

#### 4. SYRINGA Linnaeus, Sp. Pl. 1: 9. 1753.

丁香属 *ding xiang shu*

Shrubs or small trees, deciduous. Branchlets terete or 4-angled; pith solid; winter buds scaly, terminal buds often absent. Leaves opposite, simple or rarely pinnate, petiolate; leaf blade entire, pinnatisect or occasionally lobed. Inflorescences paniculate, terminal or lateral, generally composed of small cymes. Flowers bisexual, sessile or pedicellate. Calyx campanulate, regularly or irregularly 4-toothed or subtruncate, persistent. Corolla funnelform, salverform, or rotate; lobes 4, spreading or upright, valvate, usually cucullate and beaked at apex. Stamens 2, included or exerted. Ovules 2 in each locule, pendulous. Style filiform, shorter than stamens; stigma 2-cleft. Fruit a loculicidal capsule, slightly compressed. Seeds 2 in each locule, flat, narrowly winged; endosperm present; radicle erect.

About 20 species: Afghanistan, India, Japan, Kashmir, Korea, Nepal, Pakistan, Sikkim; SW Asia, SE Europe; 16 species in China.

Most species of *Syringa* are cultivated as ornamental plants, a few are medicinal.

- 1a. Corolla tube as long as calyx or slightly longer; filament exerted from corolla tube; corolla white or cream colored ..... 16. *S. reticulata*
- 1b. Corolla tube 2.5–8 × longer than calyx; anthers wholly or partly included, occasionally exerted.
- 2a. Panicles terminal, or terminal and lateral.
- 3a. Anthers entirely exerted from corolla tube; flowers white ..... 1. *S. tibetica*
- 3b. Anthers wholly or partly included in corolla tube; flowers red, purple, lilac, pink, or sometimes white.
- 4a. Leaf blade abaxially glabrous ..... 2. *S. yunnanensis*
- 4b. Leaf blade abaxially ± hairy.
- 5a. Corolla tube funnelform, gradually enlarged above middle; corolla lobes usually upright.
- 6a. Panicles nodding to pendulous; fruit ripening reflexed, smooth or sparsely lenticellate ..... 3. *S. komarowii*
- 6b. Panicles erect; fruit ripening not reflexed, smooth ..... 4. *S. wolfii*
- 5b. Corolla tube subcylindric; corolla lobes spreading, if tube slightly funnelform, then lobes not upright.
- 7a. Anthers usually inserted below mouth of corolla tube; leaf blade 1.5–4(–8) × 1–3(–5) cm ..... 7. *S. sweginzowii*
- 7b. Anthers inserted near mouth of corolla tube or slightly protruding; leaf blade 2.5–11(–18) × 1.5–6(–11) cm.
- 8a. Panicles compact, 5–13 cm; corolla tube subcylindric ..... 5. *S. villosa*
- 8b. Panicles loose, 10–25 cm; corolla tube slightly funnelform ..... 6. *S. tomentella*
- 2b. Panicles lateral; terminal buds absent.
- 9a. Leaves pinnately compound, pinnatisect, or lobed.
- 10a. Leaves mostly pinnatisect or lobed, sometimes entire ..... 14. *S. protolaciniata*
- 10b. Leaves pinnately compound, with 7–11(–13) leaflets ..... 15. *S. pinnatifolia*
- 9b. Leaves all entire.
- 11a. Leaf blade base with 2 pairs of veins ± palmately arranged ..... 9. *S. meyeri*
- 11b. Leaf blade with ± pinnate lateral veins, the 2 lowest pairs of veins not closely adjacent.
- 12a. Leaves as broad as long or slightly broader than long.
- 13a. Leaves 1–2 cm broad, almost circular ..... 12. *S. wardii*
- 13b. Leaves 3–8(–15) cm broad, ovate-orbicular to subreniform ..... 13. *S. oblata*
- 12b. Leaves usually manifestly longer than broad, sometimes almost as broad as long.
- 14a. Leaf base truncate to broadly cuneate; corolla lobes 5–8(–10) mm ..... 13. *S. oblata*

- 14b. Leaf base cuneate to subrounded; corolla lobes 2–5 mm.  
 15a. Anthers purple or purple-black; fruit clearly lenticellate; petiole  
 5–20 mm (sometimes less than 5 mm) ..... 8. *S. pubescens*  
 15b. Anthers yellow; fruit obscurely lenticellate; petiole 2–7 mm.  
 16a. Leaves 2–9 × 2–5 cm, densely villous abaxially ..... 10. *S. mairei*  
 16b. Leaves 1.5–2.5(–4) × 0.8–2(–3) cm, glabrous abaxially, except  
 for a pilose midrib and primary veins ..... 11. *S. pinetorum*

**1. *Syringa tibetica* P. Y. Bai, Acta Bot. Yunnan. 1: 151. 1979.**

藏南丁香 *zang nan ding xiang*

Trees 2.5–4 m, densely pubescent. Petiole 1–1.3 cm; leaf blade oblong or oblong-elliptic, 7–10 × 3.5–5 cm, adaxially subglabrous except along veins or sparsely pubescent, abaxially densely pubescent or pubescent only along veins, base cuneate to subrounded, apex acute or short acuminate. Panicles terminal, 7–13 cm. Pedicel 1–2 mm. Calyx 2–3 mm. Corolla white; tube 5–7 mm; lobes lanceolate, reflexed. Anthers yellow, entirely exerted from corolla tube. Capsule not seen. Fl. Jun.

\* Margins of woods; 2900–3200 m. Xizang (Jilong Xian).

**2. *Syringa yunnanensis* Franchet, Rev. Hort. 1891: 308. 1891.**

云南丁香 *yun nan ding xiang*

*Syringa yunnanensis* var. *pubicalyx* Jien ex P. Y. Bai; *S. yunnanensis* f. *pubicalyx* (Jien ex P. Y. Bai) M. C. Chang.

Shrubs 2–5 m. Branchlets terete or slightly 4-angled, usually glabrous. Petiole 0.5–2 cm, glabrous; leaf blade elliptic, elliptic-lanceolate, to oblanceolate, 2–8(–13) × 1–3.5(–5.5) cm, glabrous or abaxially rarely pubescent along veins, base cuneate or rarely subrounded, apex acute or short acuminate. Panicles erect, terminal, 5–18 × 3–12 cm; rachis and pedicel puberulent or rarely lanose. Pedicel 0.5–1.5 mm. Calyx 1–2.5 mm, glabrous or rarely lanose. Corolla white to lilac-red, 0.7–1.2(–1.7) cm; tube funnelform, 5–8(–13) mm; lobes oblong, spreading. Anthers yellow, usually inserted up to 2 mm from mouth of corolla tube. Capsule oblong, 1.2–1.7 cm, slightly lenticellate. Fl. May–Jun, fr. Sep.  $2n = 48$ .

\* Thickets, woods on slopes, gullies; 2000–3900 m. SW Sichuan, SE Xizang, NW Yunnan.

Plants with glabrous calyces and puberulent inflorescence rachis have been recognized as f. *yunnanensis*, whereas those with lanate calyces and rachis as f. *pubicalyx*.

**3. *Syringa komarowii* C. K. Schneider, Repert. Spec. Nov. Regni Veg. 9: 82. 1910.**

西蜀丁香 *xi shu ding xiang*

Shrubs 1.5–6 m. Branchlets terete, glabrous or pubescent. Petiole 1–3 cm; leaf blade ovate-oblong, oblong-lanceolate, elliptic, to elliptic-obovate, 5–19 × 1.5–7(–9) cm, adaxially glabrous or pubescent along midrib, abaxially pubescent or denser along veins, base cuneate, apex acute to long acuminate. Panicles terminal, nodding to pendulous, compact or lax, 4–

25 × 3–13 cm; rachis, pedicel, and calyx densely pubescent to glabrous. Pedicel 0–1.5 mm. Calyx 2–3 mm. Corolla purple-red, red, to pale lilac outside, white inside, 1–2.2 cm; tube funnelform, 0.8–1.5(–2) cm; lobes ovate to ovate-oblong, spreading or usually upright. Anthers yellow, inserted to 2 mm from mouth of corolla tube or somewhat protruding. Capsule ripening usually reflexed, long elliptic, 1–1.5(–2) cm, smooth or sparsely lenticellate.

\* Thickets, woods, near rivers and gullies; 1000–3400 m. S Gansu, W Hubei, S Shaanxi, Sichuan, N Yunnan.

1a. Corolla dark colored, lobes mostly ± erect

3a. subsp. *komarowii*

1b. Corolla pale colored, lobes usually spreading

3b. subsp. *reflexa*

**3a. *Syringa komarowii* subsp. *komarowii***

西蜀丁香(原亚种) *xi shu ding xiang (yuan ya zhong)*

*Syringa glabra* (C. K. Schneider) Lingelsheim; *S. komarowii* var. *sargentiana* (C. K. Schneider) C. K. Schneider; *S. sargentiana* C. K. Schneider; *S. villosa* Vahl var. *glabra* C. K. Schneider.

Inflorescences usually ± compact. Corolla somewhat deep purple-red, red, to lilac-red outside; lobes mostly ± erect. Fl. May–Jul, fr. Jul–Oct.  $2n = 46^*$ , 48.

\* Thickets, woods, near rivers; 1000–3400 m. S Gansu, S Shaanxi, Sichuan, N Yunnan.

**3b. *Syringa komarowii* subsp. *reflexa* (C. K. Schneider) P. S. Green & M. C. Chang, Novon 5: 329. 1995.**

垂丝丁香 *chui si ding xiang*

*Syringa reflexa* C. K. Schneider, Repert. Spec. Nov. Regni Veg. 9: 80. 1910; *S. komarowii* var. *reflexa* (C. K. Schneider) Jien ex M. C. Chang.

Inflorescences somewhat pyramidal, often interrupted. Corolla somewhat light red or pale lilac outside; lobes usually spreading. Fl. May–Jun, fr. Jul–Oct.  $2n = 46^*$ .

\* Woods near gullies; 1800–2900 m. W Hubei, NE Sichuan.

**4. *Syringa wolfii* C. K. Schneider, Repert. Spec. Nov. Regni Veg. 9: 81. 1910.**

辽东丁香 *liao dong ding xiang*

*Syringa formosissima* Nakai; *S. formosissima* var.

*hirsuta* (C. K. Schneider) Nakai; *S. hirsuta* (C. K. Schneider) Nakai; *S. hirsuta* var. *formosissima* (Nakai) Nakai; *S. robusta* Nakai; *S. robusta* var. *rupestris* Baranov & Skvortsov; *S. villosa* Vahl var. *hirsuta* C. K. Schneider; *S. wolfii* var. *hirsuta* (C. K. Schneider) Hatusima.

Shrubs to 6 m. Young branchlets green, becoming gray, glabrous or pubescent. Petiole 1–3 cm, glabrous or pubescent; leaf blade elliptic-oblong, elliptic, or obovate-oblong, 3.5–12(–18) × 1.5–7(–10) cm, adaxially glabrous or sparsely pubescent, abaxially villous, base cuneate to subrounded, apex usually acute to acuminate. Panicles erect, terminal, 5–30 × 3–18 cm; rachis, pedicel, and calyx villous or pubescent, occasionally subglabrous. Pedicel 0–2 mm. Calyx 2–3.5 mm. Corolla pale purple to purple-red, 1.2–1.8 cm; tube funnel-form, 1–1.4 cm; lobes oblong-ovate to ovate, upright or spreading. Anthers yellow, inserted near or slightly below mouth of corolla tube. Capsule oblong, (1–)1.2–1.7 cm, smooth. Fl. Jun, fr. Aug.  $2n = 46^*$ .

Mixed forests, thickets, woods, along rivers; 500–1600 m. Heilongjiang, Jilin, Liaoning [Korea, E Russia].

## 5. *Syringa villosa* Vahl, Enum. Pl. 1: 38. 1804.

红丁香 hong ding xiang

*Syringa bretschneideri* Lemoine; *S. emodi* Wallich ex G. Don *rosea* Cornu; *S. villosa* var. *rosea* Cornu ex Rehder.

Shrubs to 4 m, glabrous or puberulent to villous. Petiole 0.8–2.5 cm; leaf blade ovate, broadly elliptic, to obovate-oblong, 4–11(–18) × 1.5–6(–11) cm, adaxially glabrous, abaxially pilose or barbate only along veins, occasionally glabrous, base cuneate to subrounded, apex acute or short acuminate. Panicles erect, terminal, rather compact, 5–13(–17) × 3–10 cm. Pedicel 0.5–1.5 mm. Calyx 2–4 mm. Corolla lilac-red, pink, to white, 1–2 cm; tube slender, subcylindric, 0.7–1.5 cm; lobes ovate to elliptic, spreading. Anthers yellow, inserted near mouth of corolla tube or slightly protruding. Capsule oblong, 1–1.5 cm, smooth or nearly so. Fl. May–Jun, fr. Sep.  $2n = 46^*$ , 48.

\* Near gullies, riversides, thickets; 1200–2200 m. Hebei, Shanxi.

## 6. *Syringa tomentella* Bureau & Franchet, J. Bot. (Morot) 5: 103. 1891.

毛丁香 mao ding xiang

*Syringa adamiana* I. B. Balfour & W. W. Smith; *S. alborosea* N. E. Brown; *S. rehderiana* C. K. Schneider; *S. tomentella* var. *rehderiana* (C. K. Schneider) Rehder; *S. wilsonii* C. K. Schneider.

Shrubs 1.5–7 m. Branchlets sparsely to densely pubescent. Petiole 0.8–1.5 cm, together with rachis, pedicel, and calyx pubescent, villous, or glabrescent; leaf blade ovate-lanceolate to elliptic-lanceolate, rarely ovate or obovate, 2.5–11 × 1.5–5 cm, adaxially appressed pubescent or glabrous, abaxially hairy as on branchlets or barbate along veins, base cuneate to subrounded, apex acute to acuminate. Panicles erect, terminal or sometimes lateral, loose, 10–25 × 4–12 cm.

Pedicel 1–1.5 mm. Calyx 2.5–3 mm. Corolla lilac-red, pink, or white, 1–1.7 cm; tube slightly funnel-form, 0.8–1.4 cm; lobes ovate to elliptic, spreading. Anthers yellow, reaching mouth of corolla tube or slightly protruding. Capsule oblong-elliptic, 1.2–2 cm, obviously lenticellate or smooth. Fl. Jun–Jul, fr. Sep.  $2n = 46$ , 48.

\* Woods on slopes, thickets of valley, along gullies; 2500–3500 m. W Sichuan.

## 7. *Syringa sweginzowii* Koehne & Lingelsheim, Repert. Spec. Nov. Regni Veg. 8: 9. 1910.

四川丁香 si chuan ding xiang

*Syringa tetanoloba* C. K. Schneider; *S. tigerstedtii* Harry Smith.

Shrubs 2.5–4 m. Branchlets 4-angled, glabrous. Petiole 0.5–2 cm, glabrous or pilose; leaf blade ovate, ovate-elliptic, to lanceolate, 1.5–4(–8) × 1–3(–5) cm, adaxially shining and glabrous, abaxially barbate along veins or glabrous, base cuneate to subrounded, margin tinged with purplish red when young, apex acute to acuminate. Panicles erect, terminal or lateral, 7–25 × 3–15 cm; rachis generally 4-angled, including pedicel and calyx purple-brown, puberulent or glabrous. Pedicel 0–2 mm. Calyx 1.5–2 mm. Corolla pink, lilac, to white, 0.9–2 cm; tube slender, subcylindric, 0.6–1.5 cm; lobes ovate-oblong to lanceolate, spreading. Anthers yellow, inserted below or near mouth of corolla tube. Capsule long elliptic, 1.5–2 cm, smooth. Fl. May–Jun, fr. Sep–Oct.  $2n = 46$ , 48.

\* Thickets, woods, near riversides or gullies; 2000–4000 m. W Sichuan.

## 8. *Syringa pubescens* Turczaninow, Bull. Soc. Nat. Moscou 13: 73. 1840.

巧玲花 qiao ling hua

Shrubs 1–4 m. Branchlets 4-angled or subterete, along with petiole, rachis, pedicel, and calyx glabrous, puberulent, pilose or pubescent. Petiole 0.5–2 cm; leaf blade ovate, ovate-elliptic to lanceolate, or obovate to suborbicular, 1.5–8(–13) × 1–6 cm, adaxially glabrous, pilose, or pubescent, abaxially pilose, pubescent, villous, to glabrous, base cuneate to rounded, apex acute to caudate-acuminate or obtuse. Panicles erect, lateral, rarely terminal, 5–16 × 2.5–7 cm; rachis 4-angled or subterete. Flowers subsessile or short pedicellate. Calyx 1.5–2 mm. Corolla purplish red, purple, lilac, pink, to white, 0.8–1.8 cm; tube subcylindric or slightly funnel-form, 0.6–1.7 cm; lobes oblong or ovate, spreading. Anthers purple or purple-black, rarely yellow, inserted on corolla tube at or to 3 mm from mouth. Capsule long elliptic to oblong-lanceolate, 0.7–2 cm, obviously lenticellate.

Slopes, grasslands, woods, thickets, along rivers; 300–3400 m. Gansu, Hebei, Henan, W and NW Hubei, Jilin, Liaoning, S Ningxia, E Qinghai, Shaanxi, W Shandong, Shanxi, NE Sichuan [Korea].

1a. Branchlets and inflorescence rachis ± 4-angled.

- 2a. Branchlets and inflorescence rachis distinctly 4-angled, usually glabrous; anthers inserted on corolla tube 1–3 mm from mouth 8a. subsp. *pubescens*

- 2b. Branchlets and inflorescence rachis slightly 4-angled, hairy; anthers inserted on corolla tube to 1 mm from mouth ..... 8b. subsp. *patula*

- 1b. Branchlets and inflorescence rachis subterete.

- 3a. Calyx glabrous; anthers inserted on corolla tube to 1 mm from mouth ..... 8c. subsp. *julianae*

- 3b. Calyx hairy; anthers inserted on corolla tube to 3 mm from mouth ..... 8d. subsp. *microphylla*

### 8a. *Syringa pubescens* subsp. *pubescens*

巧玲花(原亚种) qiao ling hua (yuan ya zhong)

*Syringa wulingensis* Skvortsov & W. Wang.

Branchlets and inflorescence rachis distinctly 4-angled, usually glabrous. Anthers inserted on corolla tube 1–3 mm from mouth. Fl. May–Jun, fr. Jun–Aug.  $2n = 48$ .

\* Slopes, thickets of ravines, along rivers; 900–2100 m. Hebei, Henan, E Shaanxi, W Shandong, Shanxi.

### 8b. *Syringa pubescens* subsp. *patula* (Palibin) M. C. Chang & X. L. Chen, *Investig. Stud. Nat.* 10: 34. 1990.

关东巧玲花 guan dong qiao ling hua

*Ligustrum patulum* Palibin, *Acta Hort. Petrop.* 18: 156. 1900; *Syringa koehneana* C. K. Schneider; *S. palibiniana* Nakai; *S. patula* (Palibin) Nakai; *S. pubescens* var. *hirsuta* Skvortsov & W. Wang; *S. velutina* Komarov.

Branchlets and inflorescence rachis slightly 4-angled, usually puberulent or pubescent. Anthers inserted on corolla tube to 1 mm from mouth. Fl. May–Jul, fr. Aug–Oct.  $2n = 46$ .

Grasslands, woods; 300–1200 m. Jilin (Changbai mountain area), Liaoning [Korea].

### 8c. *Syringa pubescens* subsp. *julianae* (C. K. Schneider) M. C. Chang & X. L. Chen, *Investig. Stud. Nat.* 10: 34. 1990.

光萼巧玲花 guang e qiao ling hua

*Syringa julianae* C. K. Schneider, *Ill. Handb. Laubh.* 2: 777. 1911; *S. verrucosa* C. K. Schneider.

Branchlets and inflorescence rachis subterete. Calyx purple, glabrous. Anthers inserted on corolla tube to 1 mm from mouth. Fl. May–Jun, fr. Oct.

\* NW Hubei.

### 8d. *Syringa pubescens* subsp. *microphylla* (Diels) M. C. Chang & X. L. Chen, *Investig. Stud. Nat.* 10: 34. 1990.

小叶巧玲花 xiao ye qiao ling hua

*Syringa microphylla* Diels, *Bot. Jahrb. Syst.* 29: 531. 1900; *S. giraldiana* C. K. Schneider; *S. microphylla* var. *giraldiana* (C. K. Schneider) S. Z. Qu & X. L. Chen; *S. pubescens* var. *tibetica* Batalin; *S. schneideri* Lingelsheim; *S. trichophylla* T. Tang.

Branchlets and inflorescence rachis subterete. Calyx purple, mostly puberulent, sometimes densely pubescent or subglabrous. Anthers inserted on corolla tube to 3 mm from mouth. Fl. May–Jun (often with two blooming stages annually in cultivation, spring and Aug–Sep), fr. Jul–Oct.  $2n = 46^*$ , 48.

\* Woods in valleys, near rivers, grasslands at mountain tops; 500–3400 m. Gansu, SW Hebei, W Henan, W Hubei, S Ningxia, E Qinghai, Shaanxi, Shanxi, NE Sichuan.

Three varieties have been recognized in subsp. *microphylla*: var. *microphylla* (leaves glabrous adaxially to pubescent or subglabrous except for midrib, sometimes pilose toward base abaxially; corolla purplish red; anthers purple to purple black) is distributed throughout the subspecies range; var. *potaninii* (C. K. Schneider) P. S. Green & M. C. Chang (leaves pilose adaxially, pilose to villous abaxially especially on midrib; corolla white tinged with pink) is restricted to Gansu; and var. *flavoanthera* (X. L. Chen) M. C. Chang (leaves glabrous adaxially to pubescent or subglabrous except for midrib, sometimes pilose toward base abaxially; flowers white; anthers yellow) is restricted to Shaanxi (Foping Xian).

### 9. *Syringa meyeri* C. K. Schneider in Sargent, *Pl. Wilson.* 1: 301. 1912.

蓝丁香 lan ding xiang

Shrubs to 1.5 m, densely branched. Branchlets slightly 4-angled, puberulent. Petiole 0.6–1.5 cm, glabrous or puberulent; leaf blade elliptic-ovate or elliptic-obovate, sometimes ovate, broadly ovate, or suborbicular, 1–5 × 0.8–3.5 cm, glabrous or pilose along veins abaxially, palmately 5-veined or nearly so, base cuneate to subrounded, apex acute to short acuminate or obtuse. Panicles erect, lateral, 2.5–10 × 2.5–4 cm; rachis and pedicel puberulent. Flowers congested or lax. Pedicel 1–2 mm. Calyx dark purple, ca. 2 mm, glabrous or puberulent. Corolla blue-purple, purplish red, purplish pink, or white, 1.7–2 cm; tube subcylindric, 0.5–1.5 cm; lobes oblong, spreading. Anthers light brown at first, becoming black, inserted below mouth of corolla tube. Capsule long elliptic, 1–2 cm, obviously lenticellate.

\* Slopes. Liaoning.

- 1a. Flowers congested; corolla tube ca. 15 mm; leaf blade 2–5 × 1.5–3.5 cm ..... 9a. var. *meyerii*

1b. Flowers lax; corolla tube 5–8 mm;  
leaf blade  
1–2 × 0.8–1.8 cm ..... 9b. var. *spontanea*

### 9a. *Syringa meyeri* var. *meyeri*

藍丁香(原变种) lan ding xiang (yuan bian zhong)

Leaf blade elliptic-ovate or elliptic-obovate, sometimes ovate or suborbicular, 2–5 × 1.5–3.5 cm. Flowers congested. Corolla blue-purple; tube ca. 1.5 cm. Fl. Apr–Jun and Aug–Sep.  $2n = 46, 48$ .

Cultivated in Beijing and Shenyang.

Known only from cultivation and had long been considered as result of selected breeding from *Syringa pubescens*.

### 9b. *Syringa meyeri* var. *spontanea* M. C. Chang, Investig. Stud. Nat. 10: 33. 1990.

小叶藍丁香 xiao ye lan ding xiang

*Syringa meyeri* var. *spontanea* f. *alba* (W. Wang, Fuh, & Chao) M. C. Chang; *S. microphylla* Diels var. *alba* W. Wang, Fuh, & Chao; *S. microphylla* f. *alba* (W. Wang, Fuh, & Chao) Kitagawa.

Leaf blade suborbicular or broadly ovate, 1–2 × 0.8–1.8 cm. Flowers lax. Corolla purplish red, purplish pink, or white; tube 5–8 mm. Fl. May, fr. Sep–Oct.  $2n = 46^*$ .

\* Slopes; ca. 500 m. Liaoning (Jin Xian); also cultivated in Beijing, Shenyang, and other areas.

Plants with purplish red to purplish pink and white flowers have been recognized as f. *spontanea* and f. *alba* (W. Wang, Fuh, & Chao) M. C. Chang, respectively.

### 10. *Syringa mairei* (H. Léveillé) Rehder, J. Arnold Arbor. 15: 302. 1934.

皱叶丁香 zhou ye ding xiang

*Ligustrum mairei* H. Léveillé, Cat. Pl. Yun-Nan 181. 1916; *Syringa chuanxiensis* S. Z. Qa & X. L. Chen; *S. rugulosa* McKelvey.

Shrubs or small trees ca. 2 m. Branchlets terete, usually densely pubescent. Petiole 3–7 mm; leaf blade ovate, broadly elliptic to suborbicular or obovate, 2–9 × 2–5 cm, leathery, adaxially rugose and pubescent, abaxially densely villous, base cuneate to subrounded, apex acute to obtuse; midrib and veins conspicuously impressed. Panicles lateral, rarely terminal, 6–14 cm; rachis pubescent. Flowers subsessile. Calyx purplish red, ca. 2 mm, puberulent. Corolla purplish red, white when expanded, 0.9–1.5 cm; tube slender, subcylindric, 6–11 mm; lobes ovate to oblong-elliptic, spreading. Anthers yellow, inserted near or slightly below mouth of corolla tube. Capsule oblong-lanceolate, 1–2 cm, nearly smooth. Fl. Jul, fr. Jul–Nov.

\* Thickets on slopes or along roadsides; 1900–2600 m. W Sichuan, SE Xizang, N Yunnan.

### 11. *Syringa pinetorum* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 132. 1916.

松林丁香 song ling ding xiang

Shrubs 1–3 m. Branchlets terete, villous to puberulent, gradually glabrescent. Petiole 2–7 mm; leaf blade ovate, ovate-lanceolate, to lanceolate, 1.5–2.5(–4) × 0.8–2(–3) cm, papery, sparsely pubescent or subglabrous adaxially, pilose along veins abaxially or glabrescent, base cuneate to broadly cuneate, apex acute to acuminate. Panicles erect, lateral, loose, 4–11 × 3–6(–8) cm; rachis, pedicel, and calyx usually puberulent. Pedicel 0–3 mm. Calyx 1.5–3 mm. Corolla lilac or pale red, 1–1.5(–2) cm; tube cylindric, 6–10(–15) mm; lobes ovate to elliptic, spreading. Anthers yellow, inserted on corolla tube to 3 mm from mouth. Capsule long elliptic to lanceolate, 0.8–1.5 cm, nearly smooth. Fl. May–Jul, fr. Jul–Sep.

\* Valleys, under pinewoods; 2200–3600 m. W Sichuan, SE Xizang, NW Yunnan.

### 12. *Syringa wardii* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 9: 132. 1916.

圆叶丁香 yuan ye ding xiang

Shrubs or small trees 3–5 m, young stems pubescent. Petiole 2–3 mm; leaf blade suborbicular, 1–2 × 1–2 cm, adaxially glabrous, abaxially paler, glabrous or puberulent, base rounded to truncate, very short attenuate onto petiole, apex rounded or obtuse, sometimes very short apiculate-acuminate; primary veins 4 or 5 on each side of midrib, faintly reticulate below. Panicles erect, lateral, loose, 6–10 × 3–7 cm; rachis pubescent. Pedicel 1–3 mm. Calyx ca. 2 mm, almost truncate, teeth minute. Corolla 1.5–1.7 cm; tube cylindric, 1–1.2 cm; lobes ovate, obtuse, 4–5 mm. Anthers inserted slightly above middle of corolla tube. Capsule long elliptic, 1–1.4 cm, nearly smooth. Fl. May–Jun, fr. Sep.

\* Arid scrub on slopes, under woods; 2400–3000 m. SE Xizang, NW Yunnan.

### 13. *Syringa oblata* Lindley, Gard. Chron. 1859: 868. 1859.

紫丁香 zi ding xiang

Shrubs or small trees to 5 m. Branchlets glabrous, puberulent, or pubescent. Petiole 1–3 cm; leaf blade ovate, ovate-orbicular, to reniform, slightly broader than long or slightly narrower than long, 2.5–10(–14) × 2.5–8(–15) cm, glabrous or pubescent, villous to glabrescent, base subcordate or truncate to broadly cuneate, apex abruptly acute to long acuminate. Panicles erect, lateral, congested or lax, 4–16(–20) × 3–8(–10) cm. Pedicel 0–3 mm, glabrous or pubescent. Calyx 2–3 mm. Corolla purple, lilac, or sometimes white; tube subcylindric, 0.6–1.7(–2.2) cm; lobes ovate-orbicular to oblong or obovate-orbicular, 4–8(–10) mm, spreading. Anthers yellow, inserted 0–4 mm from mouth of corolla tube. Capsule obovate-elliptic, ovate, to oblong-lanceolate, 0.7–1.5(–2) cm, smooth.

Woods, thickets, valleys, along streams, roadsides, gravely mountains; 100–2600 m. Gansu, Hebei, Henan, Jilin, Liaoning, Nei

Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, NW Sichuan; widely cultivated in several other provinces [Korea].

- 1a. Leaf blade ovate-orbicular to reniform, usually slightly broader than long, base truncate to subcordate; corolla tube 0.6–1.4 cm, lobes 4–6 mm; capsule 1–1.5(–2) 13a. subsp. *oblata*
- 1b. Leaf blade ovate to ovate-orbicular, usually slightly narrower than long, base truncate to broadly cuneate; corolla tube 1–1.7(–2.2) cm, lobes 5–8(–10) mm; capsule 0.7–1.2(–1.5) 13b. subsp. *dilatata*

### 13a. *Syringa oblata* subsp. *oblata*

紫丁香(原亚种) *zi ding xiang* (yuan ya zhong)

*Syringa giraldii* Lemoine; *S. oblata* var. *alba* Rehder; *S. oblata* var. *giraldii* (Lemoine) Rehder; *S. oblata* var. *hupehensis* Pampanini; *S. vulgaris* Linnaeus var. *oblata* (Lindley) Franchet.

Shrubs or small trees to 5 m. Leaf blade ovate-orbicular to reniform, 2.5–10(–14) × 2.5–8(–15) cm, base truncate to usually subcordate, apex abruptly acute to acuminate. Panicles congested or lax, 4–16(–20) × 3–7(–10) cm. Calyx ca. 3 mm. Corolla purple or sometimes white; tube 0.6–1.4 cm; lobes ovate-orbicular to obovate-orbicular, 4–6 mm. Anthers inserted 0–4 mm from the corolla mouth. Capsule 1–1.5(–2) cm. Fl. Apr–May, fr. Jun–Oct.  $2n = 46^*$ .

\* Woods, thickets on slopes, valleys, along streams or roadsides; 300–2600 m. Gansu, Hebei, Henan, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, NW Sichuan; widely cultivated in several other provinces.

White-flowered plants, which are cultivated in provinces north of the Chang Jiang, have been recognized as cultivar *alba*.

### 13b. *Syringa oblata* subsp. *dilatata* (Nakai) P. S. Green & M. C. Chang, *Novon* 5: 329. 1995.

朝阳丁香 *chao yang ding xiang*

*Syringa dilatata* Nakai, *Bot. Mag.* (Tokyo) 32: 128. 1918; *S. dilatata* var. *alba* W. Wang & Skvortsov; *S. dilatata* f. *alba* (W. Wang & Skvortsov) S. D. Zhao; *S. dilatata* var. *longituba* W. Wang & Skvortsov; *S. dilatata* var. *pubescens* S. D. Zhao; *S. dilatata* var. *rubra* W. Wang & Skvortsov; *S. dilatata* var. *violacea* W. Wang & Skvortsov; *S. oblata* var. *dilatata* (Nakai) Rehder.

Shrubs 1–3 m, many branched. Leaf blade ovate to ovate-orbicular, 3–10 × 2.5–8 cm, base truncate to broadly cuneate, or rarely subcordate, apex short to long acuminate. Panicles lateral, lax, 5–10 × ca. 8 cm. Calyx ca. 2 mm.

Corolla lilac or red-lilac to violet-lilac, sometimes white; tube 1–1.7(–2.2) cm; lobes oblong-elliptic, 5–8(–10) mm. Anthers inserted at middle of corolla tube. Capsule 7–12(–15) mm. Fl. May–Jun, fr. Sep.

Gravelly mountains; 100–700 m. Jilin (Jian Xian), Liaoning [Korea].

Plants with white flowers have been recognized as f. *alba*, whereas those with red-lilac or violet-lilac flowers, which are cultivated in northern China, may be called f. *oblata*.

### 14. *Syringa protolaciniata* P. S. Green & M. C. Chang, *Kew Mag.* 6: 121. 1989.

华丁香 *hua ding xiang*

*Syringa buxifolia* Nakai.

Shrubs 0.5–3 m. Branchlets 4-angled, glabrous. Leaves 3–9-parted to -divided or entire, 1–4 × 0.4–2.5 cm; sessile or with petiole to 2.5 cm, glabrous; leaf blade and lobes lanceolate, elliptic, ovate, or obovate, glabrous and abaxially with conspicuous glandular dots, base cuneate, apex obtuse or acute. Panicles lateral, 2–10 cm, usually many paired on upper parts of branches and in a large inflorescence; rachis, pedicel, and calyx glabrous. Pedicel 2–6 mm, slender. Calyx 1.5–2 mm. Corolla lilac or purple, 1–2 cm; tube subcylindric, 7–12 mm; lobes ovate to narrowly elliptic, spreading. Anthers yellow-green, inserted to 2 mm from mouth of corolla tube. Capsule slightly 4-angled, 0.8–1.5 cm, smooth. Fl. Apr–Jun, fr. Jun–Aug.  $2n = 46^*$ .

\* Woods, steep slopes; 800–1200 m. E & S Gansu, E Qinghai; sometimes cultivated in N China.

### 15. *Syringa pinnatifolia* Hemsley, *Gard. Chron.*, ser. 3, 39: 68. 1906.

羽叶丁香 *yu ye ding xiang*

*Syringa pinnatifolia* var. *alashanensis* Ma & S. Q. Zhou.

Shrubs 1–4 m. Branchlets generally 4-angled, together with petiole, rachis, pedicel, and calyx glabrous. Leaves pinnately compound; petiole 0.5–1.5 cm; leaflets 7–11(–13), opposite or nearly so, sessile; leaflet blade ovate-lanceolate to ovate, 0.5–3 cm × 3–13 mm, glabrous or adaxially sparsely pubescent, base cuneate to subrounded and usually oblique, apex acute to acuminate or obtuse. Panicles lateral, slightly nodding, 2–6.5 × 2–5 cm. Pedicel 2–5 mm. Calyx ca. 2.5 mm. Corolla white or light red, somewhat tinged with lilac, 1–1.6 cm; tube slightly funnelform, 0.8–1.2 cm; lobes ovate or oblong. Anthers yellow, inserted to 4 mm from mouth of corolla tube. Capsule oblong, 1–1.3 cm, smooth. Fl. May–Jun, fr. Aug–Sep.  $2n = 46^*$ , 48.

\* Thickets on slopes; 2600–3100 m. Gansu, Nei Mongol, Ningxia, E Qinghai, S Shaanxi, W Sichuan.

### 16. *Syringa reticulata* (Blume) H. Hara, *J. Jap. Bot.* 17: 21. 1941.

Shrubs or trees 2–10(–15) m, glabrous. Petiole 1–3 cm; leaf blade ovate, ovate-lanceolate, elliptic-ovate, oblong-lanceolate, or suborbicular, 2.5–13 × 1–6(–8) cm, papery or

thickly so, glabrous or rarely pubescent abaxially, base rounded, truncate, subcordate, or cuneate, apex acuminate to caudate-acuminate or acute. Panicles lateral, 1 to many paired on same branch and forming an inflorescence 5–20(–27) × 3–20 cm. Pedicel 0–2 mm. Calyx 1–2 mm. Corolla white, rotate, 3–5 mm; tube as long as calyx or slightly longer. Capsule long elliptic to lanceolate, 1.5–2.5 cm, smooth or minutely lenticellate, apex blunt, acute, to acuminate. Fl. May–Aug, fr. Aug–Oct.  $2n = 46^*$ .

Mixed forests, grasslands, gullies, valleys; 100–2400 m. Gansu, Hebei, Heilongjiang, Henan, Jilin, Liaoning, Nei Mongol, Ningxia, Shaanxi, Shanxi, N Sichuan [Japan, Korea, E Russia].

*Syringa reticulata* subsp. *reticulata* is endemic to Japan.

- 1a. Petiole slender, 1.5–3 cm; capsule acute to acuminate at apex ..... 16a. subsp. *pekinensis*  
1b. Petiole stoutish, 1–2 cm; capsule blunt at apex ..... 16b. subsp. *amurensis*

**16a. *Syringa reticulata* subsp. *pekinensis*** (Ruprecht) P. S. Green & M. C. Chang, Novon 5: 330. 1995.

北京丁香 bei jing ding xiang

*Syringa pekinensis* Ruprecht, Cl. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 15: 371. 1857; *Ligustrina amurensis* Ruprecht var. *pekinensis* (Ruprecht) Maximowicz; *S. amurensis* Ruprecht var. *pekinensis* (Ruprecht) Maximowicz.

Shrubs or small trees 2–5(–10) m. Petiole slender, 1.5–3 cm; leaf blade ovate to ovate-lanceolate or suborbicular. Calyx 1–1.5 mm. Corolla 3–4 mm. Capsule acute to acuminate at apex. Fl. May–Aug, fr. Aug–Oct.

\* Woods on slopes, valleys, along gullies; 600–2400 m. Gansu, Hebei, Henan, Nei Mongol, Ningxia, Shaanxi, Shanxi, N Sichuan.

Usually cultivated as an ornamental in N China.

**16b. *Syringa reticulata* subsp. *amurensis*** (Ruprecht) P. S. Green & M. C. Chang, Novon 5: 329. 1995.

暴马丁香 bao ma ding xiang

*Syringa amurensis* Ruprecht, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 15: 371. 1857; *Ligustrina amurensis* Ruprecht; *L. amurensis* var. *mandshurica* Maximowicz; *S. reticulata* var. *amurensis* (Ruprecht) Pringle; *S. reticulata* var. *mandshurica* (Maximowicz) H. Hara.

Trees 4–10(–15) m. Petiole stoutish, 1–2 cm; leaf blade broadly ovate, elliptic-ovate to oblong-lanceolate. Calyx 1.5–2 mm. Corolla 4–5 mm. Capsule blunt at apex. Fl. Jun–Jul, fr. Aug–Oct.  $2n = 46^*$ .

Mixed forests on slopes, grasslands, near gullies; 100–1200 m. Heilongjiang, Jilin, Liaoning, Nei Mongol [Korea, E Russia].

The bark, trunks, and branches are used as antiphlogistic drug and diuretic. The flowers are used in the preparation of various perfumes.

