glabrous, with only a few hairs on ventral suture.

• S Xizang.

68c. *Delphinium kingianum* var. *eglandulosum* W. T. Wang, Acta Bot. Sin. 10: 138. 1962.

少腺密叶翠雀花 *shao xian mi ye cui que hua*

Stem and raceme densely spreading puberulent, mixed with a few yellow, glandular hairs. Leaf segments apically acute.

• S Xizang

68d. *Delphinium kingianum* var. *acuminatissimum* (W. T. Wang) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 393. 1979.

尖裂密叶翠雀花 *jian lie mi ye cui que hua*

Delphinium acuminatissimum W. T. Wang, Acta Bot. Sin. 10: 138. 1962.

Stem glabrous. Leaf segments apically long acuminate. Raceme retrorsely puberulent, rarely mixed with a few yellow, glandular hairs.

• Scrub, grassy slopes; 4600–4800 m. SE and W Xizang.

69. *Delphinium humilium* (W. T. Wang) W. T. Wang, Bull. Bot. Res., Harbin 16: 156. 1996.

乡城翠雀花 *xiang cheng cui que hua*

Delphinium pachycentrum Hemsley var. *humilium* W. T. Wang, Fl. Reipubl. Popularis Sin. 28: 613. 1979.

Stem 20–28 cm tall, appressed puberulent, simple or 1- or 2-branched. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or narrowly so, 3-lobulate, distally few dentate, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves withered. Raceme 3.5–8 cm, 3–6-flowered, densely appressed puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones linear. Pedicels 1.5–4.2 cm; bracteoles distal, linear, 0.8–1.4 cm. Sepals purple-blue, abaxially pubescent; spur cylindrical, 1.5–1.8 cm, slightly recurved, base 3–3.5 mm in diam.; other sepals 1.5–1.7 cm. Petals 2-lobed, glabrous. Staminode limb obovate, 2-parted slightly beyond middle, yellow barbate. Filaments glabrous or margin with few hairs. Carpels 4–6; ovaries densely pubescent. Fl. Jul–Aug.

• Grassy or gravelly slopes; 4600–4800 m. SW Sichuan (Xiangcheng Xian), NW Yunnan (Zhongdian Xian).

70. *Delphinium pachycentrum* Hemsley, J. Linn. Soc., Bot. 29: 301. 1892.

粗距翠雀花 *cu ju cui que hua*

Stem 20–50 cm tall, together with petioles densely retrorsely appressed puberulent, usually simple. Leaf blade 5–8 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe

rhombic or narrowly so, 3-lobulate, distally few lobulate or few dentate, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves usually withered. Raceme 8–20 cm, densely 5–12-flowered, densely appressed puberulent; proximal bracts leaflike, distal ones linear. Pedicels 1.5–5 cm; bracteoles distal, linear, 1–1.8 cm. Sepals purple-blue, puberulent; spur subcylindric, 1.8–2 cm, straight or slightly recurved, base 3–4 mm in diam.; other sepals 1.6–2.2 cm. Petals undivided, glabrous. Staminode limb broadly obovate or broadly elliptic, entire, emarginate, or 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul–Aug.

• Gravelly or grassy slopes; 4000–4600 m. SE Qinghai, W Sichuan.

1a. Spurless sepals narrowly elliptic;

upper sepal ovate 70a. var. *pachycentrum*

1b. Spurless sepals lanceolate; upper

sepal narrowly ovate or oblong 70b. var. *lancisepalum*

70a. *Delphinium pachycentrum* var. *pachycentrum*

粗距翠雀花(原变种) *cu ju cui que hua* (yuan bian zhong)

Delphinium pachycentrum subsp. *hemsleyi* Brühl; *D. pachycentrum* var. *lobatum* W. T. Wang; *D. setiferum* Franchet.

Spurless sepals narrowly elliptic; upper sepal ovate.

• Gravelly slopes; 4000–4500 m. SE Qinghai, W Sichuan.

70b. *Delphinium pachycentrum* var. *lancisepalum* (Handel-Mazzetti) W. T. Wang, Acta Bot. Sin. 10: 140. 1962.

狭萼粗距翠雀花 *xia e cu ju cui que hua*

Delphinium lancisepalum Handel-Mazzetti, Acta Horti Gothob. 13: 55. 1939.

Spurless sepals lanceolate; upper sepal narrowly ovate or oblong.

• Grassy slopes; 4200–4600 m. W Sichuan (Jinchuan Xian, Kangding Xian).

71. *Delphinium caudatolobum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 613. 1979.

尾裂翠雀花 *wei lie cui que hua*

Stem ca. 50 cm tall, puberulent, simple. Leaf blade 5–9 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe lanceolate-rhombic, subpinnately lobed, distally incised dentate, apex caudate acuminate; ultimate lobules linear to narrowly lanceolate; proximal leaves usually withered. Raceme ca. 15 cm, ca. 24-flowered, densely appressed puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 1.5–2 cm; bracteoles distal, lanceolate, 5–8 mm. Sepals blue-purple, abaxially sparsely puberulent; spur cylindrical-subulate, 9–10 mm, base 2.5–3 mm in diam.; other sepals ca. 11 mm. Petals entire, glabrous. Staminode limb suboblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Aug–Sep.

• Grassy slopes; ca. 4600 m. NW Sichuan (Garzê Xian).

72. *Delphinium gyalanum* C. Marquand & Airy Shaw, J. Linn. Soc., Bot. 48: 156. 1929.

拉萨翠雀花 *la sa cui que hua*

Delphinium kawaguchii Tamura; *D. lasiocarpum* Tamura.

Stem 0.5–1.1 m tall, sparsely puberulent, branched, rarely simple. Leaf blade 9–22 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-cleft, distally unequally few lobulate and dentate, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves usually withered. Raceme 20–35 cm, many flowered, yellow glandular puberulent and retrorsely puberulent; proximal bracts leaflike or 3-parted, distal ones linear. Pedicels 2.5–8.5 cm; bracteoles distal, narrowly lanceolate, 7–11 mm. Sepals blue-purple, abaxially puberulent and glandular puberulent; spur subulate, conic-subulate, or subcylindric, 1.2–1.8 cm, base 3–4.5 mm in diam.; other sepals 1.3–1.5 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments pilose. Carpels 3; ovaries puberulent. Fl. Jul–Sep.

• Scrub, grassy slopes; 3000–4500 m. S Xizang.

73. *Delphinium hsinganense* S. H. Li & Z. F. Fang, Fl. Pl. Herb. Chin. Bor.-Orient. 3: 114. 1975.

兴安翠雀花 xing an cui que hua

Stem 75–95 cm tall, subglabrous or sparsely puberulent, branched distally. Leaf blade 6–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-lobulate, distally unequally dentate, apex acute; ultimate lobules linear to narrowly lanceolate; proximal leaves usually withered. Raceme ca. 20 cm, ca. 9-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones oblong to subulate. Pedicels 2.5–7 cm; bracteoles distal, subulate, 3–5 mm, rarely linear and to 8 mm. Sepals blue, abaxially puberulent; spur cylindrical-subulate or subulate, 1.6–1.8 cm, base 3–4 mm in diam.; other sepals 1.6–1.8 cm. Petals apically rounded, glabrous. Staminode limb broadly elliptic, emarginate, yellowish barbate. Filaments glabrous or pilose. Carpels 3; ovaries puberulent. Fl. Jun–Jul.

• Forest margins. NE Nei Mongol.

74. *Delphinium cheilanthum* Fischer ex de Candolle, Syst. Nat. 1: 352. 1817.

唇花翠雀花 chun hua cui que hua

Stem 0.8–1.4 m tall, glabrous, simple or branched distally. Leaf blade 7–10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe narrowly rhombic, 3-lobulate, distally entire or few dentate, apex acute; ultimate lobules narrowly ovate or lanceolate; proximal leaves usually withered. Raceme 12–20 cm, 6–10-flowered; rachis glabrous; bracts linear or subulate. Pedicels 1.5–3.5 cm, distally appressed puberulent; bracteoles distal, subulate, 2.5–3.5 mm. Sepals blue-purple, abaxially densely appressed puberulent; spur cylindrical-subulate, 2.1–2.2 cm, base 2.5–4 mm in diam.; other sepals 1.1–2 cm. Petals undivided, glabrous. Staminode limb broadly

obovate, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Jul–Aug.

Meadows; 700–800 m. NE Nei Mongol, N Xinjiang [Mongolia, Russia (Siberia)].

75. *Delphinium yuchuanii* Y. Z. Zhao, Acta Sci. Nat. Univ. Intramongol. 20: 248. 1989.

毓泉翠雀花 yu quan cui que hua

Stem ca. 30 cm tall, glabrous, simple. Leaf blade 4–6 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally usually 1-dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme ca. 5 cm, ca. 4-flowered; rachis glabrous or subglabrous; most proximal bract leaflike. Pedicels 1–2 cm, proximally glabrous or subglabrous, distally appressed puberulent; bracteoles distal, lanceolate-linear, ca. 5 mm. Sepals blue, abaxially densely appressed puberulent; spur cylindrical-subulate, ca. 2 cm, straight, base ca. 3 mm in diam.; other sepals 1.5–1.8 cm. Petals undivided, glabrous. Staminode limb broadly elliptic, emarginate, yellowish barbate. Filaments ciliolate. Carpels 3; ovaries densely appressed puberulent. Fl. Aug.

• Meadows by streams. SW Nei Mongol.

76. *Delphinium micropetalum* Finet & Gagnepain, Bull. Soc. Bot. France 51: 479. 1904.

小瓣翠雀花 xiao ban cui que hua

Delphinium jugorum Handel-Mazzetti; *D.*

micropetalum f. *album* W. T. Wang.

Stem 45–60 cm tall, strigose, simple or branched distally. Leaf blade 6–15 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or rhombic-obtrapezoid, 3-cleft, distally incised dentate, apex acute; ultimate lobules narrowly ovate or lanceolate; proximal leaves usually not withered. Raceme 8–20 cm, 8–13-flowered, retrorsely puberulent and sparsely yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 1.5–6 cm; bracteoles distal, narrowly lanceolate, 4–15 mm. Sepals blue-purple, rarely white, abaxially sparsely puberulent; spur conic-subulate, 1–1.6 cm, base 3–4 mm in diam.; other sepals 1–1.8 cm. Petals undivided, glabrous. Staminode limb ovate, emarginate or entire, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Oct.

Grassy slopes; 3300–4200 m. NW Yunnan [N Myanmar].

77. *Delphinium orthocentrum* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 178. 1893.

直距翠雀花 zhi ju cui que hua

Delphinium szechuanicum Ulbrich.

Stem 50–100 cm tall, glabrous proximally, appressed puberulent distally, simple or 1-branched distally. Leaf blade 6–11 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-lobulate, distally few incised dentate, apex acute; ultimate lobules narrowly ovate or lanceolate; proximal leaves usually withered. Raceme 12–30 cm,

(5–)10–20-flowered, appressed puberulent; proximal bracts leaflike, distal ones small, subulate, to 7 mm. Pedicels 1–3 cm; bracteoles distal, subulate, 3.5–8 mm. Sepals blue-purple, abaxially densely puberulent; spur conic-cylindric, 0.8–1.9 cm, upcurved, base 2–3 mm in diam.; other sepals 0.9–1.5 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Aug.

•Grassy slopes; ca. 3500 m. NW Sichuan (Songpan Xian, Wenchuan Xian).

78. *Delphinium altissimum* Wallich, Pl. Asiat. Rar. 2: 25. 1831

高茎翠雀花 gao jing cui que hua

Stem ca. 1 m tall, glabrous, branched. Leaf blade 10–15 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly ovate or lanceolate; proximal leaves usually not withered. Compound raceme ca. 40 cm, ca. 25-flowered, densely appressed puberulent; bracts 3-parted. Pedicels 1.2–2.2 cm; bracteoles borne proximally or near middle of pedicel, lanceolate-linear or subulate, 2.2–2.8 mm. Sepals purple-blue, abaxially appressed puberulent; spur cylindric, ca. 1.7 cm, straight, base ca. 3 mm in diam.; other sepals 1.3–1.5 cm. Petals undivided, glabrous. Staminode limb broadly ovate, 2-lobed, sparsely white barbate. Filaments glabrous. Carpels 3; ovaries puberulent only near ventral suture. Fl. Aug–Sep.

Forest margins, grassy places; 2300–2600 m. S Xizang [Bhutan, NE India, Nepal].

79. *Delphinium delavayi* Franchet, Bull. Soc. Bot. France 33: 379. 1886.

滇川翠雀花 dian chuan cui que hua

Stem 55–100 cm tall, hispidulous or hispid, branched. Leaf blade 7–13 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or broadly so, 3-lobulate, distally incised dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves withered or not. Compound or simple raceme 12–45 cm, 5–15-flowered, densely strigose and often yellow glandular puberulent; proximal bracts leaflike, distal ones linear-lanceolate. Pedicels 1.2–6(–10) cm; bracteoles distal, narrowly lanceolate, 5–12 mm. Sepals blue-purple, abaxially puberulent or ± strigose; spur subulate, 1.6–2.2 cm, base 2–3.5 mm in diam.; other sepals 1–1.5 cm. Petals undivided, glabrous. Staminode limb oblong, 4.5–6 mm, 2-lobed, white or yellow barbate. Filaments glabrous or sparsely hairy. Carpels 3; ovaries puberulent. Fl. Jul–Nov.

•Forests, forest margins, scrub, grassy slopes, open hillsides, streamsides; 2000–3800 m. W Guizhou, SW Sichuan, Yunnan

1a. Raceme strigose only, without yellow, glandular hairs; leaf lobes more strongly divided 79d. var. *baoshanense*

- 1b. Raceme densely strigose and yellow glandular puberulent; leaf lobes less divided.
 - 2a. Stem and petioles densely retrorsely hispidulous, hairs 0.5–2 mm 79a. var. *delavayi*
 - 2b. Stem and petioles spreading hispid, hairs 2–3 mm.
 - 3a. Filaments glabrous; leaf blade central lobe rhombic 79b. var. *pogonanthum*
 - 3b. Filaments with 1 or 2 hairs on each side; leaf blade central lobe broadly rhombic 79c. var. *lasiandrum*

79a. *Delphinium delavayi* var. *delavayi*

滇川翠雀花(原变种) dian chuan cui que hua (yuan bian zhong)

Delphinium delavayi f. *aureum* W. T. Wang; *D. delavayi* var. *acuminatum* Franchet; *D. trichophorum* f. *brevigule* H. Léveillé.

Stem and petioles densely retrorsely hispidulous; hairs 0.5–2 mm. Leaf blade central lobe rhombic. Raceme strigose and yellow glandular puberulent. Filaments glabrous.

•Sparse forests, grassy slopes; 2600–3600 m. W Guizhou, SW Sichuan, NC and SE Yunnan.

79b. *Delphinium delavayi* var. *pogonanthum* (Handel-Mazzetti) W. T. Wang, Fl. Reipubl. Popularis Sin. 28: 401. 1979.

须花翠雀花 xu hua cui que hua

Delphinium pogonanthum Handel-Mazzetti, Symb. Sin. 7: 279. 1931.

Stem and petioles spreading hispid; hairs 2–3 mm. Leaf blade central lobe rhombic. Raceme strigose and yellow glandular puberulent. Filaments glabrous.

•Forests, scrub, grassy slopes; 2600–3600 m. W Guizhou, SW Sichuan, C, N, and SE Yunnan.

79c. *Delphinium delavayi* var. *lasiandrum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 14. 1986.

毛蕊翠雀花 mao rui cui que hua

Stem and petioles spreading hispid; hairs 2–3 mm. Leaf blade central lobe broadly rhombic. Raceme strigose and yellow glandular puberulent. Filaments with 1 or 2 hairs on each side.

•Forests, forest margins; 3500–3800 m. NW Yunnan (Lijiang Naxi Zu Zizhixian).

79d. *Delphinium delavayi* var. *baoshanense* (W. T. Wang) W. T. Wang in W. T. Wang et al., Phytologia 79: 384. 1996.

保山翠雀花 bao shan cui que hua

Delphinium baoshanense W. T. Wang, Bull. Bot. Res., Harbin 6(1): 12. 1986.

Stem and petioles retrorsely hispidulous; hairs 0.5–2 mm. Leaf blade central lobe rhombic. Raceme strigose only, without yellow, glandular hairs. Filaments glabrous.

•Grassy slopes; 2000–2400 m. W Yunnan (Baoshan Xian).

80. *Delphinium umbrosum* Handel-Mazzetti, Symb. Sin. 7: 278. 1931.

阴地翠雀花 yin di cui que hua

Stem 30–110 cm tall, shortly strigose, hispidulous, or hispid, branched or simple. Leaf blade 4–20 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or narrowly so, 3-lobulate, distally incised dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves withered or not. Raceme sometimes compound, 10–30 cm, 6–15-flowered, strigose and yellow glandular puberulent; proximal bracts leaflike, distal ones small, linear. Pedicels 2–8 cm; bracteoles distal, green, linear or linear-subulate, 0.8–1.9 cm × 0.5–1.8 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 2–2.9 cm, recurved, straight, or upcurved, base 2–3 mm in diam.; other sepals 0.8–1.6 cm. Petals undivided, glabrous. Staminode limb ovate, 3–6 mm, 2-lobed, white barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Oct.

Forests, forest margins, grassy slopes; 1900–3900 m. SW Sichuan, S Xizang, N Yunnan [Nepal].

1a. Stem shortly strigose, hairs 0.1–0.9 mm 80a. var. *umbrosum*

1b. Stem proximally spreading hispid, hairs 1–2 mm.

2a. Bracteoles 0.6–1.1 mm wide 80b. var. *hispidum*

2b. Bracteoles 1.5–1.8 mm wide 80c. var. *drepanocentrum*

80a. *Delphinium umbrosum* var. *umbrosum*

阴地翠雀花(原变种) yin di cui que hua (yuan bian zhong)

Stem shortly strigose; hairs 0.1–0.9 mm. Bracteoles 0.5–0.6 mm wide.

• Forests, grassy slopes; 3500–3900 m. NW Yunnan.

80b. *Delphinium umbrosum* var. *hispidum* W. T. Wang, Acta Phytotax. Sin., Addit. 1: 102. 1965.

展毛阴地翠雀花 zhan mao yin di cui que hua

Stem proximally spreading hispid; hairs 1–2 mm. Bracteoles 0.6–1.1 mm wide.

• Forests, grassy slopes; 1900–3900 m. SW Sichuan, N Yunnan.

80c. *Delphinium umbrosum* var. *drepanocentrum* (Brühl ex Huth) W. T. Wang & M. J. Warnock in W. T. Wang et al., Phytologia 79: 384. 1996.

宽苞阴地翠雀花 kuan bao yin di cui que hua

Delphinium altissimum Wallich var. *drepanocentrum* Brühl ex Huth, Bot. Jahrb. Syst. 20: 419. 1895; *D. altissimum* subsp. *drepanocentrum* (Brühl ex Huth) Brühl; *D. drepanocentrum* (Brühl ex Huth) Munz; *D. umbrosum* subsp. *drepanocentrum* (Brühl ex Huth) Chowdhury ex Mukerjee.

Stem proximally spreading hispid; hairs 1–2 mm. Bracteoles 1.5–1.8 mm wide

Forest margins; 2300–3800 m. S Xizang [Nepal, Sikkim].

81. *Delphinium latirhombicum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 7. 1986.

宽菱形翠雀花 kuan ling xing cui que hua

Stem 55–65 cm tall, glabrous proximally, yellow glandular puberulent near raceme, 1-branched. Leaf blade 6–13 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves withered or not. Raceme 5–24 cm, 5–15-flowered, puberulent and yellow glandular puberulent; bracts lanceolate-linear, sometimes proximal bracts leaflike. Pedicels 0.6–6 cm; bracteoles distal, linear-lanceolate, 4.5–6.5 mm. Sepals purple, abaxially sparsely yellow glandular puberulent; spur subulate, 1.4–1.7 cm, straight or slightly recurved, base 2–2.5 mm in diam.; other sepals 0.9–1.1 cm. Petals 2-lobulate, glabrous. Staminode limb triangular, 2-cleft, sparsely yellowish barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Forest margins; ca. 2900 m. NW Yunnan (Eryuan Xian).

82. *Delphinium handelianum* W. T. Wang, Acta Phytotax. Sin. 6: 365. 1957.

淡紫翠雀花 dan zi cui que hua

Delphinium lilacinum Handel-Mazzetti (1931), not Willdenow ex Huth (1895).

Stem 50–80 cm tall, hispid or glabrous, branched. Leaf blade 7–12 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, entire or 3-lobulate, distally unequally dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves withered or not. Raceme 12–19 cm, 8–14-flowered, densely retrorsely strigose and yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate or subulate. Pedicels 1–5 cm; bracteoles borne near middle of pedicel or distally, lanceolate-linear, 5–8 mm. Sepals purple or purplish, abaxially puberulent; spur subulate, ca. 1.5 cm, straight, base ca. 2.5 mm in diam.; other sepals 1–1.1 cm. Petals 2-lobed, sparsely ciliate. Staminode limb ovate, 2-cleft, white barbate. Filaments glabrous. Carpels 3; ovaries sparsely strigose or glabrous. Fl. Aug.

• Sparse forests, slopes. NW Yunnan (Dayao Xian, Yongsheng Xian).

83. *Delphinium honanense* W. T. Wang, Acta Bot. Sin. 10: 146. 1962.

河南翠雀花 he nan cui que hua

Stem 50–100 cm tall, glabrous, simple or branched. Leaf blade 7–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, entire or 3-lobulate, distally dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves usually withered. Raceme 8–11 cm, 10–15-flowered, retrorsely puberulent, sometimes yellow glandular puberulent; proximal bracts 3-parted, distal ones lanceolate-linear or linear. Pedicels 0.8–2.6 cm; bracteoles borne proximally or near middle of pedicel, linear, 5–8 mm. Sepals purple, abaxially sparsely puberulent; spur subulate, 2–2.1 cm, base 2–3 mm in

diam.; other sepals 1.3–1.6 cm. Petals emarginate or entire, glabrous. Staminode limb suboblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. May.

• Forests, grassy slopes; 600–1900 m. SW Henan, W Hubei, S Shaanxi

- 1a. Stem 50–60 cm, simple; raceme retrorsely puberulent and yellow glandular puberulent; petals emarginate 83a. var. *honanense*
1b. Stem ca. 100 cm, branched distally; raceme only retrorsely puberulent, without glandular hairs; petals entire 83b. var. *piliferum*

83a. *Delphinium honanense* var. *honanense*

河南翠雀花(原变种) he nan cui que hua (yuan bian zhong)

Stem 50–60 cm, simple. Raceme retrorsely puberulent and yellow glandular puberulent. Petals emarginate.

• Forests; 600–1900 m. SW Henan, W Hubei, S Shaanxi.

83b. *Delphinium honanense* var. *piliferum* W. T. Wang, Fl. Tsinling. 1(2): 261. 1974.

毛梗河南翠雀花 mao geng he nan cui que hua

Stem ca. 100 cm, branched distally. Raceme only retrorsely puberulent, without glandular hairs. Petals entire.

• Grassy slopes. SE Shaanxi.

84. *Delphinium omeiense* W. T. Wang, Fl. Reipubl. Popularis Sin. 7: 613. 1979.

峨眉翠雀花 e mei cui que hua

Stem 60–95 cm tall, retrorsely hispid or appressed puberulent, simple or branched. Petiole retrorsely hispid or appressed puberulent; leaf blade 7–16 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate and dentate, apex acute; ultimate lobules ovate or narrowly so; proximal leaves usually withered. Raceme 12–30 cm, 8–12-flowered, retrorsely strigose and yellow glandular puberulent; proximal bracts leaf-like, distal ones linear-lanceolate or linear. Pedicels 1–4 cm; bracteoles borne near middle of pedicel or distally, lanceolate-linear or linear, 6–7 mm. Sepals blue-purple, abaxially puberulent and yellow glandular puberulent; spur subulate, (0.7–)2–2.6 cm, base 2–3 mm in diam.; other sepals (0.4–)1.2–1.6 cm. Petals undivided, acute, glabrous. Staminode limb suboblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Jul–Nov.

• Forests, forest margins, scrub, grassy slopes, open slopes; 2000–3300 m. SW Hubei, SW Sichuan, NE Yunnan.

- 1a. Stem and petioles appressed puberulent 84c. var. *pubescens*
1b. Stem and petioles retrorsely hispid.

- 2a. Sepals (1–)1.2–1.6 cm, spur 2–2.6 cm 84a. var. *omeiense*
2b. Sepals 0.4–0.8 cm, spur 0.7–1.8 cm 84b. var. *micranthum*

84a. *Delphinium omeiense* var. *omeiense*

峨眉翠雀花(原变种) e mei cui que hua (yuan bian zhong)

Stem and petioles retrorsely hispid. Sepals (1–)1.2–1.6 cm; spur 2–2.6 cm.

• Forests, grassy slopes; 2500–3300 m. SW Sichuan, NE Yunnan.

84b. *Delphinium omeiense* var. *micranthum* G. F. Tao, Acta Phytotax. Sin. 23: 219. 1985.

小花峨眉翠雀花 xiao hua e mei cui que hua

Stem and petioles retrorsely hispid. Sepals 0.4–0.8 cm; spur 0.7–1.8 cm.

• Slopes; ca. 2000 m. SW Hubei (Jianshi Xian).

84c. *Delphinium omeiense* var. *pubescens* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 614. 1979.

毛峨眉翠雀花 mao e mei cui que hua

Stem and petioles appressed puberulent. Sepals 1–1.2 cm; spur 1.6–1.8 cm.

• Forest margins, scrub; 2200–2600 m. SW Sichuan (Muli Zang Zu Zizhixian).

This variety is similar to *Delphinium tongolense*, but differs in having a puberulent stem.

85. *Delphinium yanwaense* W. T. Wang, Acta Bot. Yunnan. 5: 157. 1983.

岩瓦翠雀花 yan wa cui que hua

Stem ca. 30 cm tall, retrorsely puberulent proximally, glabrous distally, branched. Leaf blade 4–6 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally 1- or 2-dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually not withered. Raceme ca. 16 cm, sparsely 3–5-flowered; rachis glabrous; proximal bracts leaflike, distal ones narrowly oblong. Pedicels 3.5–10 cm, appressed puberulent near apex; bracteoles distal, linear or narrowly so, 0.5–1.8 cm. Sepals blue-purple, abaxially densely appressed puberulent; spur subulate, ca. 1.9 cm, straight, base ca. 2 mm in diam.; other sepals 7.5–9 mm. Petals 2-lobulate, sparsely ciliate. Staminode limb subobovate, 2-cleft, yellow barbate. Filaments pilose. Carpels 3; ovaries puberulent. Fl. Jul.

• Rocks in valleys; ca. 2700 m. NW Yunnan (Weixi Lisu Zu Zizhixian).

86. *Delphinium tongolense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 166. 1893.

川西翠雀花 *chuan xi cui que hua*

Stem 0.5–1.6 m tall, glabrous, branched distally. Leaf blade 8–12 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally lobulate and dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme 12–38 cm, 8–25-flowered, yellow glandular puberulent; proximal bracts leaflike, distal ones linear or filiform. Pedicels 1.8–7 cm; bracteoles distal, subfiliform, 4–7 mm. Sepals blue-purple, abaxially sparsely puberulent; spur subulate, 1.5–2.4 cm, base 3–3.5 mm in diam.; other sepals 1.1–1.8 cm. Petals emarginate, glabrous. Staminode limb suboblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Jul–Aug.

• Forests, grassy slopes; 2200–3900 m. W Sichuan, N Yunnan.

87. *Delphinium hirtifolium* W. T. Wang, Acta Bot. Yunnan. 6: 374. 1984.

毛叶翠雀花 *mao ye cui que hua*

Stem ca. 80 cm tall, glabrous, branched distally. Leaf blade ca. 7.5 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic-lanceolate, nearly undivided, distally dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme 27–40 cm, 18–35-flowered, yellow glandular puberulent and retrorsely puberulent; proximal bracts leaflike, distal ones linear. Pedicels 0.5–5 cm; bracteoles borne near middle of pedicel, linear, 5–9 mm. Sepals deep blue-purple, abaxially sparsely puberulent; spur subulate, 1.5–2 cm, recurved, base ca. 2.5 mm in diam.; other sepals 1–1.1 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-parted, sparsely white barbate. Filaments glabrous. Carpels 3; ovaries yellowish pilose. Fl. Jun–Jul.

• Slopes; ca. 2500 m. SW Sichuan (Muli Zang Zu Zizhixian).

88. *Delphinium longipedicellatum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 614. 1979.

长梗翠雀花 *chang geng cui que hua*

Stem 75–95 cm tall, glabrous or sparsely hispidulous proximally, simple or 1-branched distally. Leaf blade 14–18 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate and dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme 20–40 cm, ca. 6-flowered, retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 5–9 cm; bracteoles distal, narrowly linear or filiform, 4–10 mm. Sepals blue, adaxially sparsely puberulent; spur cylindrical-subulate, 1.3–1.4 cm, base ca. 3.5 mm in diam.; other sepals 1.9–2.1 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-parted, yellowish barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Aug.

• *Abies* forests; ca. 3800 m. E Xizang (Bomi Xian).

89. *Delphinium pseudocyananthum* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 83. 1992.

假深蓝翠雀花 *jia shen lan cui que hua*

Stem ca. 90 cm tall, appressed puberulent proximally, glabrous distally, ca. 2-branched. Leaf blade ca. 7 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or broadly so, 3-cleft, distally sparsely lobulate-dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme 18–22 cm, densely many flowered, densely appressed puberulent; proximal bracts 3-parted, distal ones undivided, linear. Pedicels 5–10 mm; bracteoles distal, narrowly linear, 5–7 mm. Sepals blue-purple, abaxially densely appressed puberulent; spur subulate, 1.3–1.5 cm, nearly straight, base 2.8–3 mm in diam.; other sepals 1.2–1.3 cm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-lobed, yellow barbate, ciliate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul.

• Grassy places by streams; ca. 1000 m. N Xinjiang (Habahe Xian).

90. *Delphinium sherriffii* Munz, J. Arnold Arbor. 49: 115. 1968.

米林翠雀花 *mi lin cui que hua*

Stem (0.5–)1–1.6 m tall, spreading puberulent and yellow glandular puberulent, branched distally. Leaf blade 8–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate and dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Compound raceme pyramidal, to 40 cm, many flowered, yellow glandular puberulent; proximal bracts leaflike, distal ones small, subfiliform. Pedicels 1.5–4 cm; bracteoles distal, subulate or filiform, 2–5 mm. Sepals blue-purple, abaxially sparsely puberulent; spur subulate, (1.6–)2–2.2 cm, base 3–4 mm in diam.; other sepals 1–1.2 cm. Petals 2-lobed, glabrous. Staminode limb oblong, 2-cleft, yellowish barbate. Filaments glabrous. Carpels 3, glabrous or ovary puberulent. Fl. Jun–Jul.

• Forests, streams; 3000–3500 m. SE Xizang (Mainling Xian).

91. *Delphinium hirticaule* Franchet, J. Bot. (Morot) 8: 275. 1894.

毛茎翠雀花 *mao jing cui que hua*

Stem ca. 70 cm tall, usually hispid proximally, glabrous distally, branched or simple. Leaf blade 8–10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic-obovate, 3-lobulate, distally lobulate, apex acute; ultimate lobules narrowly ovate or linear-lanceolate; proximal leaves usually withered. Raceme 5–20(–30) cm, 5–10(–20)-flowered, glabrous or yellow glandular puberulent; bracts linear. Pedicels 1.5–3 cm; bracteoles proximal, subulate-linear, 2.2–4 mm. Sepals blue-purple, abaxially sparsely puberulent; spur subulate, 1.7–2 cm, sometimes U-shaped, base 3–4 mm in diam.; other sepals 1.2–2 cm. Petals undivided, glabrous. Staminode limb obovate,

emarginate to 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Aug.

• Grassy slopes; 1200–2900 m. W Hubei, S Shaanxi, E Sichuan.

1a. Raceme glabrous 91a. var. *hirticaule*

1b. Raceme yellow glandular puberulent 91b. var. *mollipes*

91a. *Delphinium hirticaule* var. *hirticaule*

毛茎翠雀花(原变种) mao jing cui que hua (yuan bian zhong)

Delphinium coelestinum Franchet; *D. hirticaule* var. *coelestinum* (Franchet) Finet & Gagnepain; *D. hirticaule* var. *micranthum* Finet & Gagnepain; *D. wilsonii* Munz.

Raceme glabrous.

• Grassy slopes; 1400–2900 m. W Hubei, S Shaanxi, NE Sichuan.

91b. *Delphinium hirticaule* var. *mollipes* W. T. Wang, Acta Bot. Sin. 10: 146. 1962.

腺毛翠雀花 xian mao cui que hua

Raceme yellow glandular puberulent.

• Grassy slopes; 1200–2600 m. W Hubei, E Sichuan.

92. *Delphinium potaninii* Huth, Bull. Herb. Boissier 1: 332. 1893.

黑水翠雀花 hei shui cui que hua

Stem 0.5–1.5 m tall, glabrous, usually branched. Leaf blade 10–15 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves withered. Raceme 6–30 cm, 3–15-flowered, sometimes corymbiform, glabrous; proximal bracts sometimes leaflike, distal ones small, linear or subulate. Pedicels 1.5–9 cm; bracteoles borne at various points on pedicel, lanceolate-linear to filiform, 2–12 × 0.2–1.2 mm. Sepals blue-purple, abaxially puberulent; spur subulate, (1.6–)2.2–2.5(–3) cm, recurved, U-shaped, or spirally recurved; other sepals 1–2 cm. Petals emarginate, glabrous. Staminode limb obovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovary sparsely puberulent or glabrous. Fl. Jun–Sep.

• Forests, forest margins, grassy slopes, meadows; 1100–3800 m. S Gansu, S Shaanxi, Sichuan.

1a. Bracteoles lanceolate-linear or linear, 10–12 × 1–1.2 mm 92c. var. *latibracteolatum*

1b. Bracteoles narrowly linear or filiform, 2–7 × 0.2–0.4 mm.

2a. Spur recurved; inflorescence racemose

..... 92a. var. *potaninii*

2b. Spur U-shaped or spirally recurved;

inflorescence racemose, often

corymbiform 92b. var. *bonvalotii*

92a. *Delphinium potaninii* var. *potaninii*

黑水翠雀花(原变种) hei shui cui que hua (yuan bian zhong)

Raceme 14–30 cm, 6–15-flowered. Bracteoles narrowly linear or filiform, 2–7 × 0.2–0.4 mm. Spur recurved.

Ovary glabrous, rarely sparsely puberulent.

• Slopes in forests; 1800–3300 m. S Gansu, S Shaanxi, E and NW Sichuan.

92b. *Delphinium potaninii* var. *bonvalotii* (Franchet) W. T. Wang, Bull. Bot. Res., Harbin 16: 156. 1996.

螺距黑水翠雀花 luo ju hei shui cui que hua

Delphinium bonvalotii Franchet, Bull. Soc. Philom.

Paris, sér. 8, 5: 165. 1893.

Raceme 6–14 cm, 3–12-flowered, often corymbiform; bracteoles narrowly linear or filiform, 2–7 × 0.2–0.4 mm. Spur U-shaped or spirally recurved. Ovary sparsely puberulent or glabrous.

• Forest margins; 1100–3800 m. W Sichuan.

92c. *Delphinium potaninii* var. *latibracteolatum* W. T. Wang, Acta Bot. Sin. 10: 147. 1962.

宽苞黑水翠雀花 kuan bao hei shui cui que hua

Raceme ca. 11 cm, ca. 9-flowered. Bracteoles lanceolate-linear or linear, 10–12 × 1–1.2 mm. Spur U-shaped or spirally recurved. Ovary glabrous.

• Grassy slopes; ca. 2300 m. NC Sichuan (Maowen Qiang Zu Zizhixian).

93. *Delphinium eriostylum* H. Léveillé, Bull. Herb. Boissier, sér. 2, 6: 505. 1906.

毛梗翠雀花 mao geng cui que hua

Stem 40–60 cm tall, glabrous or proximally sparsely hispid, branched distally. Leaf blade 7–16 cm wide, shortly strigose or hispid, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate or few dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Corymb 3–10 cm, 3–5-flowered; bracts leaflike or undivided, lanceolate.

Pedicels 2–3.5 cm, sparsely yellow glandular puberulent; bracteoles borne near middle of pedicel or distally, narrowly linear or subulate, 4–8 mm. Sepals purple-blue, abaxially sparsely puberulent; spur subulate, 1.7–2 cm, slightly recurved, base 2.5–3.5 mm in diam.; other sepals 1.4–1.7 cm. Petals 2-lobulate, glabrous. Staminode limb oblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely pilose or glabrous. Fl. Mar–Jun.

• Slopes, grassy places, streamsides in valleys; 500–2000 m. Guizhou, SE Sichuan.

1a. Proximal leaves absent, leaf blade shortly strigose; ovary sparsely pilose 93a. var. *eriostylum*

1b. Proximal leaves 3, leaf blade hispid; ovary glabrous 93b. var. *hispidum*

93a. *Delphinium eriostylum* var. *eriostylum*

毛梗翠雀花(原变种) mao geng cui que hua (yuan bian zhong)

Delphinium bonvalotii Franchet var. *eriostylum* (H. Léveillé) W. T. Wang.

Proximal leaves absent; leaf blade shortly strigose.

Ovary sparsely pilose. Fl. Mar–Jun.

• Slopes, grassy places, streamsides in valleys; 500–2000 m. Guizhou, SE Sichuan (Nanchuan Xian).

93b. *Delphinium eriostylum* var. *hispidum* (W. T. Wang) W. T. Wang, Bull. Bot. Res., Harbin 16: 157. 1996.

糙叶毛梗翠雀花 *cao ye mao geng cui que hua*

Delphinium bonvalotii var. *hispidum* W. T. Wang, Fl.

Reipubl. Popularis Sin. 27: 412. 1979.

Proximal leaves 3; leaf blade hispid. Ovary glabrous. Fl. Apr.

• Grassy places in valleys; ca. 1200 m. S Guizhou (Wangmo Bouyei-Miao Zu Zizhixian).

94. *Delphinium laxicymosum* W. T. Wang, Acta Bot. Sin. 10: 148. 1962.

聚伞翠雀花 *ju san cui que hua*

Stem 50–75 cm tall, hispid proximally or throughout, branched. Leaf blade 6–13 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate or dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Corymb 3–8 cm, 2–5-flowered, glabrous or retrorsely puberulent; proximal bracts 3-parted, distal ones filiform. Pedicels 2–7 cm; bracteoles borne near middle of pedicel, filiform, 2–2.5 mm. Sepals deep blue, abaxially puberulent; spur subulate, 2–2.5 cm, recurved, base ca. 3 mm in diam.; other sepals 0.8–2.1 cm. Petals undivided, glabrous. Staminate limb oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Mixed forests in valleys, scrub, streamsides; 1300–3100 m. N Sichuan.

1a. Stem hispid only proximally, glabrous elsewhere; corymb glabrous; upper sepal ca. 1.4 cm, spur 2.3–2.5 cm 94b. var. *laxicymosum*

1b. Stem hispid throughout; corymb retrorsely puberulent; upper sepal ca. 1.2 cm, spur ca. 2 cm 94b. var. *pilostachyum*

94a. *Delphinium laxicymosum* var. *laxicymosum*

聚伞翠雀花(原变种) *ju san cui que hua* (yuan bian zhong)

Stem hispid only proximally, glabrous elsewhere.

Corymb glabrous. Upper sepal ca. 1.4 cm; spur 2.3–2.5 cm.

• Scrub; ca. 3100 m. NW Sichuan (Wenchuan Xian).

94b. *Delphinium laxicymosum* var. *pilostachyum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 614. 1979.

毛序聚伞翠雀花 *mao xu ju san cui que hua*

Stem hispid throughout. Corymb retrorsely puberulent. Upper sepal ca. 1.2 cm; spur ca. 2 cm.

• Mixed forests in valleys, streamsides; ca. 1300 m. N Sichuan (Qingchuan Xian).

95. *Delphinium sinovitifolium* W. T. Wang, Acta Bot. Sin. 10: 152. 1962.

葡萄叶翠雀花 *pu tao ye cui que hua*

Delphinium vitifolium Finet & Gagnepain, Bull. Soc. Bot. France 53: 126. 1906, not Willdenow ex Steudel (1840).

Stem 30–40 cm tall, densely spreading hirsute, simple.

Leaf blade 5–6 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, 3-lobulate or 3-dentate, distally few dentate, apex acute; ultimate lobules triangular; proximal leaves withered. Raceme 9.5–13 cm, 4- or 5-flowered, spreading puberulent; proximal bracts leaflike, distal ones linear or narrowly so. Pedicels 1.8–4 cm, puberulent and sparsely glandular puberulent; bracteoles distal, subulate, 3.5–6 mm. Sepals blue, abaxially pubescent; spur subulate, 2.2–2.5 cm, recurved or U-shaped, base 3–3.5 mm in diam.; other sepals 1–1.3 cm. Petals undivided, glabrous. Staminate limb obliquely ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Sep.

• Alpine meadows; ca. 4000 m. W Sichuan.

96. *Delphinium maoxianense* W. T. Wang, Acta Phytotax. Sin. 31: 209. 1993.

茂县翠雀花 *mao xian cui que hua*

Stem 30–40 cm tall, hispid proximally, glabrous distally, simple. Leaf blade 4–6 cm wide, base deeply cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, 3-lobulate, distally incised dentate, apex acute; ultimate lobules triangular; proximal leaves withered. Corymb ca. 6.5 cm, ca. 4-flowered, glabrous; bracts leaflike. Pedicels 3.5–5.5 cm; bracteoles borne near middle of pedicel, linear, ca. 5 mm. Sepals blue-purple, abaxially sparsely puberulent; spur cylindrical-subulate, 1.8–2.2 cm, spirally curved, base 4–5 mm in diam.; other sepals 1.2–1.4 cm. Petals undivided, glabrous. Staminate limb obovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Sep.

• NC Sichuan (Maowen Qiang Zu Zizhixian).

97. *Delphinium spirocentrum* Handel-Mazzetti, Symb. Sin. 7: 280. 1931.

螺距翠雀花 *luo ju cui que hua*

Delphinium pediforme Comber; *D. spirocentrum* var. *grandibracteolatum* W. T. Wang; *D. spirocentrum* var. *hirsutum* Chen; *D. spirocentrum* var. *pediforme* (Comber) W. T. Wang.

Stem (16–)26–90 cm tall, hispid, simple or branched.

Leaf blade 4–14 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate and dentate, apex shortly acuminate; ultimate lobules triangular; proximal leaves withered. Raceme 8–25 cm, 4–25-flowered, hispidulous and yellow glandular puberulent, proximal bracts leaflike, distal ones linear or linear-subulate. Pedicels 1.5–5.5 cm; bracteoles borne at various points on pedicel, usually linear, 1–1.2 cm. Sepals blue-purple, abaxially puberulent; spur subulate, ca. 2.3 cm, U-shaped or spirally curved, base 3–4 mm in diam.; other sepals 1.6–2 cm. Petals undivided, glabrous. Staminate limb suboblong,

emarginate to 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries strigose. Fl. Jul–Oct.

• Forest margins, scrub, grassy slopes; 3400–4200 m. SW Sichuan, NW Yunnan.

98. *Delphinium gonggaense* W. T. Wang, Acta Bot. Yunnan. 6: 375. 1984.

贡嘎翠雀花 gong ga cui que hua

Stem 55–70 cm tall, hispidulous, simple. Leaf blade ca. 11 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally incised dentate, apex shortly acuminate; ultimate lobules triangular; proximal leaves withered. Raceme ca. 22 cm, ca. 10-flowered, retrorsely puberulent and yellowish glandular puberulent; proximal bracts leaflike, distal ones broadly lanceolate. Pedicels 7–8 cm; bracteoles distal, linear, rarely narrowly oblong, 7–8(–28) mm. Sepals blue-purple, abaxially pubescent; spur subulate, ca. 1.9 cm, spirally curved; other sepals ca. 1.1 cm. Petals 2-lobed, glabrous. Staminode limb suboblong, 2-lobed, yellowish barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Alpine *Quercus* thickets; ca. 3600 m. W Sichuan (Gongga Shan, Luding Xian).

99. *Delphinium angustirhombicum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 9. 1986.

狭菱形翠雀花 xia ling xing cui que hua

Stem ca. 42 cm tall, sparsely spreading puberulent, proximally with several axillary, short, sterile branches. Leaf blade ca. 5.5 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe narrowly rhombic, 3-lobulate, distally 1- or few dentate, apex shortly acuminate; ultimate lobules triangular; proximal leaves withered. Raceme ca. 29 cm, ca. 19-flowered; rachis glabrous proximally, elsewhere retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones linear or narrowly so. Pedicels 1.5–5.8 cm, retrorsely puberulent and yellow glandular puberulent; bracteoles distal, linear or narrowly so, 5–10 mm. Sepals purple-blue, abaxially appressed puberulent; spur subulate, 1.9–2.2 cm, recurved U-shaped, base 2–3 mm in diam.; other sepals 1.3–1.5 cm. Petals 2-lobulate, glabrous. Staminode limb obtrapezoid, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent distally. Fl. Jul.

• Moist areas; ca. 3500 m. NW Yunnan (Zhongdian Xian).

100. *Delphinium wenchuanense* W. T. Wang, Bull. Bot. Res., Harbin 3(1): 34. 1983.

汶川翠雀花 wen chuan cui que hua

Stem glaucous, ca. 2.5 m, glabrous, branched. Leaf blade ca. 16 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally lobulate and dentate, apex acuminate; ultimate lobules triangular; proximal leaves withered. Compound raceme ca. 32 cm, many flowered; rachis glabrous proximally, elsewhere densely yellow

glandular puberulent; proximal bracts leaflike, distal ones linear. Pedicels 0.6–4.5 cm, densely yellow glandular puberulent; bracteoles distal, linear, 3.8–5 mm. Sepals blue-purple, abaxially yellow glandular puberulent; spur cylindrical-subulate, ca. 2 cm, U-shaped, base ca. 4 mm in diam.; other sepals ca. 1.3 cm. Petals undivided, glabrous. Staminode limb obovate-oblong, 2-lobed, white barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul.

• Slopes; ca. 2500 m. NW Sichuan (Wenchuan Xian).

101. *Delphinium bulleyanum* Forrest ex Diels, Notes Roy. Bot. Gard. Edinburgh 5: 125. 1912.

拟螺距翠雀花 ni luo ju cui que hua

Delphinium polyanthum W. T. Wang; *D. spirocentrum* Handel-Mazzetti var. *pauciflorum* Chen.

Stem 0.6–1.8 m tall, glabrous, simple or branched distally. Leaf blade 7–12 cm wide, base deeply cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate and dentate, apex shortly acuminate; ultimate lobules triangular; proximal leaves withered. Raceme often terminal and compound, 9–14 cm, 6–16-flowered, retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones small, lanceolate-linear to filiform. Pedicels 1–4.8 cm; bracteoles borne near middle of pedicel or distally, linear or filiform, 1.5–4 mm. Sepals blue, abaxially densely puberulent; spur subulate, 1.8–2.4 cm, recurved, U-shaped, or spirally curved, base 2.8–3.5 mm in diam.; other sepals 1.1–1.5 cm. Petals 2-lobed, glabrous. Staminode limb narrowly obovate, 2-parted, yellow or white barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent or glabrous. Fl. Aug–Sep.

• Scrub, grassy slopes; 3100–4800 m. SW Sichuan, NW Yunnan.

102. *Delphinium ninglangshanicum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 10. 1986.

宁朗山翠雀花 ning lang shan cui que hua

Stem ca. 25 cm tall, glabrous, simple or branched. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or cuneate, 3-lobulate, distally incised lobulate or 1- or 2-dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves not withered. Raceme ca. 15 cm, ca. 4-flowered, retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones undivided, lanceolate or narrowly so. Pedicels 2.5–6 cm; bracteoles distal, linear-lanceolate or linear, 0.8–1.2 cm. Sepals blue-purple, abaxially appressed puberulent; spur subulate, 2–2.2 cm, recurved U-shaped, base ca. 3 mm in diam.; other sepals 1.5–1.8 cm. Petals undivided, glabrous. Staminode limb broadly elliptic or ovate, emarginate, yellow barbate. Filaments glabrous. Carpels 3; ovaries pubescent. Fl. Sep.

• Scrub; 3600–3800 m. SW Sichuan (Muli Zang Zu Zizhixian).

103. *Delphinium pseudotongolense* W. T. Wang, Acta Bot. Sin. 10: 153. 1962.

拟川西翠雀花 ni chuan xi cui que hua

Stem 60–100 cm tall, glabrous, branched. Leaf blade 11–12 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe ovate-rhombic, 3-lobulate, distally incised dentate, apex acuminate; ultimate lobules narrowly ovate; proximal leaves usually withered. Compound raceme (5–)12–18 cm, densely yellow glandular puberulent mixed with a few retrorse, white hairs; bracts linear or filiform. Pedicels 0.7–3 cm; bracteoles borne near middle of pedicel or distally, filiform, 4.5–7 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 1.5–2.1 cm, spirally curved, base 2–3.5 mm in diam.; other sepals 1.3–2 cm. Petals undivided, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries glabrous or sparsely puberulent. Fl. Jul–Aug.

• Thickets; 1200–2500 m. W Sichuan.

104. *Delphinium muliense* W. T. Wang, Acta Phytotax. Sin. 6: 365. 1957.

木里翠雀花 mu li cui que hua

Stem 60–70 cm tall, glabrous, simple or branched. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate and dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Raceme 6–19 cm, 4–15-flowered, retrorsely puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones linear or lanceolate, 0.8–1.4 cm. Pedicels 1.2–5 cm; bracteoles distal, lanceolate, lanceolate-linear, or subfiliform, 3.5–13 × 0.2–2 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 2–2.2 cm, recurved, base 2.5–3.5 mm in diam.; other sepals 1.3–1.8 cm. Petals undivided, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, sparsely puberulent only on ventral suture. Fl. Jul.

• Forests, forest margins, grassy places by streams; 3300–4200 m. SW Sichuan.

- 1a. Bracteoles lanceolate or lanceolate-linear, 8–13 × 1.2–2 mm 104a. var. *muliense*
- 1b. Bracteoles subfiliform, 3.5–4.5 × ca. 0.2 mm 104b. var. *minutibracteolatum*

104a. *Delphinium muliense* var. *muliense*

木里翠雀花(原变种) mu li cui que hua (yuan bian zhong)

Delphinium pachycentrum Hemsley var. *tenuicaule* Chen.

Bracteoles lanceolate or lanceolate-linear, 8–13 × 1.2–2 mm.

• Forests, forest margins; 3500–4200 m. SW Sichuan (Muli Zang Zu Zizhixian).

104b. *Delphinium muliense* var. *minutibracteolatum* W. T. Wang, Acta Bot. Sin. 10: 149. 1962.

小苞木里翠雀花 xiao bao mu li cui que hua

Bracteoles subfiliform, 3.5–4.5 × ca. 0.2 mm.

• Grassy places by streams; ca. 3300 m. SW Sichuan (Muli Zang Zu Zizhixian).

105. *Delphinium campylocentrum* Maximowicz, Trudy Imp. S.-Peterburgsk. Bot. Sada 11: 31. 1890.

弯距翠雀花 wan ju cui que hua

Stem 65–100 cm tall, glabrous, branched distally. Leaf blade 10–14 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate and dentate, apex acute; ultimate lobules narrowly ovate; proximal leaves usually withered. Compound raceme ca. 30 cm, 14–to many flowered, yellow glandular puberulent; bracts leaflike, lanceolate, or linear. Pedicels 2.2–6 cm; bracteoles borne near middle of pedicel or distally, subulate, 5–7 mm. Sepals blue-purple, abaxially sparsely glandular puberulent, 2-cleft corniculate near apex; spur subulate, 1.8–2 cm, U-shaped, base 2–3 mm in diam.; other sepals 1–1.5 cm. Petals 2-lobed, glabrous. Staminode limb obtrapezoid, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3(or 4), glabrous. Fl. Jul–Sep.

• *Picea* forests, grassy slopes; 3400–3900 m. S Gansu, NW Si chuan.

106. *Delphinium sutchuenense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 178. 1893.

松潘翠雀花 song pan cui que hua

Delphinium sungpanense W. T. Wang.

Stem 50–100 cm tall, glabrous, branched distally. Leaf blade ca. 10 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate and dentate, apex long acuminate; ultimate lobules lanceolate; proximal leaves usually withered. Raceme ca. 15 cm, ca. 10-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones linear or linear-subulate. Pedicels 1.5–5 cm; bracteoles distal, narrowly linear or subulate, 3–7 mm. Sepals blue-purple, abaxially puberulent, sometimes corniculate near apex; spur subulate, 1.5–2 cm, recurved or straight, base 2–3 mm in diam.; other sepals ca. 1 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries glabrous or sparsely puberulent. Fl. Jul–Aug.

• Forests, grassy slopes; ca. 2800 m. S Gansu (Zhugqu Xian), NW Sichuan (Songpan Xian).

107. *Delphinium pseudocampylocentrum* W. T. Wang, Acta Bot. Sin. 10: 150. 1962.

拟弯距翠雀花 ni wan ju cui que hua

Stem 50–65 cm tall, hispid proximally, glabrous distally, branched or simple. Leaf blade 4–7 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate or dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Raceme 5–15 cm, 3–10-flowered, yellow glandular puberulent or glabrous; proximal bracts leaflike, distal ones small, linear or subulate. Pedicels 1.5–4 cm;

bracteoles distal, linear or subulate, 2.3–6.5 mm. Sepals deep blue, abaxially puberulent; spur subulate, 1.7–2.2 cm, usually slightly recurved, base ca. 3 mm in diam.; other sepals 1.2–1.5 cm. Petals undivided, glabrous. Staminode limb ovate, 2-lobed or 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent distally or glabrous. Fl. Jul–Aug.

• Forests, *Picea* forest margins, grassy slopes; 3400–4400 m. NW Sichuan.

1a. Raceme yellow glandular puberulent; ovaries sparsely puberulent distally

..... 107a. var. *pseudocampylocentrum*

1b. Raceme and ovaries glabrous . 107b. var. *glabripes*

107a. *Delphinium pseudocampylocentrum* var. *pseudocampylocentrum*

拟弯距翠雀花(原变种) ni wan ju cui que hua (yuan bian zhong)

Raceme yellow glandular puberulent. Ovaries sparsely puberulent distally.

• Grassy slopes; ca. 4400 m. NW Sichuan (Jinchuan Xian).

107b. *Delphinium pseudocampylocentrum* var. *glabripes* W. T. Wang, Bull. Bot. Res., Harbin 16: 158. 1996.

光序拟弯距翠雀花 guang xu ni wan ju cui que hua

Raceme and ovaries glabrous.

• *Picea* forest margins; ca. 3400 m. NW Sichuan (Aba Xian).

108. *Delphinium rangtangense* W. T. Wang, Acta Bot. Yunnan. 8: 262. 1986.

壤塘翠雀花 rang tang cui que hua

Stem 70–100 cm tall, sparsely yellowish hispid proximally, glabrous distally, simple. Leaf blade 7–11 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic or broadly so, 3-cleft, distally 3-dentate or incised dentate, apex long acuminate; ultimate lobules triangular or lanceolate; proximal leaves withered. Compound raceme ca. 34 cm, lax, ca. 20-flowered, glabrous; proximal bracts leaflike or linear, distal ones linear-subulate. Pedicels 7.5–8.5 cm; bracteoles distal, linear-subulate, 1.5–3 mm. Sepals blue-purple, abaxially sparsely puberulent along midvein; spur subulate, ca. 2 cm, recurved, base ca. 3.5 mm in diam.; other sepals 9–10 mm. Petals distally erose, ciliate. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous or pilose. Carpels 3, glabrous. Fl. Jul.

• *Abies* forests; ca. 3300 m. NW Sichuan (Zamtang Xian).

109. *Delphinium conaense* W. T. Wang, Acta Phytotax. Sin. 25: 34. 1987.

错那翠雀花 cuo na cui que hua

Stem ca. 60 cm tall, densely appressed puberulent, simple. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, subpinnately parted, distally 1-denticulate or entire, apex acute; ultimate lobules narrowly triangular; proximal leaves withered. Raceme

ca. 2.5 cm, ca. 2-flowered, appressed puberulent; bracts linear. Pedicels ca. 1 cm; bracteoles borne near middle of pedicel, linear, 3.5–4.5 mm. Sepals bluish, abaxially appressed puberulent; spur subulate, ca. 1.5 cm, base ca. 2.5 mm in diam.; other sepals 0.9–1.2 cm. Petals emarginate, glabrous. Staminode limb obovate-oblong, 2-lobed, yellowish barbate. Filaments pilose. Carpels 3; ovaries pubescent. Fl. Sep.

• Wet places in forests; 3400–3500 m. SE Xizang (Cona Xian).

110. *Delphinium giraldii* Diels, Bot. Jahrb. Syst. 36(Beibl. 82): 39. 1905.

秦岭翠雀花 qin ling cui que hua

Stem 55–110(–150) cm tall, glabrous, branched distally. Leaf blade 12–20 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic or rhombic-obovate, 3-cleft, distally few lobulate or dentate, apex acute; ultimate lobules lanceolate; proximal leaves usually withered. Compound raceme 40–50 cm, many flowered, glabrous; proximal bracts leaflike, distal ones linear. Pedicels 1.5–3 cm; bracteoles borne near middle of pedicel, subulate, 2.5–3.5 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 1.5–2 cm, straight, base 3–4 mm in diam.; other sepals 1–1.3 cm. Petals 2-lobed, glabrous. Staminode limb oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• Forests, grassy slopes; 1000–2000 m. SE Gansu, W Henan, W Hubei, S Ningxia, S Shaanxi, S Shanxi, NW Sichuan (Barkam Xian).

111. *Delphinium sparsiflorum* Maximowicz, Bull. Acad. Imp. Sci. Saint-Petersbourg, Sér. 3, 23: 307. 1877.

疏花翠雀花 shu hua cui que hua

Stem to 1.2 m tall, glabrous, few branched distally. Leaf blade 7–14 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate or dentate, apex acute; ultimate lobules lanceolate; proximal leaves withered. Compound raceme pyramidal, 30–40 cm, many flowered, glabrous; proximal bracts leaflike, distal ones linear or subulate. Pedicels 1.8–3.8 cm; bracteoles borne near middle of pedicel or distally, subulate, 2–3.5 mm. Sepals blue or pinkish, abaxially sparsely puberulent distally; spur narrowly conic or cylindrical, 6–11 mm, base ca. 3 mm in diam.; other sepals 8.5–11 mm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• *Picea* forests, grassy slopes; 1900–2800 m. C and S Gansu, S Ningxia, E Qinghai.

112. *Delphinium angustipaniculatum* W. T. Wang, Acta Phytotax. Sin. 29: 456. 1991.

宕昌翠雀花 dang chang cui que hua

Stem ca. 1 m tall, densely puberulent proximally, glabrous distally, branched. Leaf blade ca. 14 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally

incised lobulate, apex acuminate; ultimate lobules narrowly triangular; proximal leaves usually not withered. Compound raceme narrowly pyramidal, ca. 27 cm, many flowered; rachis glabrous; bracts leaflike. Pedicels 4–8 cm, densely appressed puberulent; bracteoles borne near middle of pedicel, linear, 2–2.5 mm. Sepals blue, abaxially sparsely puberulent; spur conic-subulate, 8–9 mm, base ca. 3 mm in diam.; other sepals 7–8 mm. Petals undivided, glabrous; staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Sep–Oct.

• Scrub in valleys. S Gansu (Dangchang Xian).

113. *Delphinium glabricaule* W. T. Wang, Acta Bot. Sin. 10: 154. 1962.

光茎翠雀花 *guang jing cui que hua*

Stem ca. 70 cm tall, glabrous, simple. Leaf blade 7–8 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally lobulate and dentate, apex acute; ultimate lobules narrowly triangular; proximal leaves usually not withered. Raceme ca. 36 cm, sparsely ca. 8-flowered, glabrous; proximal bracts lanceolate, distal ones linear or filiform. Pedicels 3.5–9 cm; bracteoles borne near middle of pedicel or distally, subulate, 4–5 mm. Sepals blue, abaxially sparsely puberulent; spur subulate, 1.8–2 cm, spirally curved, base ca. 3.5 mm in diam.; other sepals 0.9–1.2 cm. Petals emarginate, glabrous. Staminode limb obovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Forests. W Sichuan (Xiaojin Xian).

114. *Delphinium trifoliolatum* Finet & Gagnepain, Bull. Soc. Bot. France 51: 481. 1904.

三小叶翠雀花 *san xiao ye cui que hua*

Stem 50–90(–120) cm tall, sparsely retrorsely puberulent, often glabrescent proximally, branched. Leaf blade 7–12 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe narrowly rhombic or lanceolate, indistinctly 3-lobulate, distally few dentate, apex acute; ultimate lobules narrowly triangular; proximal leaves withered. Raceme 3–12 cm, 3–8-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones elliptic or oblong. Pedicels 0.9–2 cm; bracteoles distal, oblanceolate-linear or linear, 3–7 mm. Sepals purple, abaxially puberulent; spur subulate, 2.2–2.5 cm, nearly straight, base 3–3.5 mm in diam.; other sepals 1–1.2 cm. Petals 2-lobed, glabrous. Staminode limb obovate, 2-cleft, sparsely white barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• Forests; 1500–1600 m. W Anhui, SW Hubei, SE Sichuan.

115. *Delphinium wangii* M. J. Warnock, *nom. nov.*

秀丽翠雀花 *xiu li cui que hua*

Replaced synonym: *Delphinium amabile* Chang Y. Yang & B. Wang, Acta Phytotax. Sin. 30: 89. 1992, not Tidestrom (1925).

Stem 70–80 cm tall, retrorsely hispid proximally, puberulent near middle, simple or 1- or 2-branched.

Leaf blade to 12 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally sparsely lobulate or dentate, apex acute; ultimate lobules narrowly triangular; proximal leaves withered. Raceme 10–16 cm, 10- to many flowered, puberulent; proximal bracts 3-sect, distal ones undivided, narrowly linear. Pedicels 0.8–1.2 cm; bracteoles distal, narrowly linear, 5–7 mm. Sepals blue, abaxially puberulent; spur cylindrical-subulate, 1.2–1.5 cm, nearly straight, base ca. 3.5 mm in diam.; other sepals ca. 1.3 cm. Petals entire, glabrous. Staminode limb broadly ovate, 2-cleft, yellow barbate, ciliate distally. Filaments glabrous. Carpels 3, glabrous. Fl. Jul–Aug.

• Forest margins, scrub, slopes; ca. 2300 m. N Xinjiang (Hoboksar Mongol Zizhixian).

116. *Delphinium aemulans* Nevski in Komarov, Fl. URSS 7: 725. 1937.

塔城翠雀花 *ta cheng cui que hua*

Stem 70–100 cm tall, retrorsely puberulent proximally, glabrescent distally, simple or branched. Leaf blade 13–18 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally lanceolate, few lobulate, apex long acuminate; ultimate lobules narrowly lanceolate; proximal leaves withered. Raceme 6.5–15 cm, densely 14–20-flowered, densely yellow glandular puberulent and sparsely retrorsely puberulent; bracts linear-filiform, 1–1.6 cm. Pedicels 0.7–1.1 cm; bracteoles distal, subulate, ca. 6 mm. Sepals blue-purple, abaxially yellow glandular puberulent; spur conic-subulate, 1.2–1.7 cm, recurved or nearly straight, base 2–3 mm in diam.; other sepals ca. 1.5 cm. Petals undivided, glabrous. Staminode limb suboblong, 2-cleft, yellowish barbate. Filaments pilose. Carpels 3; ovaries puberulent. Fl. Jul–Aug.

Slopes; ca. 1400 m. NW Xinjiang [Kazakhstan].

117. *Delphinium taliense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 174. 1893.

大理翠雀花 *da li cui que hua*

Stem 45–130 cm, glabrous or proximally with short, rigid hairs, usually branched. Leaf blade 6–10 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate, apex acute; ultimate lobules triangular, narrowly so, narrowly lanceolate or lanceolate-linear; proximal leaves withered. Raceme 6–15(–30) cm, 6–12(–17)-flowered; rachis glabrous; proximal bracts 3-parted or undivided, distal ones undivided, linear-subulate. Pedicels 2–7 cm, glabrous or puberulent apically; bracteoles borne near middle of pedicel or distally, subulate, 4.5–9 mm, glabrous or sparsely puberulent. Sepals purple-blue, abaxially appressed puberulent, rarely abaxially hirsute, shortly cerniculate distally; spur subulate or rarely cylindrical-subulate, 1.3–2.4(–2.6) cm, nearly equaling or 1.5–2 × as long as lateral and lower sepals, slightly recurved, base 2–3(–5) mm in diam.; other sepals 1–1.5(–2.5) cm.

Petals distally 2-lobulate, glabrous or sparsely ciliate. Staminode limb 2-lobed, sometimes emarginate or 2-parted, yellow barbate. Filaments glabrous. Carpels 3; ovaries glabrous or puberulent. Fl. Aug–Nov.

• Forests on slopes, forest margins, grassy slopes, meadows, rocks; 2800–3500 m. SW Sichuan, NC and NW Yunnan

1a. Spur cylindrical-subulate, nearly equaling sepals, base 4–5 mm in diam. 117c. var. *platycentrum*

1b. Spur subulate, slightly longer than or 1.5–2 ×

as long as sepals, base 2–3 mm in diam.

2a. Sepals hirsute abaxially ... 117b. var. *hirsutum*

2b. Sepals appressed puberulent abaxially.

3a. Leaf blade 3 or 4 × dissected, ultimate lobules narrowly lanceolate or lanceolate-linear; spur ca. 2.6 cm; staminode limb 2-parted beyond middle 117d. var. *dolichocentrum*

3b. Leaf blade less divided, ultimate lobules triangular or narrowly so; spur 1.3–2.4 cm; staminode limb 2-lobed nearly

to middle or emarginate 117a. var. *taliense*

117a. *Delphinium taliense* var. *taliense*

大理翠雀花(原变种) da li cui que hua (yuan bian zhong)

Delphinium georgei Comber; *D. mizugense* Ulbrich; *D. taliense* var. *glabrum* W. T. Wang.

Leaf blade less divided; ultimate lobules triangular or narrowly so. Spur subulate, 1.3–2.4 cm, base 2–3 mm in diam.; other sepals 1–1.6 cm, appressed puberulent abaxially. Staminode limb 2-lobed nearly to middle or emarginate. Fl. Aug–Nov.

• Forest margins, meadows; 2800–3500 m. SW Sichuan, NC and NW Yunnan.

117b. *Delphinium taliense* var. *hirsutum* W. T. Wang, Acta Bot. Sin. 10: 159. 1962.

硬毛大理翠雀花 ying mao da li cui que hua

Leaf blade less divided; ultimate lobules triangular or narrowly so. Spur subulate, 2–2.3 cm, base 2–3 mm in diam.; other sepals 1.2–1.5 cm, hirsute abaxially. Fl. Sep.

• Grassy slopes. SW Sichuan (Huili Xian).

117c. *Delphinium taliense* var. *platycentrum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 614. 1979.

粗距大理翠雀花 cu ju da li cui que hua

Leaf blade less divided; ultimate lobules triangular or narrowly so. Spur cylindrical-subulate, ca. 2.5 cm, base 4–5 mm in diam.; other sepals ca. 2.5 cm, appressed puberulent abaxially. Fl. Aug.

• Rocks; ca. 3500 m. SW Sichuan (Butuo Xian).

117d. *Delphinium taliense* var. *dolichocentrum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 615. 1979.

长距大理翠雀花 chang ju da li cui que hua

Leaf blade 3 or 4 × dissected; ultimate lobules narrowly lanceolate or lanceolate-linear. Spur subulate, ca. 2.6 cm, base 2–3 mm in diam.; other sepals 1.2–1.5 cm, appressed puberulent abaxially. Staminode limb 2-parted beyond middle. Fl. Sep.

• Forests on slopes; ca. 2800 m. SW Sichuan (Huidong Xian).

118. *Delphinium lasiantherum* W. T. Wang, Acta Bot. Yunnan. 5: 160. 1983.

毛药翠雀花 mao yao cui que hua

Delphinium taliense Franchet var. *pubipes* W. T. Wang.

Stem 60–70 cm tall, glabrous or subglabrous, 1-branched distally. Leaf blade 9–13 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic, 3-lobulate, distally 1- or 2-dentate, apex acute; ultimate lobules triangular or lanceolate; proximal leaves withered. Raceme 11–15 cm, 5- or 6-flowered, yellow glandular puberulent; bracts narrowly linear. Pedicels 1.8–4.5 cm; bracteoles distal, lanceolate-linear or subulate, 5–6 mm. Sepals deep purple, abaxially yellow pilose; spur subulate, 2.2–2.5 cm, recurved, base ca. 2.5 mm in diam.; other sepals 1–1.6 cm. Petals 2-lobulate, sparsely ciliate. Staminode limb suboblong, 2-parted, yellow barbate. Filaments pilose distally; anthers abaxially puberulent. Carpels 3; ovaries densely pubescent. Fl. Feb.

• Scrub; ca. 3200 m. SW Sichuan (Daocheng Xian).

The type citation gives a February collection date. No other specimens have been seen. August or September is a more likely collection date at this location and elevation.

119. *Delphinium liangshanense* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 615. 1979.

凉山翠雀花 liang shan cui que hua

Stem 28–55 cm, glabrous, branched. Leaf blade 4–9 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-parted, distally undivided or 3-lobulate, apex acute; ultimate lobules triangular or lanceolate; proximal leaves withered. Raceme 5–10 cm, 4–6-flowered, glabrous; bracts narrowly linear. Pedicels 2.5–8 cm; bracteoles borne proximally or near middle of pedicel, subulate or subfiliform, 5–7 mm. Sepals purple, abaxially puberulent; spur subulate, 2.3–2.8 cm, base ca. 3 mm in diam.; other sepals 1.6–1.9 cm. Petals undivided, glabrous. Staminode limb narrowly obovate, undivided, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely pubescent. Fl. Jul–Oct.

• Grassy slopes; ca. 3000 m. SW Sichuan (Yuexi Xian), NE Yunnan (Qiaojia Xian).

120. *Delphinium ceratophoroides* W. T. Wang, Acta Bot. Sin. 10: 158. 1962.

拟角萼翠雀花 ni jiao e cui que hua

Stem ca. 30 cm tall, glabrous, simple or 1-branched distally. Leaf blade 3–7 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic or obovate-rhombic, 3-parted, distally 2- or 3-lobulate, apex acute; ultimate lobules triangular or lanceolate; proximal leaves withered. Raceme ca. 9 cm, ca. 3-flowered, glabrous; bracts 3-parted or undivided, linear. Pedicels 4–5.5 cm; bracteoles distal, linear, 5–9.5 mm. Sepals deep blue, abaxially puberulent, subapically corniculate; spur subulate, ca. 2.5 cm, base ca. 3 mm in diam.; other sepals 1.6–2.2 cm. Petals emarginate, glabrous. Staminate limb suboblong, 2-cleft, yellow barbate. Filaments pilose. Carpels 3; ovaries densely appressed pubescent. Fl. Aug.

• Alpine meadows; ca. 3200 m. SE Xizang (Zayü Xian).

121. *Delphinium hamatum* Franchet, Pl. Delavay. 28. 1889.
钩距翠雀花 *gou ju cui que hua*

Stem 10–30 cm tall, hispid proximally, glabrous distally, branched or simple. Leaf blade 2–6 cm wide, base cordate; primary lobes separate for less than 60% of blade radius; central lobe cuneate or rhombic-cuneate, 3-lobulate, distally few dentate, apex acute; ultimate lobules triangular or lanceolate; proximal leaves not withered. Raceme 2–9 cm, 1–5-flowered, glabrous; bracts small, linear. Pedicels 1.5–5 cm; bracteoles distal, linear-subulate, 2–5 mm. Sepals blue-purple, abaxially sparsely puberulent; spur cylindrical-subulate, 1.2–1.5 cm, recurved or U-shaped, base 3–3.5 mm in diam.; other sepals 1.5–1.7 cm. Petals undivided, glabrous. Staminate limb narrowly obovate, emarginate or 2-lobed, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries pubescent. Fl. Sep–Oct.

• Grassy or stony slopes; 2900–3800 m. NW Yunnan (Eryuan Xian, Heqing Xian).

122. *Delphinium hueizeense* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 18. 1986.

会泽翠雀花 *hui ze cui que hua*

Stem 12–20 cm tall, retrorsely hispid, simple. Leaf blade 3–9 cm wide, base deeply cordate; primary lobes separate for less than 60% of blade radius; central lobe rhombic or broadly so, 3-lobulate, distally 1- or 2-dentate, apex acute; ultimate lobules triangular or lanceolate; proximal leaves not withered. Raceme ca. 17 cm, ca. 6-flowered, retrorsely pubescent and yellow glandular puberulent; proximal bracts leaflike or 3-sect, distal ones undivided, linear. Pedicels 2–7 cm; bracteoles distal, narrowly linear, 7–9 mm. Sepals purple-blue, abaxially appressed yellow glandular puberulent and hispid; spur subulate, 2–2.2 cm, straight or nearly so, base 2.5–3.5 mm in diam.; other sepals 1.3–1.5 cm. Petals 2-lobed, glabrous or subglabrous. Staminate limb oblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries pubescent. Fl. Aug–Sep.

• Thicket margins along streams, alpine meadows; ca. 3400 m. NE Yunnan (Huize Xian).

123. *Delphinium calthifolium* Q. E. Yang & Y. Luo, Novon 11: 370. 2001.

驴蹄草叶翠雀花 *lu ti cao ye cui que hua*

Stem 25–40 cm tall, densely appressed puberulent, unbranched. Leaf blade 4–6 cm wide, base deeply cordate; primary lobes separate for less than 60% of blade radius; central lobe broadly rhombic, unlobed, distally dentate, apex acute; ultimate lobules broadly triangular or orbicular; proximal leaves not withered. Raceme 5–12 cm, 3–6-flowered, appressed white puberulent; proximal bracts 3–5-sect, distal ones undivided, lanceolate. Pedicels 2–5 cm; bracteoles distal, lanceolate, 2–5 mm. Sepals blue, abaxially appressed puberulent; spur subulate-cylindric, ca. 2.5 cm, slightly downcurved, base ca. 2.5 mm in diam.; other sepals 1.2–1.3 cm. Petals 2-lobed, glabrous. Staminate limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries glabrous. Fl. and fr. Sep.

• Forests; ca. 2300 m. NC Sichuan (Beichuan Xian).

124. *Delphinium pseudohamatum* W. T. Wang, Acta Bot. Yunnan. 5: 161. 1983.

宁蒗翠雀花 *ning lang cui que hua*

Stem 11–18 cm tall, sparsely spreading puberulent proximally, glabrous distally, simple. Leaf blade 2–4 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe broadly rhombic or rhombic, 3-lobulate, distally 1-dentate or entire, apex acute; ultimate lobules triangular; proximal leaves not withered. Raceme 3–5 cm, 1- or 2-flowered; rachis glabrous; bracts undivided and linear, or 3-sect. Pedicels ca. 3.5 cm, yellow pilose distally; bracteoles borne near middle of pedicel, linear, ca. 5 mm. Sepals blue, abaxially yellow puberulent; spur subulate, ca. 2.8 cm, nearly straight, base ca. 2 mm in diam.; other sepals ca. 1.7 cm. Petals undivided, sparsely ciliate. Staminate limb broadly ovate or elliptic-ovate, undivided, yellow barbate. Filaments pilose distally. Carpels 3; ovaries densely villous. Fl. Sep.

• Alpine meadows; ca. 3800 m. NW Yunnan (Ninglang Yi Zu Zizhixian).

125. *Delphinium autumnale* Handel-Mazzetti, Symb. Sin. 7: 276. 1931.

秋翠雀花 *qiu cui que hua*

Delphinium kamaonense Huth var. *autumnale* (Handel-Mazzetti) W. T. Wang.

Stem 16–45 cm tall, with sparse, rigid hairs proximally, branched or simple. Leaf blade 3–6 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 2 × dissected, distally 1-dentate or entire, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves not withered. Raceme 5–6 cm, 2–5-flowered; rachis glabrous or very sparsely pilose; bracts linear. Pedicels 2–5 cm, mostly glabrous, yellow pilose apically;

bracteoles borne at various points on pedicel, subulate, 4–10 mm, ciliate. Sepals blue, abaxially white appressed puberulent and yellow pilose; spur subulate, 1.5–1.8 cm, slightly recurved, base ca. 3 mm in diam.; other sepals 1.5–1.8 cm. Petals undivided, glabrous, sparsely ciliate apically. Staminode limb suborbicular, entire, yellow barbate. Filaments with few marginal hairs. Carpels 3; ovaries densely yellowish pubescent. Fl. Sep.

• Meadows; 3600–3900 m. SW Sichuan (Yanyuan Xian), NW Yunnan (Ninglang Yi Zu Zizhixian).

126. *Delphinium pergamenum* W. T. Wang, Acta Bot. Yunnan. 5: 158. 1983.

纸叶翠雀花 zhi ye cui que hua

Stem 11–30 cm tall, spreading puberulent, simple or 1-branched distally. Leaf blade 3–7 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or rhombic-cuneate, 1–3-dentate, distally 3-lobulate, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves not withered. Raceme 6.5–16 cm, 3- or 4-flowered, yellow glandular puberulent or retrorsely puberulent; bracts lanceolate. Pedicels 2.5–5 cm; bracteoles borne near middle of pedicel or distally, narrowly linear or lanceolate-linear, 4–9 mm. Sepals blue, abaxially pilose; spur cylindrical, ca. 2.2 cm, straight or slightly recurved, base ca. 3 mm in diam.; other sepals ca. 1.5 cm. Petals 2-lobulate, ciliate. Staminode limb narrowly ovate, 2-lobed, sparsely white barbate. Filaments pilose. Carpels 3; ovaries densely puberulent. Fl. Aug.

• Grassy places in forests; 3400–3600 m. NW Yunnan (Dêqên Xian).

127. *Delphinium yongningense* W. T. Wang & M. J. War-nock, Guihaia 17: 7. 1997.

永宁翠雀花 yong ning cui que hua

Stem 55–80 cm tall, spreading hispid, simple or 1-branched. Leaf blade ca. 7 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally incised dentate, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves not withered. Raceme terminal, elongate, 40–70 cm, laxly 6–22-flowered, strigose and yellow glandular puberulent; proximal bracts leaflike, distal ones sessile, 3-sect or undivided. Pedicels erect-spreading, 0.6–12 cm; bracteoles distal, linear, 0.6–1.4 cm. Sepals blue-purple, abaxially sparsely strigose; spur subulate, 1.7–2 cm, base 3–3.5 mm in diam.; other sepals 1.3–1.7 cm. Petals undivided, glabrous. Staminode limb oblong, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries pubescent. Fl. Jun.

• Moist slopes; 3300–4000 m. NW Yunnan (Lijiang Naxi Zu Zizhixian: Yongning).

128. *Delphinium ceratophorum* Franchet, Bull. Soc. Bot. France 33: 377. 1886.

角萼翠雀花 jiao e cui que hua

Stem 30–60 cm tall, sparsely hispid proximally, glabrous distally to middle, branched. Leaf blade 3–19 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or rhombic-cuneate, 3-lobulate, distally incised dentate, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves not withered. Raceme 7–18(–30) cm, 5–10(–17)-flowered; rachis glabrous; proximal bracts 3-parted, distal ones undivided, oblong or linear. Pedicels 1.7–8 cm, glabrous, rarely with sparse, rigid hairs apically; bracteoles distal, lanceolate-linear or subulate, 5–10 mm. Sepals purple-blue, abaxially shortly strigose, rarely hirsute, corniculate near apex; spur cylindrical-subulate, 1.9–2.3 cm, slightly recurved or U-shaped, base 2.5–3 mm in diam.; other sepals 1.2–1.9 cm. Petals undivided, glabrous. Staminode limb obovate, 2-lobed, 2-cleft, or emarginate, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely pubescent. Fl. Jun–Oct.

• Forests, forest margins, grassy slopes, meadows; 2800–4200 m. NW Yunnan.

- 1a. Leaf blade to 10 × 19 cm, more strongly divided, central lobe 3-cleft beyond middle, ultimate lobules narrowly lanceolate or linear-lanceolate; bracteoles remote from flower 128d. var. *robustum*
- 1b. Leaf blade to 6.5 × 10 cm, less divided, central lobe 3-lobulate, ultimate lobules ovate or triangular; bracteoles contiguous to flower or nearly so.
 - 2a. Sepals abaxially hirsute, hairs to 3.5 mm 128c. var. *hirsutum*
 - 2b. Sepals abaxially shortly strigose, hairs to 0.5 mm.
 - 3a. Sepal cornicle 1.5–2 mm 128a. var. *ceratophorum*
 - 3b. Sepal cornicle less than 1 mm .. 128b. var. *brevicorniculatum*

128a. *Delphinium ceratophorum* var. *ceratophorum*

角萼翠雀花(原变种) jiao e cui que hua (yuan bian zhong)

Leaf blade to 6.5 × 10 cm, less divided; central lobe 3-lobulate; ultimate lobules ovate or triangular. Bracteoles contiguous to flower or nearly so. Sepals abaxially shortly strigose; hairs to 0.5 mm; cornicle 1.5–2 mm. Staminode limb 2-lobed, sometimes to middle.

• Forest margins, grassy slopes; 2800–4200 m. NW Yunnan.

128b. *Delphinium ceratophorum* var. *brevicorniculatum* W. T. Wang, Acta Bot. Sin. 10: 157. 1962.

短角萼翠雀花 duan jiao e cui que hua

Delphinium ceratophorum var. *brevicorniculatum* f. *lobatum* W. T. Wang.

Leaf blade to 6.5 × 10 cm, less divided; central lobe 3-lobulate; ultimate lobules ovate or triangular. Bracteoles contiguous to flower or nearly so. Sepals

abaxially shortly strigose; hairs to 0.5 mm; cornicle less than 1 mm. Staminode limb emarginate or 2-lobed.

• Forests, grassy slopes; 4000–4200 m. NW Yunnan (Dêqên Xian).
128c. *Delphinium ceratophorum* var. *hirsutum* W. T. Wang, Acta Bot. Sin. 10: 158. 1962.

毛角萼翠雀花 *mao jiao e cui que hua*
Leaf blade to 6.5 × 10 cm, less divided; central lobe 3-lobulate; ultimate lobules ovate or triangular. Bracteoles contiguous to flower or nearly so. Sepals abaxially hirsute; hairs to 3.5 mm; cornicle 1–1.5 mm. Staminode limb emarginate.

• Slopes; ca. 3600 m. NW Yunnan (Weixi Lisu Zu Zizhixian).
128d. *Delphinium ceratophorum* var. *robustum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 615. 1979.

粗壮角萼翠雀花 *cu zhuang jiao e cui que hua*
Leaf blade to 10 × 19 cm, more strongly divided; central lobe 3-cleft beyond middle; ultimate lobules narrowly lanceolate or linear-lanceolate. Bracteoles remote from flower. Sepal cornicle 1.5–2 mm. Staminode limb 2-lobed.

• Rocky *Pinus* forests; 2800–3000 m. NW Yunnan (Zhongdian Xian).
129. *Delphinium yulungshanicum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 15. 1986.

玉龙山翠雀花 *yu long shan cui que hua*
Stem 15–17 cm tall, retrorsely puberulent, simple. Leaf blade 2–5 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe broadly rhombic, 3-cleft, distally 1- or 2-dentate, apex acute; ultimate lobules triangular; proximal leaves not withered. Raceme 5–10 cm, 2–5-flowered, puberulent; bracts linear, or proximal ones leaflike. Pedicels (2–)3–10 cm; bracteoles distal, narrowly linear, (5–)7.5–9 mm. Sepals purple-blue, abaxially puberulent; spur subulate, (1.6–) 2.2–2.9 cm, straight or nearly so, base ca. 3 mm in diam.; other sepals 1.8–2.1 cm. Petals emarginate, glabrous. Staminode limb elliptic-ovate or suborbicular, emarginate or 2-lobed, yellow barbate. Filaments pilose distally. Carpels 3; ovaries densely appressed villous. Fl. Sep–Oct.

• Alpine meadows; ca. 3700 m. NW Yunnan (Lijiang Naxi Zu Zizhixian).
130. *Delphinium hui* Chen, Bull. Fan Mem. Inst. Biol., n.s., 1: 173. 1948.

稻城翠雀花 *dao cheng cui que hua*
Stem 3–8 cm tall, densely pubescent, simple. Leaf blade 1–3 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe cuneate or cuneate-obovate, 3-lobulate or 3-dentate, distally 1- or 2-dentate, apex acute; ultimate lobules triangular; proximal leaves not withered. Raceme 2–4 cm, 1(or 2)-flowered, puberulent; bracts leaflike. Pedicels 3–4.5 cm; bracteoles distal, lanceolate, 6–9 mm. Sepals purple, abaxially pubescent; spur subulate, ca. 2.5 cm, straight or recurved, base 2.5–3 mm in diam.; other sepals ca. 1.5 cm. Petals 2-lobed, glabrous. Staminode limb obovate, 2-lobed, yellow barbate.

Filaments glabrous or pilose. Carpels 3; ovaries puberulent. Fl. Aug.

• Gravelly slopes; ca. 4500 m. SW Sichuan (Daocheng Xian).
131. *Delphinium dolichocentroides* W. T. Wang, Acta Bot. Sin. 10: 159. 1962.

拟长距翠雀花 *ni chang ju cui que hua*
Stem 30–50 cm tall, sparsely hispid proximally, glabrous distally, simple. Leaf blade 4–8 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally few lobulate, apex acute; ultimate lobules triangular or linear-lanceolate; proximal leaves not withered. Raceme 5–24 cm, 3–6-flowered, glabrous; proximal bracts 3-parted, distal ones linear. Pedicels 2–8 cm; bracteoles borne at various points on pedicel, linear, 0.6–1.4 cm. Sepals blue-purple, abaxially puberulent, shortly corniculate near apex; spur subulate, 2.7–2.8 cm, slightly recurved, base ca. 4 mm in diam.; other sepals 1.3–1.4 cm. Petals emarginate, glabrous. Staminode limb elliptic, 2-lobed or 2-parted, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent or glabrous. Fl. Aug.

• Scrub on gravelly slopes, grassy slopes, meadows; 2900–3600 m. SW Sichuan.

- 1a. Ovaries densely puberulent; pedicels bracteolate near middle or distally; staminode limb 2-lobed 131a. var. *dolichocentroides*
- 1b. Ovaries glabrous; pedicels bracteolate proximally; staminode limb 2-parted 131b. var. *leiogynum*

131a. *Delphinium dolichocentroides* var. *dolichocentroides*
拟长距翠雀花(原变种) *ni chang ju cui que hua* (yuan bian zhong)

Delphinium dolichocentroides var. *parvidolium* W. T. Wang.

Leaf blade 3-parted or nearly 3-sect. Pedicels bracteolate near middle or distally. Staminode limb 2-lobed. Ovaries densely puberulent.

• Grassy slopes, meadows; 3000–3600 m. SW Sichuan (Muli Zang Zu Zizhixian).
131b. *Delphinium dolichocentroides* var. *leiogynum* W. T. Wang, Acta Bot. Yunnan. 8: 263. 1986.

基苞翠雀花 *ji bao cui que hua*

Leaf blade 3-parted. Pedicels bracteolate proximally. Staminode limb 2-parted. Ovaries glabrous.

• Scrub on gravelly slopes; ca. 2900 m. SW Sichuan (Muli Zang Zu Zizhixian).

132. *Delphinium leiostachyum* W. T. Wang, Bull. Bot. Res., Harbin 7(2): 96. 1987.

光轴翠雀花 *guang zhou cui que hua*
Stem ca. 1.1 m tall, appressed puberulent proximally, glabrous elsewhere, distally branched. Leaf blade 7–9 cm wide, base cordate; primary lobes separate for at

least 90% of blade radius; central lobe rhombic, 2 or 3 × dissected, distally 3-sect, apex acute; ultimate lobules lanceolate-linear or linear; proximal leaves withered. Raceme ca. 15 cm, ca. 7-flowered, glabrous; bracts linear-subulate. Pedicels 1.2–5.2 cm; bracteoles distal, linear-subulate, 5–6 mm. Sepals deep blue, abaxially yellow puberulent, indistinctly corniculate near apex; spur subulate, 2.5–2.8 cm, recurved, base ca. 3 mm in diam.; other sepals 1.3–1.5 cm. Petals erose, glabrous. Staminode limb obovate-oblong, 2-lobed, yellow barbate. Filaments pilose. Carpels 3; ovaries densely pubescent. Fl. Aug.

• Scrub; ca. 3000 m. SW Sichuan (Muli Zang Zu Zizhixian).

133. *Delphinium brevisepalum* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 22. 1986.

短萼翠雀花 duan e cui que hua

Stem ca. 28 cm tall, sparsely retrorsely strigose near base, glabrous elsewhere, branched. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft or subpinnately parted, distally incised lobulate or unequally dentate, apex acute; ultimate lobules triangular to lanceolate-linear; proximal leaves not withered. Raceme ca. 6 cm, 3- or 4-flowered; rachis glabrous; proximal bracts leaflike, distal ones long elliptic or linear. Pedicels 1–5.8 cm, distally yellow glandular puberulent and retrorsely hispid; bracteoles distal, linear, 4.5–6.5 mm. Sepals blue, abaxially shortly strigose; spur subulate, 2.4–2.6 cm, straight or nearly so, base 2–2.5 mm in diam.; other sepals 0.8–1.2 cm. Petals undivided, glabrous. Staminode limb oblong, 2-cleft, white barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Oct.

• Forests. NW Yunnan (Lijiang Naxi Zu Zizhixian).

134. *Delphinium tenii* H. Lévillé, Repert. Spec. Nov. Regni Veg. 7: 98. 1909.

长距翠雀花 chang ju cui que hua

Delphinium dolichocentrum W. T. Wang; *D. obcordatilibum* W. T. Wang var. *minus* W. T. Wang.

Stem (25–)40–75 cm tall, glabrous, branched. Leaf blade 4–9 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-parted to near midvein, distally entire or 1-lobulate, apex acute; ultimate lobules triangular to lanceolate-linear; proximal leaves withered or not. Raceme (5–)8–22 cm, (2–)6–15-flowered, glabrous to subglabrous; proximal bracts leaflike, distal ones linear. Pedicels 2.5–9.5 cm; bracteoles distal, green, subulate or lanceolate-linear, 4–5(–12) mm. Sepals blue, abaxially puberulent; spur subulate, 1.8–2.5 cm, straight, base 2.5–3 mm in diam.; other sepals 0.7–1.5 cm. Petals undivided, glabrous. Staminode limb broadly obovate, 5.5–7 mm, emarginate or 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely pubescent. Fl. Jun–Oct.

• Forest margins, grassy slopes; 1900–3400 m. SW Sichuan, SE Xizang, NW Yunnan.

135. *Delphinium shuichengense* W. T. Wang, Acta Phytotax. Sin. 29: 461. 1991.

水城翠雀花 shui cheng cui que hua

Stem ca. 1 m tall, glabrous, branched. Leaf blade ca. 10 cm wide, base broadly cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally 2- or 3-cleft, apex acute; ultimate lobules triangular, lanceolate or linear; proximal leaves usually withered. Raceme 4–9 cm, 2–4-flowered, glabrous; proximal bracts leaflike, distal ones linear. Pedicels 1.6–5 cm; bracteoles borne near middle of pedicel or distally, linear, 2–2.8 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 1.5–1.6 cm, base ca. 3 mm in diam.; other sepals ca. 8 mm. Petals undivided, glabrous. Staminode limb broadly oblong, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• Scrub in valleys; ca. 1800 m. W Guizhou (Shuicheng Tequ).

136. *Delphinium yunnanense* (Franchet) Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 173. 1893.

云南翠雀花 yun nan cui que hua

Delphinium denudatum Wallich var. *yunnanense* Franchet, Bull. Soc. Bot. France 33: 378. 1886; *D. esquirolii* H. Lévillé.

Stem (40–)60–90 cm tall, retrorsely puberulent proximally, glabrous distally, branched. Leaf blade 5–10 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic or rhombic-cuneate, 3-parted, distally undivided or 1- or 2-lobulate, apex acute; ultimate lobules narrowly triangular to linear-lanceolate; proximal leaves withered. Raceme 8–38 cm, 3–12-flowered, glabrous to sparsely puberulent; proximal bracts leaflike or undivided, lanceolate-linear, distal ones subulate. Pedicels 1.2–5.5 cm; bracteoles distal, subulate, 3.5–4.5 mm. Sepals blue-purple, abaxially sparsely puberulent; spur subulate, 1.7–2.4 cm, straight or nearly so, base 3–4 mm in diam.; other sepals 1–1.7 cm, sometimes shortly corniculate. Petals undivided, glabrous. Staminode limb obovate, 2-lobed, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Oct.

• Scrub, grassy slopes; 1000–2400 m. W Guizhou, SW Sichuan, Yunnan.

137. *Delphinium pseudoyunnanense* W. T. Wang & M. J. Warnock in W. T. Wang et al., Phytologia 79: 382. 1996.

拟云南翠雀花 ni yun nan cui que hua

Stem ca. 1.5 m, glabrous, branched distally. Leaf blade 0.5–7 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe lanceolate-linear, entire, distally undivided or 1- or 2-lobulate, apex acute; ultimate lobules narrowly lanceolate or lanceolate-linear; proximal leaves withered. Raceme elongate, 25–45 cm, densely 18–30-flowered, glabrous; bracts narrowly lanceolate-linear or subulate. Pedicels 0.25–3 cm; bracteoles distal, narrowly lanceolate-linear,

5–9 mm. Sepals purple, abaxially densely appressed puberulent; spur subulate, 1.3–1.5 cm, straight, base 1.8–2.2 mm in diam.; other sepals 1–1.2 cm. Petals distally 2-lobed, ciliate. Staminode limb suboblong, ca. 6 mm, 2-cleft, yellow barbate. Filaments mostly pilose. Carpels 3; ovaries sparsely puberulent near apex. Fl. Sep.

• Roadside banks. W Yunnan (Longling Xian to Tengchong Xian).

138. *Delphinium yuanum* Chen, Bull. Fan Mem. Inst. Biol., n.s., 1: 176. 1948.

中甸翠雀花 *zhong dian cui que hua*

Stem ca. 80 cm tall, glabrous, branched distally. Leaf blade 5–9 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally few lobulate, apex acute; ultimate lobules narrowly ovate or narrowly lanceolate; proximal leaves usually not withered. Raceme 14–22 cm, 12–15-flowered, glabrous; proximal bracts 3-parted, distal ones linear to subulate. Pedicels 2.5–6 cm; bracteoles distal, lanceolate-linear, 4–6 mm. Sepals deep blue, abaxially densely puberulent; spur cylindrical-subulate, 1–1.4 cm, slightly upcurved, base 2–3 mm in diam.; other sepals 0.9–1.2 cm. Petals undivided, glabrous. Staminode limb elliptic or obovate, emarginate or 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries subglabrous. Fl. Jul.

• Alpine meadows; ca. 3000 m. NW Yunnan (Zhongdian Xian).

139. *Delphinium coleopodum* Handel-Mazzetti, Symb. Sin. 7: 275. 1931.

鞘柄翠雀花 *qiao bing cui que hua*

Stem 20–35 cm tall, retrorsely puberulent, sometimes sparsely hispid proximally, glabrescent distally, simple or branched. Petiole base at least 8 mm wide; leaf blade 6–10 cm wide, base deeply cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally 1- or 2-lobulate, apex acute; ultimate lobules triangular or narrowly lanceolate; proximal leaves usually not withered. Raceme 10–20 cm, 3–7-flowered; rachis subglabrous; bracts lanceolate to filiform. Pedicels 1.5–4 cm, distally sparsely puberulent; bracteoles distal, lanceolate to filiform, 4.5–9 mm. Sepals blue, abaxially puberulent; spur subulate, 2–2.5 cm, straight or slightly recurved, base 3–4 mm in diam.; other sepals 2–2.6 cm. Petals undivided, glabrous. Staminode limb obovate, undivided or emarginate, yellow (rarely white) barbate. Filaments pilose. Carpels 3; ovaries pubescent. Fl. Sep–Oct.

• Grassy slopes; 3000–3700 m. NW Yunnan (Lijiang Naxi Zu Zizhixian).

140. *Delphinium kantzeense* W. T. Wang, Acta Bot. Sin. 10: 161. 1962.

甘孜翠雀花 *gan zi cui que hua*

Stem ca. 1 m tall, sparsely hispid, branched distally. Leaf blade ca. 7.5 cm wide, base cordate; primary lobes separate for at least 75% of blade radius; central lobe rhombic, 3-cleft, distally 1- or 2-lobulate, apex acute;

ultimate lobules narrowly ovate or narrowly lanceolate; proximal leaves usually withered. Raceme ca. 15 cm, ca. 14-flowered, retrorsely puberulent and yellow glandular puberulent; proximal bracts 3-parted, distal ones linear. Pedicels 2–5 cm; bracteoles distal, linear, 4–9 mm.

Sepals grayish blue, abaxially puberulent; spur subulate, 1.6–1.8 cm, recurved, base ca. 2.5 mm in diam.; other sepals ca. 1 cm. Petals undivided, glabrous. Staminode limb ovate, undivided or emarginate, yellowish barbate. Filaments glabrous. Carpels 3, glabrous. Fl. Jul.

• NW Sichuan (Garzê Xian).

141. *Delphinium pycnocentrum* Franchet, Bull. Soc. Bot. France 33: 379. 1886.

密距翠雀花 *mi ju cui que hua*

Delphinium lankongense Franchet; *D. pycnocentrum* var. *lankongense* (Franchet) Huth.

Stem 18–70 cm tall, glabrous or retrorsely puberulent and hispid proximally, glabrous distally, simple or 1-branched. Leaf blade 4–9 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 2 or 3 × dissected, distally 1- or 2-lobulate, apex acute; ultimate lobules lanceolate to lanceolate-linear; proximal leaves usually not withered. Raceme 5–12 cm, 3–10-flowered, sparsely puberulent throughout or only apically, or glabrous; bracts linear or subulate. Pedicels 1.2–2.5 cm; bracteoles borne near middle of pedicel or distally, lanceolate-linear or subulate, 3–4 mm. Sepals blue, abaxially sparsely puberulent; spur subulate, 1.8–2 cm, slightly recurved or nearly straight, base 1.5–2 mm in diam.; other sepals 1.1–1.2 cm. Petals emarginate, glabrous. Staminode limb obovate-oblong, emarginate, yellow barbate. Filaments glabrous. Carpels 3; ovaries sparsely pubescent. Fl. Sep–Oct.

• Alpine meadows; ca. 3000 m. NW Yunnan (Dali Xian, Eryuan Xian).

142. *Delphinium medogense* W. T. Wang, Bull. Bot. Res., Harbin 6(1): 20. 1986.

墨脱翠雀花 *mo tuo cui que hua*

Stem 23–45 cm tall, retrorsely pubescent, simple or 1-branched. Leaf blade 8–11 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally incised lobulate, apex acute; ultimate lobules triangular; proximal leaves not withered. Raceme 8–15 cm, 7–10-flowered, densely appressed puberulent; proximal bracts leaflike, distal ones linear. Pedicels 1–5.5 cm; bracteoles distal, linear-lanceolate or linear, 7–10 mm. Sepals purple, abaxially appressed puberulent; spur cylindrical-subulate, 1.2–1.6 cm, straight, base 1.2–1.6 mm in diam.; other sepals 1.6–2.1 cm. Petals 2-lobed, adaxially white barbate near apex. Staminode limb obovate, 2-lobed, yellowish barbate. Filaments sparsely puberulent. Carpels 3; ovaries densely pubescent. Fl. Aug–Sep.

• Scrub, alpine meadows; 3500–3700 m. SE Xizang (Mêdog Xian).

143. *Delphinium thibeticum* Finet & Gagnepain, Bull. Soc. Bot. France 5: 498. 1904.

澜沧翠雀花 lan cang cui que hua

Stem 28–70(–85) cm tall, retrorsely puberulent, usually simple. Leaf blade 8–15 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally 1–3 × dissected or lobed, apex acute; ultimate lobules triangular to lanceolate-linear; proximal leaves not withered. Raceme 10–30 cm, 5–17-flowered; rachis densely retrorsely or spreading puberulent, often mixed with a few yellow, glandular hairs; bracts lanceolate. Pedicels 2–6 cm; bracteoles distal, blue, lanceolate, 5–11 mm. Sepals blue-purple, abaxially puberulent; spur subulate, 1.9–2.7 cm, straight or slightly to strongly recurved, base 2.5–3.5 mm in diam.; other sepals 1–1.6 cm. Petals undivided, glabrous. Staminode limb ovate, 4–5 mm, 2-lobed, yellow (rarely to white) barbate. Filaments pilose or glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Aug–Sep.

• Open woods, grassy slopes, rocky valleys; 2800–3800 m. NW and SW Sichuan, NW Yunnan, E Xizang.

- 1a. Leaf blade central lobe segments distally 1 or 2 × dissected, ultimate lobules few, narrowly ovate to lanceolate-linear; raceme rachis retrorsely puberulent 143a. var. *thibeticum*
- 1b. Leaf blade central lobe segments distally 2 or 3 × lobed, ultimate lobules many, triangular to lanceolate; raceme rachis spreading puberulent 143b. var. *laceratilobum*

143a. *Delphinium thibeticum* var. *thibeticum*

澜沧翠雀花(原变种) lan cang cui que hua (yuan bian zhong)

Delphinium pycnocentroides W. T. Wang; *D. pycnocentroides* var. *latisectum* W. T. Wang; *D. thibeticum* var. *schizophyllum* Handel-Mazzetti; *D. thibeticum* var. *subintegrum* Finet & Gagnepain.

Leaf blade central lobe segments distally 1 or 2 × dissected; ultimate lobules few, narrowly ovate to lanceolate-linear. Raceme rachis retrorsely puberulent.

• Open woods, grassy slopes; 2800–3800 m. SW Sichuan, NW Yunnan, E Xizang.

143b. *Delphinium thibeticum* var. *laceratilobum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 615. 1979.

锐裂翠雀花 rui lie cui que hua

Leaf blade central lobe segments distally 2 or 3 × lobed; ultimate lobules many, triangular to lanceolate. Raceme rachis spreading puberulent.

• Rocky valleys; ca. 3700 m. NW Sichuan (Dêgê Xian), E Xizang (Jomda Xian).

144. *Delphinium incisolobulatum* W. T. Wang, Acta Phytotax. Sin. 25: 35. 1987.

缺刻翠雀花 que ke cui que hua

Stem ca. 70 cm tall, puberulent, branched. Leaf blade 4–10 cm wide, base cordate; primary lobes separate for at least 60% of blade radius; central lobe rhombic or broadly so, 3-parted, distally incised lobulate, apex acute; ultimate lobules lanceolate-linear; proximal leaves not withered. Raceme 9–37 cm, 5–12-flowered, puberulent and yellow glandular puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 1.2–6.2 cm; bracteoles distal, lanceolate, 4–6 mm. Sepals purple-blue, abaxially puberulent and yellow glandular puberulent; spur cylindrical-subulate, 1.6–1.8 cm, base 3–3.5 mm in diam.; other sepals 1.1–1.2 cm. Petals 2-lobulate, glabrous. Staminode limb obtuse, 2-cleft, sparsely white barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Aug.

• Scrub at *Picea* forest margins. E Xizang (Qamdo Xian).

145. *Delphinium pseudothibeticum* W. T. Wang & M. J. Warnock, Guihaia 17: 8. 1997.

拟澜沧翠雀花 ni lan cang cui que hua

Stem 13–30 cm tall, spreading hispid, simple. Leaf blade 2–3 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally few dentate, apex acute; ultimate lobules narrowly ovate or oblong-ovate; proximal leaves not withered. Raceme terminal, 2.5–13 cm, (1–)3–7-flowered, hispid; bracts undivided, linear, or 3-sect. Pedicels 1–3 cm; bracteoles distal, linear, 7–8 mm. Sepals purple-blue, abaxially strigose; spur cylindrical-subulate, 2–2.4 cm, base 3–5 mm in diam.; other sepals 1.6–1.7 cm. Petals undivided, glabrous. Staminode limb oblong-obovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3, ovaries densely pubescent. Fl. Jun.

• Gravelly slopes; ca. 4600 m. NW Yunnan (Dêqên Xian).

146. *Delphinium taipaicum* W. T. Wang, Acta Bot. Sin. 10: 164. 1962.

太白翠雀花 tai bai cui que hua

Stem 22–30 cm tall, retrorsely puberulent or glabrescent, simple. Leaf blade 4–8 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic-cuneate, 3-parted, distally undivided or few lobulate, apex acute; ultimate lobules narrowly triangular to lanceolate-linear; proximal leaves not withered. Raceme 4–10 cm, 2–4-flowered, retrorsely puberulent; proximal bracts 3-sect, distal ones oblong-ovate or lanceolate. Pedicels 1.5–4 cm; bracteoles distal, oblong-ovate, 0.9–1.2 cm. Sepals purple, abaxially pubescent; spur cylindrical-subulate, 1.4–2 cm, base ca. 2.6 mm in diam.; other sepals 1.6–1.7 cm. Petals emarginate, glabrous. Staminode limb obovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely pubescent. Fl. Sep.

• Grassy slopes; 3600–3900 m. S Shaanxi (Taibai Shan).

147. *Delphinium pomeense* W. T. Wang, Acta Phytotax. Sin. 12: 158. 1974.

波密翠雀花 *bo mi cui que hua*

Stem 10–25 cm tall, retrorsely puberulent, simple. Leaf blade 2–9 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules narrowly triangular to lanceolate-linear; proximal leaves not withered.

Corymb 3–10 cm, 2–5-flowered; most proximal bract usually leaflike, shortly petiolate, others lanceolate or linear, 5.5–11.5 mm. Pedicels 0.8–8.5 cm, puberulent; bracteoles distal, lanceolate or linear, 5.5–11.5 mm. Sepals blue-purple, abaxially puberulent; spur subulate or cylindric-subulate, 1.7–2.1 cm, straight or slightly recurved, base 2.2–3 mm in diam.; other sepals 1.5–1.6 cm. Petals undivided, glabrous. Staminode limb obovate, 2-cleft, yellow barbate. Filaments glabrous or pilose. Carpels 3, glabrous. Fl. Aug.

• *Abies* forests; 3800–4000 m. E Xizang (Bomi Xian).

148. *Delphinium chayense* W. T. Wang, Bull. Bot. Res., Harbin 6(1) 16. 1986.

察隅翠雀花 *cha yu cui que hua*

Stem 8–16 cm, retrorsely puberulent. Leaf blade 3–5 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe cuneate, 3-lobulate, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules narrowly ovate; proximal leaves not withered. Raceme 7–12.5 cm, 3- or 4-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones linear. Pedicels 2.3–8.2 cm; bracteoles distal, linear-lanceolate, 7–9 mm. Sepals blue, abaxially appressed puberulent; spur subulate, 2–2.2 cm, slightly recurved, base 3–3.5 mm in diam.; other sepals 1.8–2 cm. Petals 2-lobed, glabrous. Staminode limb narrowly obovate, 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely appressed pubescent. Fl. Sep.

• *Abies* forest margins; ca. 4000 m. SE Xizang (Zayü Xian).

149. *Delphinium sinoscaposum* W. T. Wang, Acta Bot. Sin. 10: 165. 1962.

花葶翠雀花 *hua ting cui que hua*

Delphinium scaposum W. T. Wang, Acta Phytotax. Sin. 6: 364. 1957, not Greene (1881).

Stem ca. 30 cm. Leaf blade 2–6 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic-obovate, 3-parted, distally undivided or 1- or 2-lobulate, apex acute; ultimate lobules narrowly lanceolate or linear; proximal leaves not withered. Raceme 6–11 cm, puberulent, 1 (or 2)-flowered; bracts 3-sect or undivided and lanceolate. Pedicels 3–6 cm, densely puberulent; bracteoles distal, lanceolate, ca. 1.1 cm. Sepals purple, abaxially sparsely puberulent; spur subulate, 2.2–2.4 cm, base 3–4 mm in diam.; other sepals 1.6–1.8 cm. Petals emarginate, ciliate. Staminode limb ovate, 2-lobed, sparsely white

barbate. Filaments glabrous. Carpels 3; ovaries sparsely puberulent. Fl. Aug.

• Alpine meadows; ca. 3500 m. W Sichuan (Baoping Xian).

150. *Delphinium nortonii* Dunn, Bull. Misc. Inform. Kew 1927: 247. 1927.

细茎翠雀花 *xi jing cui que hua*

Delphinium caeruleum Jacquemont var. *tenuicaule* Brühl ex Huth; *D. grandiflorum* Linnaeus var. *tenuicaule* (Brühl ex Huth) Brühl.

Stem 12–22 cm tall, retrorsely puberulent, simple or 1-branched. Leaf blade 16–30 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe linear and undivided, or rhombic and 3-parted nearly to midvein, distally undivided or 1- or 2-lobulate, apex acute; ultimate lobules linear-lanceolate or linear; proximal leaves usually withered. Flower solitary, terminal; pedicel 3–7 cm; bracteoles borne proximally or near middle of pedicel, linear, 0.9–2.5 cm. Sepals blue, abaxially puberulent; spur cylindric-subulate, 1.7–1.9 cm, base 3–4 mm in diam.; other sepals 1.7–1.8 cm. Petals emarginate, glabrous. Staminode limb elliptic-obovate, 2-cleft, yellowish barbate. Filaments pilose. Carpels 3; ovaries densely villous. Fl. Jul.

Alpine meadows; 4500–5000 m. S Xizang [Nepal, Sikkim].

151. *Delphinium souliei* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 172. 1873.

川甘翠雀花 *chuan gan cui que hua*

Delphinium paludicola Ulbrich.

Stem 9–60 cm tall, sparsely pubescent, often glabrescent proximally, simple. Leaf blade 2–9 cm wide, base subtruncate or broadly cuneate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 1–3 × dissected, distally entire, apex acute; ultimate lobules linear, margin often revolute; proximal leaves withered or not. Raceme 6–32 cm, 2–15-flowered, puberulent; proximal bracts leaflike, distal ones lanceolate. Pedicels 3–14 cm; bracteoles distal, lanceolate or lanceolate-linear, 5–12 mm. Sepals blue-purple, abaxially sparsely puberulent; spur cylindric, 2.1–2.7 (–3) cm, base 2.8–4.5 mm in diam.; other sepals 1.4–1.9 cm. Petals emarginate, glabrous. Staminode limb ovate, 2-lobed, sparsely barbate. Filaments pilose. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

• Grassy slopes; 3500–4400 m. SW Gansu, W Sichuan.

152. *Delphinium likiangense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 180. 1893.

丽江翠雀花 *li jiang cui que hua*

Delphinium oliganthum Franchet, Pl. Delavay. 29. 1889, not Boissier (1867).

Stem 10–25 (–50) cm tall, retrorsely puberulent, simple. Leaf blade 3–6 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-cleft, distally lobulate, apex acute; ultimate lobules triangular, lanceolate, or linear; proximal leaves usually withered. Raceme 3–17 cm, 1–4-flowered, densely appressed puberulent; proximal bracts leaflike, distal ones oblong or oblong-linear.

Pedicels 2.6–10 cm; bracteoles distal, narrowly ovate or oblong-ovate, 0.9–2 cm. Sepals blue, abaxially puberulent; spur conic-cylindric, 1.1–1.8 cm, base 3.5–5 mm in diam.; other sepals 2.2–3 cm. Petals undivided, glabrous. Staminode limb suboblong, 2-lobed or 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Aug–Sep.

•Grassy or gravelly slopes; 3400–4500 m. NW Yunnan (Lijiang Naxi Zu Zizhixian, Zhongdian Xian).

153. *Delphinium sinopentagynum* W. T. Wang, Acta Phytotax. Sin. 12: 159. 1974.

五果翠雀花 wu guo cui que hua

Stem ca. 35 cm tall, retrorsely puberulent, simple or branched. Leaf blade 4–7 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 1 or 2 × dissected, distally lobulate, apex acute; ultimate lobules lanceolate-linear or linear; proximal leaves usually not withered. Raceme ca. 11 cm, ca. 8-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones linear. Pedicels 2–4.2 cm; bracteoles distal, linear-lanceolate, 5–6.5 mm. Sepals blue, abaxially puberulent; spur cylindrical-subulate, ca. 1.2 cm, base ca. 2.5 mm in diam.; other sepals ca. 9 mm. Petals undivided, glabrous. Staminode limb suborbicular, emarginate, yellow barbate. Filaments pilose. Carpels 5, glabrous. Fl. Aug.

•Grassy slopes; ca. 2800 m. N Sichuan (Zuigê Xian).

154. *Delphinium pseudomosoyense* W. T. Wang, Acta Bot. Yunnan. 15: 350. 1993.

条裂翠雀花 tiao lie cui que hua

Stem 40–60 cm tall, retrorsely appressed puberulent throughout or only proximally, branched. Leaf blade 7–10 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, subpinnately dissected, distally lobulate, apex acute; ultimate lobules linear; proximal leaves withered. Raceme 14–17 cm, 7- or 8-flowered, yellow glandular puberulent, sometimes also white puberulent; most proximal bract 3-sect, others undivided, linear. Pedicels 2.8–4.5 cm; bracteoles distal, linear, 6–8 mm. Sepals purple-blue, abaxially puberulent, very shortly corniculate distally; upper sepal oblong or elliptic-obovate, 0.7–1.1 cm wide, spur subulate, 2–2.4 cm, slightly recurved or nearly straight, base 2–3 mm in diam.; other sepals 1.8–2.1 cm. Petals emarginate, glabrous. Staminode limb oblong or oblong-obovate, 2-lobulate, yellow barbate. Filaments pilose at margin. Carpels 5; ovaries densely pubescent. Fl. Jul–Sep.

•Scrub, meadows. W Sichuan.

1a. Stem appressed puberulent throughout; raceme yellow glandular puberulent and white puberulent; upper sepal oblong, ca. 0.7 cm wide, spur ca. 2 cm

..... 154a. var. *pseudomosoyense*

1b. Stem proximally puberulent, elsewhere glabrous; raceme yellow glandular puberulent; upper sepal elliptic-obovate,

ca. 1.1 cm wide, spur 2.1–2.4 cm

..... 154b. var. *subglabrum*

154a. *Delphinium pseudomosoyense* var. *pseudomosoyense*

条裂翠雀花(原变种) tiao lie cui que hua (yuan bian zhong)

Stem appressed puberulent throughout. Raceme yellow glandular puberulent and white puberulent.

Upper sepal oblong, ca. 0.7 cm wide, spur ca. 2 cm.

•Scrub. W Sichuan (Yajiang Xian).

154b. *Delphinium pseudomosoyense* var. *subglabrum* W. T. Wang, Acta Bot. Yunnan. 15: 351. 1993.

疏毛条裂翠雀花 shu mao tiao lie cui que hua

Stem proximally puberulent, elsewhere glabrous.

Raceme yellow glandular puberulent. Upper sepal elliptic-obovate, ca. 1.1 cm wide, spur 2.1–2.4 cm.

•Meadows. W Sichuan (Yajiang Xian).

155. *Delphinium majus* (W. T. Wang) W. T. Wang, Acta Phytotax. Sin., Addit. 1: 102. 1965.

金沙翠雀花 jin sha cui que hua

Delphinium grandiflorum Linnaeus var. *majus* W. T. Wang, Acta Bot. Sin. 10: 273. 1962.

Stem 26–65 cm tall, sparsely retrorsely puberulent, branched. Leaf blade 6–11 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally 1- or 2-lobulate, apex acute; ultimate lobules triangular to narrowly lanceolate; proximal leaves withered or not. Raceme 7–12 cm, 2–7-flowered, densely retrorsely puberulent; bracts 3-sect or undivided and linear. Pedicels 3–5.5 cm; bracteoles borne near middle of pedicel, narrowly linear or subulate, 2.5–6 mm. Sepals purple-blue, abaxially puberulent; spur subulate, 1.6–2.2 cm, base 2–2.8 mm in diam.; other sepals 1.2–1.8 cm. Petals undivided, glabrous. Staminode limb obovate, emarginate, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Aug–Sep.

•Scrub in valleys, grassy places; 1600–1800 m. SW Sichuan, NW Yunnan (Lijiang Naxi Zu Zizhixian, Zhongdian Xian).

156. *Delphinium obcordatilimum* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 616. 1979.

倒心形翠雀花 dao xin xing cui que hua

Stem ca. 70 cm tall, glabrous or subglabrous, branched.

Leaf blade 5–9 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 1–3-lobulate, distally 1- or 2-lobulate, apex acute; ultimate lobules triangular to linear-lanceolate; proximal leaves not withered. Raceme to 22 cm, ca. 8-flowered; rachis glabrous; bracts linear. Pedicels 2.8–8.5 cm, puberulent and sparsely yellow glandular puberulent near apex; bracteoles distal, subulate, 4–7.5 mm. Sepals blue, abaxially sparsely puberulent; spur cylindrical-subulate, 2–2.5 cm, base 2.5–3 mm in diam.; other sepals 1.5–2 cm. Petals undivided, glabrous. Staminode limb obcordate or obovate, 2-lobed, yellow barbate. Filaments pilose. Carpels 3; ovaries puberulent. Fl. Jul.

•Alpine meadows; ca. 3800 m. E Xizang (Riwogê Xian).

157. *Delphinium weiningense* W. T. Wang, Acta Phytotax. Sin. 29: 459. 1991.

威宁翠雀花 *wei ning cui que hua*

Stem 45–90 cm tall, appressed puberulent, branched. Leaf blade 2–7 cm wide, base broadly cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally undivided or 2- or 3-parted, apex acute; ultimate lobules lanceolate or linear; proximal leaves usually withered. Raceme 5–20 cm, 3–5-flowered, densely appressed puberulent; proximal bracts leaflike, distal ones narrowly oblong or oblong-linear. Pedicels 5.5–10 cm; bracteoles borne near middle of pedicel, narrowly oblong, 1.1–1.8 cm. Sepals blue, abaxially puberulent; spur subulate, 1.6–1.9 cm, base ca. 3.5 mm in diam.; other sepals 1.4–1.5 cm. Petals undivided, glabrous. Staminode limb narrowly obovate, emarginate, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries densely puberulent. Fl. Aug.

• Slopes; ca. 2100 m. W Guizhou (Weining Yi-Hui-Miao Zu Zizhixian).

158. *Delphinium nangchienense* W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 616. 1979.

囊谦翠雀花 *nang qian cui que hua*

Stem ca. 55 cm tall, retrorsely puberulent, simple. Leaf blade 4–8 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted nearly to midvein, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules narrowly triangular to linear; proximal leaves withered. Raceme 12–15.5 cm, 5–9-flowered, densely retrorsely puberulent and mixed with a few long hairs; proximal bracts leaflike, distal ones linear. Pedicels 3.3–4.4 cm; bracteoles distal, linear, 6–7 mm. Sepals blue, abaxially puberulent and villous; spur subulate-cylindric, 2.4–2.8 cm, base ca. 3 mm in diam.; other sepals ca. 1.4 cm. Petals undivided, ciliate. Staminode limb suboblong, apically erose, yellow barbate. Filaments pilose. Carpels 3; ovaries densely puberulent. Fl. Aug. $2n = 16^*$.

• Grassy places near forest margins; ca. 4200 m. S Qinghai (Nangqên Xian).

159. *Delphinium grandiflorum* Linnaeus, Sp. Pl. 1: 531. 1753.

翠雀 *cui que*

Stem (14–)30–65 cm tall, branched. Leaf blade 4–12 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 1- or 3-cleft nearly to midvein, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules linear-lanceolate, linear, or narrowly linear; proximal leaves withered or not. Raceme 5–20 cm, 3–10-flowered, appressed puberulent, rarely mixed with yellow, glandular hairs; proximal bracts leaflike, distal ones linear. Pedicels 1.5–4(–7) cm; bracteoles borne near middle of pedicel or distally, linear or subulate, 3.5–7 mm. Sepals purple-blue or blue, abaxially puberulent;

spur subulate or cylindric-subulate, 1.5–2(–2.2) cm, straight or slightly recurved, base 2.5–3.5 mm in diam.; other sepals 1–1.9 cm. Petals undivided, glabrous. Staminode limb suborbicular or broadly obovate, entire, emarginate, or 2-lobulate, rarely 2-lobed, yellow barbate. Filaments glabrous or rarely pilose. Carpels 3; ovaries densely puberulent or glabrous. Fl. May–Nov. Sparse forests, scrub, grassy slopes, grassy places in valleys, meadows, dry slopes, weedy places, fields; 100–3500 m. N Anhui, Beijing, C and E Gansu, Hebei, Heilongjiang, S and W Henan, NW Jiangsu, Jilin, Liaoning, Nei Mongol, S Ningxia, E Qinghai, Shaanxi, E Shandong, Shanxi, NW Sichuan, C and NW Yunnan [Mongolia, Russia (Siberia)].

- 1a. Stem appressed puberulent, mixed with some retrorse, longer hairs . 159e. var. *mosoynense*
- 1b. Stem appressed puberulent, sometimes mixed with short, glandular hairs.
 - 2a. Carpels glabrous.
 - 3a. Raceme appressed puberulent, without glandular hairs 159c. var. *deinocarpum*
 - 3b. Raceme appressed puberulent and yellow glandular puberulent 159d. var. *leiocarpum*
 - 2b. Carpels densely puberulent.
 - 4a. Inflorescence corymbose 159f. var. *fangshanense*
 - 4b. Inflorescence racemose.
 - 5a. Raceme and stem appressed puberulent, without glandular hairs 159a. var. *grandiflorum*
 - 5b. Raceme and often stem appressed puberulent and glandular puberulent 159b. var. *gilgianum*

159a. *Delphinium grandiflorum* var. ***grandiflorum***

翠雀(原变种) *cui que* (yuan bian zhong)

Chienia honanensis W. T. Wang; *Delphinium bonatii* H. Léveillé; *D. chinense* Fischer; *D. grandiflorum* var. *chinense* (Fischer) de Candolle; *D. grandiflorum* var. *tigrinum* Kitagawa.

Stem and raceme appressed puberulent, without glandular hairs. Inflorescence racemose. Staminode limb entire or emarginate. Carpels densely puberulent. Fl. May–Oct.

Sparse forests, grassy slopes; 500–2800 m. Hebei, Heilongjiang, W Henan, Jilin, Liaoning, Nei Mongol, E Qinghai, N Shaanxi, Shanxi, NW Sichuan [Mongolia, Russia (Siberia)].

159b. *Delphinium grandiflorum* var. ***gilgianum*** (Pilger ex Gilg) Finet & Gagnepain, Bull. Soc. Bot. France 51: 483. 1904.

腺毛翠雀 *xian mao cui que*

Delphinium gilgianum Pilger ex Gilg, Bot. Jahrb. Syst. 34(Beibl. 75): 33. 1904; *D. chefoense* Franchet; *D. grandiflorum* var. *glandulosum* W. T. Wang.

Stem (often) and raceme appressed puberulent and glandular puberulent. Inflorescence racemose.

Staminode limb emarginate or 2-lobulate. Carpels densely puberulent. Fl. May–Sep.

• Scrub, grassy slopes; 100–1800 m. N Anhui, C Gansu, SW Hebei, S Henan, NW Jiangsu, E Qinghai, Shaanxi, E Shandong, S Shanxi.

159c. *Delphinium grandiflorum* var. *deinocarpum* W. T. Wang, Acta Phytotax. Sin. 32: 469. 1994.

安泽翠雀 an ze cui que

Stem and raceme appressed puberulent, without glandular hairs. Inflorescence racemose. Staminode limb emarginate. Carpels glabrous. Fl. Jun.

• S Shanxi (Anze Xian).

159d. *Delphinium grandiflorum* var. *leiocarpum* W. T. Wang, Acta Bot. Sin. 10: 274. 1962.

光果翠雀 guang guo cui que

Stem appressed puberulent, sometimes mixed with short, glandular hairs. Raceme appressed puberulent and yellow glandular puberulent. Staminode limb emarginate or 2-lobulate. Carpels glabrous. Fl. May–Oct.

• Dry slopes, weedy places, fields; 700–1800 m. E Gansu, S Ningxia, N Shaanxi, N Shanxi.

159e. *Delphinium grandiflorum* var. *mosoynense* (Franchet) Huth, Bot. Jahrb. Syst. 20: 461. 1895.

裂瓣翠雀 lie ban cui que

Delphinium mosoynense Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 168. 1893; *D. grandiflorum* var. *robustum* W. T. Wang; *D. grandiflorum* var. *villosum* W. T. Wang.

Stem appressed puberulent, mixed with some retrorse, longer hairs. Inflorescence racemose; raceme appressed puberulent, rarely mixed with yellow, glandular hairs. Staminode limb entire, emarginate, or 2-lobed. Carpels puberulent. Fl. Jul–Nov.

• Scrub, grassy slopes; 1900–3500 m. C and NW Yunnan.

159f. *Delphinium grandiflorum* var. *fangshanense* (W. T. Wang) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 447. 1979.

房山翠雀 fang shan cui que

Delphinium fangshanense W. T. Wang, Acta Bot. Sin. 10: 269. 1962.

Stem and corymb appressed puberulent, without glandular hairs. Inflorescence corymbose. Staminode limb emarginate. Carpels densely puberulent. Fl. Jul–Sep.

• Grassy places in valleys; 400–600 m. Beijing (Fangshan Xian).

160. *Delphinium kamaonense* Huth, Bull. Herb. Boissier 1: 333. 1893.

光序翠雀花 guang xu cui que hua

Stem 25–45 cm tall, puberulent proximally, glabrous or subglabrous distally, branched. Leaf blade 3–10 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted nearly to midvein, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules narrowly ovate, lanceolate, or linear; proximal leaves usually withered. Raceme 8–29 cm, 3–14-flowered; rachis sparsely

puberulent; bracts all linear, or most proximal one 3-sect. Pedicels 1.5–6.5(–10) cm, densely pubescent distally, glabrous or sparsely puberulent elsewhere; bracteoles borne near middle of pedicel or distally, narrowly linear or subulate, 3–6.5 mm. Sepals deep or light blue, rarely white, abaxially appressed puberulent; spur subulate, 1.2–2.5 cm, usually slightly upcurved or downcurved, base 2–3 mm in diam.; other sepals 1.2–2 cm. Petals undivided, glabrous. Staminode limb broadly obovate, distally emarginate, sometimes entire, rarely 2-lobed, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries densely pubescent. Fl. Jun–Aug.

Grassy slopes, meadows; 2500–4200 m. SW Gansu, S Qinghai, W Sichuan, E and S Xizang [NW India, Nepal].

1a. Spur slightly shorter than sepals, 1.2–1.6 cm, usually slightly upcurved 160a. var. *kamaonense*

1b. Spur slightly longer than sepals, 1.8–2.5

cm, usually slightly downcurved 160b. var. *glabrescens*

160a. *Delphinium kamaonense* var. *kamaonense*

光序翠雀花(原变种) guang xu cui que hua (yuan bian zhong)

Delphinium grandiflorum Linnaeus var. *kamaonense* (Huth) Brühl.

Sepals deep blue; spur slightly shorter than sepals, 1.2–1.6 cm, usually slightly upcurved. Staminode limb distally emarginate.

Grassy slopes; 2800–4100 m. S Xizang [NW India, Nepal].

160b. *Delphinium kamaonense* var. *glabrescens* (W. T. Wang) W. T. Wang, Fl. Reipubl. Popularis Sin. 27: 449. 1979.

展毛翠雀花 zhan mao cui que hua

Delphinium pseudograndiflorum W. T. Wang var. *glabrescens* W. T. Wang, Acta Bot. Sin. 10: 274. 1962; *D. pseudograndiflorum* var. *lobatum* W. T. Wang; *D. sordidecaerulescens* Ulbrich; *D. tatsienense* Franchet f. *sordidecaerulescens* (Ulbrich) Handel-Mazzetti.

Sepals deep or light blue, rarely white; spur slightly longer than sepals, 1.8–2.5 cm, usually slightly downcurved. Staminode limb distally entire or emarginate, rarely 2-lobed. $2n = 16^*$.

• Meadows; 2500–4200 m. SW Gansu, S Qinghai, W Sichuan, E Xizang.

161. *Delphinium beesianum* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 8: 130. 1913.

宽距翠雀花 kuan ju cui que hua

Stem 8–28 cm tall, retrorsely puberulent, branched or simple. Leaf blade 2–8 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe narrowly rhombic and 3-cleft or oblong-linear and undivided, distally 1- or 2-lobulate or undivided, apex acute; ultimate lobules lanceolate, narrowly oblong, or linear, 2–7 mm wide; proximal leaves usually withered or not. Corymb 3–6 cm, 1–5-flowered, retrorsely puberulent; bracts leaflike, shortly petiolate. Pedicels 3–6 cm; bracteoles borne near middle of pedicel, lanceolate or lanceolate-linear, 5–12 mm. Sepals blue or blue-purple, abaxially puberulent; spur subulate-cylindric, 2.4–2.8(–3.2) cm, base 3–4.5

mm in diam.; other sepals 1.7–2.9 cm. Petals undivided, glabrous. Staminode limb narrowly obovate, erose, emarginate, or 2-lobed, yellow barbate. Filaments pilose. Carpels 5; ovaries densely pubescent. Fl. Sep–Nov.

• Grassy or gravelly slopes, alpine meadows; 3500–4800 m. W Sichuan, E Xizang, NW Yunnan.

- 1a. Leaf blade central lobe oblong-linear, undivided, distal lateral lobes usually undivided and similar to central lobe, proximal lateral lobes unequally 2-parted, tertiary lobes undivided 161c. var. *radiatifolium*
- 1b. Leaf blade central lobe narrowly rhombic, 3-cleft, lateral lobes unequally 2-cleft or 2-parted, tertiary lobes undivided or 1- or 2-lobulate.
 - 2a. Leaf blade ultimate lobules mostly linear, sometimes lanceolate, 2–3.5 mm wide 161a. var. *beesianum*
 - 2b. Leaf blade ultimate lobules lanceolate or narrowly oblong, 3–7 mm wide 161b. var. *latisectum*

161a. *Delphinium beesianum* var. *beesianum*

宽距翠雀花(原变种) kuan ju cui que hua (yuan bian zhong)

Delphinium beesianum f. *calcicola* (W. W. Smith) W. T. Wang; *D. calcicola* W. W. Smith.

Leaf blade central lobe narrowly rhombic, 3-cleft; lateral lobes unequally 2-cleft or 2-parted; tertiary lobes undivided or 1- or 2-lobulate; ultimate lobules mostly linear, sometimes lanceolate, 2–3.5 mm wide.

• Grassy or gravelly slopes; 3500–4600 m. SW Sichuan (Daocheng Xian), NW Yunnan.

161b. *Delphinium beesianum* var. *latisectum* W. T. Wang, Acta Bot. Sin. 10: 263. 1962.

粗裂宽距翠雀花 cu lie kuan ju cui que hua

Leaf blade central lobe narrowly rhombic, 3-cleft; lateral lobes unequally 2-cleft or 2-parted; tertiary lobes undivided or 1- or 2-lobulate; ultimate lobules lanceolate or narrowly oblong, 3–7 mm wide.

• Slopes; 3500–4700 m. E Xizang (Qamdo Xian), NW Yunnan (Gongshan Drung-Nu Zu Zizhixian).

161c. *Delphinium beesianum* var. *radiatifolium* (Handel-Mazzetti) W. T. Wang, Acta Bot. Sin. 10: 265. 1962.

辐裂翠雀花 fu lie cui que hua

Delphinium beesianum var. *malacotrichum* Handel-Mazzetti f. *radiatifolium* Handel-Mazzetti, Acta Horti Gothob. 13: 60. 1939; *D. beesianum* var. *radiatifolium* f. *ramosum* W. T. Wang.

Leaf blade central lobe oblong-linear, undivided; distal lateral lobes usually undivided and similar to central lobe; proximal lateral lobes unequally 2-parted; tertiary lobes undivided, narrowly lanceolate or linear.

• Alpine meadows; 4200–4800 m. W Sichuan, E Xizang (Zhag'yab Xian).

162. *Delphinium caeruleum* Jacquemont, Voy. Inde 4(Bot.): 7. 1835–1844.

蓝翠雀花 lan cui que hua

Stem 5–80 cm tall, puberulent or pilose, sometimes also with glandular hairs, usually branched. Leaf blade 0.4–12 cm wide, adaxially densely puberulent or velutinous, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic or obovate-rhombic, 1–3 × dissected, distally 1- or 2-lobulate or undivided, apex rounded to acute; ultimate lobules linear, 2–5 mm wide; proximal leaves withered or not. Corymb 5–14 cm, 1–7-flowered, finely puberulent; proximal bracts leaflike or 3-sect, distal ones linear. Pedicels 3.5–8 cm; bracteoles borne near middle of pedicel or distally, lanceolate-linear, 4–10 mm. Sepals purple-blue, rarely white, abaxially puberulent; spur subulate, 1.5–2.8 cm, nearly straight or slightly recurved, base 2–3(–4) mm in diam.; other sepals 1.2–1.9(–2.5) cm. Petals undivided, glabrous. Staminode limb broadly obovate or suborbicular, entire or emarginate, yellow barbate. Filaments glabrous or pilose. Carpels 4 or 5; ovaries puberulent or villous. Fl. (Jun–)Jul–Oct.

Grassy or gravelly slopes; 2100–5000 m. Gansu, Qinghai, W Sichuan, NW Yunnan, Xizang [Bhutan, Nepal, Sikkim].

- 1a. Stem appressed puberulent, without glandular hairs.
 - 2a. Proximal leaves present at anthesis, cauline leaf blade to 8 cm wide, ultimate lobules 2–3 mm wide 162a. var. *caeruleum*
 - 2b. Proximal leaves absent at anthesis, cauline leaf blade to 12 cm wide, ultimate lobules 2.5–5 mm wide 162b. var. *majus*
- 1b. Stem spreading puberulent, or spreading pilose and appressed puberulent, sometimes also with spreading, glandular hairs.
 - 3a. Stem spreading puberulent, sometimes also with spreading, glandular hairs; cauline leaf blade 2–2.8 cm wide, adaxially velutinous, ultimate lobules apically rounded or obtuse; spur 1.5–1.9 cm, base ca. 2.5 mm in diam.; ovaries puberulent 162c. var. *obtusilobum*
 - 3b. Stem spreading pilose, appressed puberulent, and with some spreading, glandular hairs; cauline leaf blade 0.4–2.2 cm wide, adaxially densely puberulent, ultimate lobules apically acute; spur ca. 2.8 cm, base 3–4 mm in diam.; ovaries villous 162d. var. *crassicalcaratum*

162a. *Delphinium caeruleum* var. *caeruleum*

蓝翠雀花(原变种) lan cui que hua (yuan bian zhong)

Delphinium beesianum W. W. Smith var. *malacotrichum* Handel-Mazzetti; *D. caeruleum* f. *album* W. T. Wang; *D. grandiflorum* Linnaeus var.

kunawarensense Brühl; *D. grandiflorum* var. *tsangense* Brühl.

Stem 8–60 cm, appressed puberulent, without glandular hairs. Proximal leaves present at anthesis; cauline leaf blade to 8 cm wide; ultimate lobules 2–3 mm wide, apically acute. Spur 1.8–2.8 cm, base 2–3 mm in diam. Ovaries puberulent. Fl. Jul–Sep.

Grassy or gravelly slopes; 2100–4000 m. Gansu, Qinghai, W Sichuan, NW Yunnan, Xizang [Bhutan, Nepal].

162b. *Delphinium caeruleum* var. *majus* W. T. Wang, Acta Bot. Sin. 10: 266. 1962.

大叶蓝翠雀花 da ye lan cui que hua

Stem 65–80 cm, appressed puberulent, without glandular hairs. Proximal leaves absent at anthesis; cauline leaf blade to 12 cm wide; ultimate lobules 2.5–5 mm wide, apically acute. Spur 1.8–2.8 cm, base 2–3 mm in diam. Ovaries puberulent.

• Grassy slopes; 3300–3600 m. SW Gansu.

162c. *Delphinium caeruleum* var. *obtusilobum* Brühl ex Huth, Bot. Jahrb. Syst. 20: 463. 1895.

钝裂蓝翠雀花 dun lie lan cui que hua

Delphinium grandiflorum var. *obtusilobum* (Brühl ex Huth) Brühl; *D. tsoongii* W. T. Wang.

Stem 6–9 cm, spreading puberulent, sometimes also with spreading, glandular hairs. Proximal leaves present at anthesis; cauline leaf blade 2–2.8 cm wide, adaxially velutinous; ultimate lobules ca. 2 mm wide, apically rounded or obtuse. Spur 1.5–1.9 cm, base ca. 2.5 mm in diam. Ovaries puberulent. Fl. Aug.

Grassy slopes; ca. 5000 m. S Xizang [Sikkim].

162d. *Delphinium caeruleum* var. *crassicalcaratum* W. T. Wang & M. J. Warnock, Guihaia 17: 9. 1997.

粗距蓝翠雀花 cu ju lan cui que hua

Stem 5–9 cm, spreading pilose, appressed puberulent, and with some spreading, glandular hairs. Proximal leaves present at anthesis; cauline leaf blade 0.4–2.2 cm wide, adaxially densely puberulent; ultimate lobules 1–2 mm wide, apically acute. Spur ca. 2.8 cm, base 3–4 mm in diam. Ovaries villous. Fl. Jun.

• Gravelly slopes; ca. 4600 m. NW Yunnan (Dêqên Xian).

163. *Delphinium huangzhongense* W. T. Wang in W. T. Wang et al., Acta Phytotax. Sin. 37: 216. 1999.

湟中翠雀花 huang zhong cui que hua

Stem 7.5–8.5 cm tall, appressed puberulent, simple. Leaf blade 1–3 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic to narrowly so, 1–3 × dissected, distally 1–3-lobulate, apex acute; ultimate lobules ± linear; proximal leaves withered or not. Inflorescence ca. 2 cm, 1-flowered; rachis with retrorse, yellowish hairs; proximal bracts leaflike or linear. Pedicels 1.5–3 cm; bracteoles distal, lanceolate, 4–7 mm. Sepals gray-blue, abaxially densely appressed puberulent; spur subulate-cylindric, 5–7 mm, decurved; other sepals 1.25–1.4 cm. Petals undivided, glabrous. Staminode limb obliquely

ovate, ca. 3.8 mm, entire, white barbate. Filaments glabrous. Carpels 5; glabrous. Fl. Jul.

• Scrub; ca. 3900 m. W Qinghai (Huangzhong Xian).

164. *Delphinium davidii* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 179. 1893.

谷地翠雀花 gu di cui que hua

Delphinium longipes Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 8: 191. 1886, not Moris (1837); *D.*

grandiflorum Linnaeus var. *davidii* (Franchet) Brühl.

Stem 28–70 cm tall, sparsely retrorsely puberulent, branched distally. Leaf blade 6–9 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-lobulate, distally few lobulate or few dentate, apex acute; ultimate lobules triangular to lanceolate; proximal leaves not withered. Corymb 7–13 cm, 2–5-flowered; bracts leaflike. Pedicels 3.5–10 cm, retrorsely puberulent; bracteoles proximal, lanceolate or linear, 4.5–6 mm. Sepals blue, abaxially sparsely puberulent; spur subulate, 1.8–2.5 cm, slightly recurved, base 3.5–4 mm in diam.; other sepals 1.8–2.5 cm. Petals emarginate, glabrous. Staminode limb oblong or obovate, emarginate or 2-lobed, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Aug–Oct.

• Grassy places at forest margins, rocks; 1100–1400 m. W Sichuan (Baoping Xian to Luding Xian).

165. *Delphinium saxatile* W. T. Wang, Acta Phytotax. Sin. 6: 367. 1957.

岩生翠雀花 yan sheng cui que hua

Delphinium davidii Franchet var. *saxatile* (W. T. Wang) W. T. Wang.

Stem ca. 27 cm tall, sparsely hispid proximally, sparsely retrorsely puberulent distally. Leaf blade 3–8 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 3-parted, distally few lobulate or few dentate, apex acute; ultimate lobules lanceolate to linear; proximal leaves not withered. Corymb ca. 12 cm, ca. 2-flowered; bracts leaflike. Pedicels 8–13 cm, densely retrorsely appressed puberulent; bracteoles borne proximally or near middle of pedicel, linear, ca. 9 mm. Sepals blue-purple, distally acuminate, abaxially appressed puberulent; spur subulate, ca. 2.5 cm, slightly recurved, base ca. 3 mm in diam.; other sepals 2.5–2.9 cm. Petals distally emarginate, ciliate. Staminode limb broadly ovate, 5–6 mm, 2-cleft nearly to middle, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely puberulent. Fl. Jul.

• Rocky valleys; ca. 2100 m. W Sichuan (Baoping Xian).

166. *Delphinium tatsienense* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 169. 1893.

康定翠雀花 kang ding cui que hua

Stem 30–80 cm tall, retrorsely puberulent, branched distally. Leaf blade 4–9 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe rhombic, 2 or 3 × dissected, distally few

lobulate or few dentate, apex acute; ultimate lobules lanceolate to linear, 0.5–2.5(–4) mm wide; proximal leaves usually withered. Compound raceme pyramidal, each branch 3–15 cm, 3–12-flowered, densely retrorsely puberulent, often mixed with yellow, glandular hairs; bracts linear. Pedicels 3–7.5 cm; bracteoles borne near middle of pedicel or distally, green, subulate, 3–6 mm. Sepals purple-blue, abaxially puberulent, adaxially glabrous or puberulent; spur subulate, 2–2.5 cm, base 2–3.5 mm in diam.; other sepals 1–1.6 cm. Petals undivided, glabrous. Staminate limb broadly obovate, 5–6 mm, undivided, emarginate, or 2-lobulate, yellow barbate. Filaments pilose or glabrous. Carpels 3; ovaries densely puberulent. Fl. Jun–Sep.

• Grassy slopes, alpine meadows; 2300–4000 m. SE Qinghai, W Sichuan, N Yunnan.

1a. Ultimate leaf blade lobules 1.5–2.5(–4) mm wide; sepals glabrous adaxially

..... 166a. var. *tatsienense*

1b. Ultimate leaf blade lobules 0.5–1.5 mm wide; sepals puberulent adaxially

..... 166b. var. *chinghaiense*

166a. *Delphinium tatsienense* var. *tatsienense*

康定翠雀花(原变种) kang ding cui que hua (yuan bian zhong)

Ultimate leaf blade lobules 1.5–2.5(–4) mm wide. Sepals glabrous adaxially.

• Grassy slopes; 2300–3300 m. W Sichuan, N Yunnan.

166b. *Delphinium tatsienense* var. *chinghaiense* W. T. Wang, Acta Phytotax. Sin. 12: 159. 1974.

班玛翠雀花 ban ma cui que hua

Ultimate leaf blade lobules 0.5–1.5 mm wide. Sepals puberulent adaxially.

• Alpine meadows; ca. 4000 m. SE Qinghai (Baima Xian).

167. *Delphinium grandilimum* W. T. Wang & M. J. War-nock, Guihaia 17: 10. 1997.

硕边翠雀花 shuo bian cui que hua

Stem 12–22 cm tall, proximally retrorsely pubescent, elsewhere glabrous, simple. Leaf blade 3–6 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic, 3-parted, distally entire or 3-dentate, apex acute; ultimate lobules linear, triangular or linear-lanceolate; proximal leaves withered or not. Corymb terminal, 1- or 2-flowered; bracts lanceolate, apex subulate-acuminate. Pedicels 2–6 cm, distally spreading pubescent and yellow glandular puberulent; bracteoles distal, subulate, 5–6 mm. Sepals purple-blue, abaxially pilose; spur subulate, 2.5–3.1 cm, base 2.1–3(–4) mm in diam.; other sepals 3–3.6 cm. Petals undivided, glabrous. Staminate limb obliquely obovate, emarginate, yellow barbate. Filaments pilose distally. Carpels 3, ovaries densely yellowish villous. Fl. Sep.

• Alpine meadows; ca. 3600 m. NW Yunnan (Lijiang Naxi Zu Zizhixian).

168. *Delphinium pumilum* W. T. Wang, Acta Bot. Sin. 10: 267. 1962.

矮翠雀花 ai cui que hua

Stem 10–16.5 cm tall, sparsely pubescent, usually simple. Leaf blade 1–3 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic-obovate, 3-parted nearly to midvein, distally entire or 3–5-lobulate, apex acute; ultimate lobules lanceolate-linear; proximal leaves not withered. Corymb 4.5–9 cm, (1 or)2(or 3)-flowered; bracts leaflike or linear. Pedicels 2–9 cm, pubescent and yellow glandular puberulent; bracteoles borne near middle of pedicel, linear-subulate, 3–4.5 mm. Sepals blue, abaxially sparsely puberulent; spur subulate, 3.3–3.8 cm, base ca. 2.5 mm in diam.; other sepals 1.4–1.6 cm. Petals emarginate, glabrous. Staminate limb broadly obovate, emarginate, yellow barbate. Filaments glabrous. Carpels 3; ovaries puberulent. Fl. Sep.

• Grassy slopes; 3900–4300 m. SW Sichuan (Muli Zang Zu Zizhixian).

169. *Delphinium mollipilum* W. T. Wang, Acta Bot. Sin. 10: 268. 1962.

软毛翠雀花 ruan mao cui que hua

Stem ca. 35 cm tall, sparsely retrorsely pubescent, simple. Leaf blade 6–8 cm wide, base cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic-obovate, 3-parted nearly to midvein, distally entire or 3–5-lobulate, apex acute; ultimate lobules lanceolate-linear; proximal leaves usually withered. Corymb 3.5–6.5 cm, 2- or 3-flowered; proximal bracts 3-sect, distal ones linear. Pedicels 3.1–6 cm, spreading puberulent; bracteoles borne near middle of pedicel, linear, 4.5–7 mm. Sepals purple-blue, abaxially sparsely puberulent; spur subulate, 1.8–2.5 cm, base ca. 2 mm in diam.; other sepals 1.5–2.4 cm. Petals emarginate or entire, glabrous. Staminate limb orbicular-obovate, emarginate, yellow barbate. Filaments glabrous or pilose. Carpels 3; ovaries sparsely pubescent distally. Fl. Sep–Oct.

• Grassy slopes; ca. 3300 m. Gansu (Hegang Shan).

170. *Delphinium pseudocaeruleum* W. T. Wang, Acta Bot. Sin. 10: 269. 1962.

拟蓝翠雀花 ni lan cui que hua

Stem 70–100 cm tall, retrorsely puberulent proximally, glabrous and branched distally. Leaf blade ca. 8 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic-obovate, dissected nearly to midvein, distally entire or 3–5-lobulate, apex acute; ultimate lobules narrowly linear; proximal leaves usually withered. Corymb 4–8 cm, 2–5-flowered; proximal bracts 3-sect, distal ones linear. Pedicels 3.2–7.5 cm, densely retrorsely puberulent; bracteoles borne near middle of pedicel, linear, 4–6 mm. Sepals deep blue, abaxially appressed puberulent; spur subulate, 2–2.2 cm, base ca.

2.5 mm in diam.; other sepals 1.3–1.5 cm. Petals emarginate, glabrous. Staminode limb elliptic, 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely appressed puberulent. Fl. Jul–Sep.

• Grassy slopes; 1200–2500 m. S Gansu (Zhuguo Xian).

171. *Delphinium maximowiczii* Franchet, Bull. Soc. Philom. Paris, sér. 8, 5: 164. 1893.

多枝翠雀花 duo zhi cui que hua

Stem ca. 60 cm tall, densely retrorsely puberulent, much branched. Leaf blade 3–8 cm wide, base deeply cordate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic-obovate, dissected nearly to midvein, distally entire or 3–5-

lobulate, apex acute; ultimate lobules narrowly lanceolate or linear; proximal leaves usually withered. Corymb 4–7 cm, usually 2- or 3-flowered; bracts leaflike. Pedicels 1.5–5.5 cm, densely appressed puberulent; bracteoles borne near middle of pedicel or distally, oblong or linear, 2–6 mm. Sepals blue, abaxially puberulent; spur subulate, 2–2.2 cm, base ca. 2 mm in diam.; other sepals ca. 1.4 cm. Petals undivided, glabrous. Staminode limb obovate, 2-lobed or 2-cleft, yellow barbate. Filaments glabrous. Carpels 3; ovaries densely appressed puberulent. Fl. Jul–Aug.

• Grassy slopes; 1500–1900 m. S Gansu, NW Sichuan (Nanping Xian).

4. *Delphinium* sect. *Oligophyllon* Dimitrova, Novosti Sist. Vyssh. Rast. 6: 65. 1970.

三出翠雀花组 san chu cui que hua zu

Herbs perennial, tuberous. Leaves mostly near middle of stem and distal; leaf blade deeply palmately divided; primary lobes 2- to many lobulate. Petals of same color as sepals, not black-brown, distally not enlarged. Staminodes of same color as sepals, not black-brown, distinctly differentiated into a claw and an expanded limb; limb abaxially yellow barbate. Carpels 3. Seeds transversely squamulose winged.

About 45 species: N Africa, W Asia, S Europe, North America; one species in China.

172. *Delphinium biternatum* Huth, Bot. Jahrb. Syst. 20: 422. 1895.

三出翠雀花 san chu cui que hua

Stem 48–70 cm tall, densely retrorsely puberulent, simple or 1-branched. Leaf blade 3–7 cm wide, base broadly cuneate; primary lobes separate for at least 90% of blade radius; central lobe broadly rhombic-obovate, 2 or 3 × dissected, distally entire, apex acute; ultimate lobules narrowly linear; proximal leaves withered. Raceme elongate, to 35 cm, densely many flowered; rachis densely appressed puberulent; bracts lanceolate

or linear-lanceolate. Pedicels 0.9–1.1 cm, appressed puberulent and yellow glandular puberulent; bracteoles borne proximally or near middle of pedicel, lanceolate, ca. 3 mm. Sepals yellow, abaxially densely puberulent; spur cylindrical-subulate, 1.1–1.3 cm, base ca. 2.8 mm in diam.; other sepals 6–8 mm. Petals 2-lobed, glabrous. Staminode limb ovate, 2-cleft, yellow barbate. Filaments glabrous. Ovaries appressed puberulent. Fl. Jul–Aug.

Slopes. W Xinjiang (Yining Xian) [Kazakhstan, Kyrgyzstan].

5. *Delphinium* sect. *Anthriscifolium* W. T. Wang, Acta Bot. Sin. 10: 277. 1962.

还亮草组 huan liang cao zu

Herbs annual or biennial, with taproots. Leaves mostly near middle of stem; leaf blade 2- or 3-pinnate. Petals enlarged distally. Staminodes of same color as sepals, not black-brown, glabrous, distinctly differentiated into a claw and an expanded limb. Carpels 3, widely spreading in fruit. Seeds transversely lamellate.

One species: C and S China, N Vietnam.

173. *Delphinium anthriscifolium* Hance, J. Bot. 5: 207. 1868.

还亮草 huan liang cao

Plants annual. Stem (12–)30–80 cm tall, glabrous or sparsely retrorsely puberulent distally, branched. Leaf blade 4–8 cm wide, base broadly cuneate; primary lobes separate for at least 90% of blade radius; central lobe narrowly ovate, pinnately divided nearly to midvein, distally entire, apex long acuminate; ultimate lobules narrowly ovate or lanceolate; proximal leaves usually withered. Raceme 2–12 cm, (1 or)2–10-flowered, retrorsely puberulent; proximal bracts leaflike, distal ones lanceolate to lanceolate-subulate. Pedicels 0.4–1.2 cm; bracteoles borne proximally or near middle of pedicel, lanceolate-linear, 2.5–4.5 mm. Sepals violet or purple, abaxially sparsely puberulent; spur subulate, 0.5–2.2 cm, base 1.5–4 mm in diam.; other sepals 0.6–

1.6 cm. Petals distally much widened, glabrous. Staminode limb dolabriform or ovate, 2-parted, 2-lobed, emarginate, or sometimes entire, base subtruncate or broadly cuneate. Filaments glabrous. Ovaries sparsely puberulent or subglabrous. Fl. Mar–May.

Forest margins, scrub, grassy places on slopes or by streams in hilly or low-montane regions; near sea level to 1700 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, S Jiangsu, Jiangxi, S Shaanxi, S Shanxi, Sichuan, NE and SE Yunnan, Zhejiang [N Vietnam].

1a. Spur 1.7–2.2 cm, base 3–4 mm in diam., other sepals 1.2–1.6 cm 173c. var. *majus*

1b. Spur 0.5–1.1(–1.5) cm, base 1.5–2 mm in diam., other sepals 0.6–0.9(–1.1) cm.

2a. Staminode limb dolabriform, 2-parted, base subtruncate 173a. var. *anthriscifolium*

- 2b. Staminode limb ovate, 2-lobed,
emarginate, or sometimes entire,
base broadly cuneate 173b. var. *savatieri*

173a. *Delphinium anthriscifolium* var. *anthriscifolium*

还亮草(原变种) huan liang cao (yuan bian zhong)

Delphinium anthriscifolium var. *calleryi* (Franchet)

Finet & Gagnepain; *D. anthriscifolium* f. *latilobulatum*

W. T. Wang; *D. calleryi* Franchet; *D. cavaleriense* H.

Léveillé & Vaniot; *D. cerefolium* H. Léveillé & Vaniot.

Spur 0.5–0.9(–1.5) cm, base 1.5–2 mm in diam.; other
sepals 0.6–0.9(–1.1) cm. Staminode limb dolabriform,
2-parted, base subtruncate.

• Grassy places on slopes or by streams in hilly or low-montane
regions; 200–1200 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou,
S Henan, Hubei, Hunan, S Jiangsu, Jiangxi, S Shanxi, NE and SE
Yunnan, Zhejiang.

173b. *Delphinium anthriscifolium* var. *savatieri* (Franchet)

Munz, J. Arnold Arbor. 48: 261. 1967.

卵瓣还亮草 luan ban huan liang cao

Delphinium savatieri Franchet, Bull. Mens. Soc. Linn.

Paris 1: 330. 1882; *D. kweichowense* W. T. Wang; *D.*

minutum H. Léveillé & Vaniot; *D. robertianum* H.

Léveillé & Vaniot.

Spur 0.6–1.1 cm, base 1.5–2 mm in diam.; other
sepals 0.6–0.9 cm. Staminode limb ovate, 2-lobed,
emarginate, or sometimes entire, base broadly cuneate.

Forest margins, scrub, shady grassy slopes in hilly or low-montane
regions; below 100 to 1300 m. Anhui, Gansu, Guangdong, Guangxi,
Guizhou, Henan, Hubei, Hunan, S Jiangsu, Jiangxi, S Shaanxi, Si-
chuan, NE and SE Yunnan, Zhejiang [N Vietnam].

173c. *Delphinium anthriscifolium* var. *majus* Pampanini,
Nuovo Giorn. Bot. Ital., n.s., 20: 288. 1915.

大花还亮草 da hua huan liang cao

Spur 1.7–2.2 cm, base 3–4 mm in diam.; other sepals

1.2–1.6 cm. Staminode limb broadly ovate, 2-lobed,
base broadly cuneate or subtruncate.

• Grassy slopes; 200–1700 m. W Anhui, E Guizhou, Hubei, NW
Hunan, S Shaanxi, E Sichuan.

