**ZYGOPHYLLACEAE**

蒺藜科  jì lì kē

Liu Yingxin (刘媖心 Liou Yingxin, Liu Ying-hsin); Lihua Zhou (周丽华)

Shrubs, shrublets, or perennial herbs, rarely annuals. Stipules distinct or connate, often persistent. Leaves opposite or sometimes alternate, simple or pinnate, often fleshy. Inflorescences axillary or terminal, solitary, racemose, or cymose. Flower bisexual, actinomorphic or zygomorphic. Sepals 4 or 5, imbricate or valvate. Petals 4 or 5, imbricate or valvate. Stamens 4 or 5 or up to 3 × as many as petals, with or without appendages. Ovary usually (2 or) 3–5(–12)-locular. Fruit a drupe, capsule, or schizocarp, leathery or fragile.

Twenty-six genera and ca. 284 species: temperate, tropical, and subtropical areas of Africa, America, Asia, Australia, and Europe; three genera (one endemic) and 22 species (three endemic) in China.


1a. Fruit a capsule .............................................................................................................................................................. 1. *Zygophyllum*

1b. Fruit a schizocarp.

2a. Schizocarp with 5 carpels; sepals and petals 5; stamens 5, base with glands ............................................................. 2. *Tribulus*

2b. Schizocarp with 4 carpels; sepals and petals 4; stamens 8, base with membranous appendages ............................. 3. *Tetraena*


霸王属  ba wang shu

*Sarcozygium* Bunge.

Shrubs, perennial herbs, or rarely annuals. Leaves opposite, even-pinnate or rarely simple; petiole herbaceous or membranous; leaflet blades plane or sticklike, fleshy. Flowers axillary, solitary or paired. Sepals 4 or 5, sometimes caducous. Petals as many as sepals, orangish red, white, or yellow, sometimes with an orange claw or pale along margin, rarely apetalous. Stamens 8–10, abaxially with scale-form appendages. Ovary 3–5-locular. Capsule winged or not, dehiscent or indehiscent, with 1 to several seeds per carpel.

More than 100 species: arid and semiarid regions of N Africa, C, N, and W Asia, Australia, S Europe; 19 species (two endemic) in China.

1a. Fruit conspicuously winged.

2a. Shrubs; sepals and petals 4.

3a. Capsule nearly spherical, 1.8–4 cm .......................................................................................................................... 2. *Z. xanthoxylon*

3b. Capsule narrowly ovoid to obovoid, 1–1.6 cm ........................................................................................................... 3. *Z. kaschgaricum*

2b. Herbs; sepals and petals 5.

4a. Leaflets 1 pair; capsule spherical, ca. 1 cm .............................................................................................................. 14. *Z. fabagoides*

4b. Leaflets 1–5 pairs; capsule not spherical, or if spherical larger than 1 cm.

5a. Capsule spherical, width of wings more than 5 mm.

6a. Leaves with 2 or 4 leaflets; leaflet blades 1–2.5 × 0.5–2 cm .................................................................................. 15. *Z. potaninii*

6b. Leaves with 6–10 leaflets; leaflet blades 0.5–1.2 × 0.2–0.8 cm .............................................................................. 16. *Z. macropterum*

5b. Capsule not spherical, width of wings less than 3 mm.

7a. Stamens ca. 2 × as long as petals; leaflet blades ovate to rotund ........................................................................... 17. *Z. iliense*

7b. Stamens shorter than petals; leaflet blades linear, linear-oblong, or lanceolate.

8a. Capsule lanceolate, base cuneate, apex acuminate .............................................................................................. 18. *Z. oxytocarpum*

8b. Capsule oblong-ovoid to ovoid, both ends obtuse ........................................................................................... 19. *Z. pterocarpum*

1b. Fruit sometimes ridged but not conspicuously winged.

9a. Fruit not more than 2 × as long as wide, dehiscent .................................................................................. 12. *Z. mucronatum*

9b. Fruit more than 2 × as long as wide, dehiscent.

10a. Leaves with more than 2 leaflets at least for majority of leaves.

11a. Plants prostrate to ascending; leaflet blades 1–3 mm wide .......................................................... 13. *Z. mucronatum*

11b. Plants erect or spreading; leaflet blades 3–15 mm wide.

12a. Perennial herbs; leaflet blades 3–5 mm wide; sepals 7–8 mm; capsule 2.5–4 cm, falcately curved .......................................................................................................................... 11. *Z. jaxarticum*

12b. Annual or biennial herbs; leaflet blades 4–15 mm wide; sepals 5–6 mm; capsule 1.6–2.5 cm, straight or slightly curved but not falcate .................................................................................. 12. *Z. loczyi*

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10b. Leaves with only 2 leaflets.

13a. Stamens shorter than petals.

14a. Plants 7–15 cm tall; petiole scabrous; pedicel 1–3 mm ........................................... 4. Z. kansuense

14b. Plants 30–80 cm tall; petiole not scabrous; pedicel 10–18 mm .................................... 5. Z. obliquum

13b. Stamens longer than petals.

15a. Plants 10–20 cm tall; capsule apex acuminate ............................................................... 10. Z. rosowii

15b. Plants 20–60(–100) cm tall; capsule apex not acuminate.

16a. Capsule more than 6 mm in diam.; leaflet blades 1.5–3 cm wide.

17a. Capsule cylindric, both ends not slender, 0.7–1 cm in diam.; seed surface smooth, margin entire; plants 40–80 cm tall ......................................................... 6. Z. macropodum

17b. Capsule oblong to oblanceolate, 1.5–5 cm in diam.; seed surface with pores, margin irregular; plants 20–25 cm tall ......................................................... 7. Z. sinkiangense

16b. Capsule less than 5 mm in diam.; leaflet blades 0.7–1 cm wide.

18a. Leaflet blades oblanceolate; plants erect .............................................................. 8. Z. brachypterum

18b. Leaflet blades oblong to oblanceolate; plants spreading or prostrate .................. 9. Z. fabago


戈壁霸王 ge bi ba wang

Herbs, perennial, glaucous, reddish in autumn. Stems much branched, prostrate, 10–20 cm. Stipules distinct, ovate, 2–7 mm. Leaves with 2 leaflets; petiole 2.5–7 mm; leaflet blades obliquely ovate, 5–20 × 3–8 mm, larger basally on stem. Flowers paired. Petal 2–3 mm. Sepals 5, green or orange, elliptic to oblong, 6–9 mm. Sepals pendulous, indehiscent, both ends obtuse. Fl. Jun, fr. Aug.

Gravel deserts. N Gansu, W Nei Mongol, Qinghai, E Xinjiang [Kazakhstan, Mongolia].

2. Zygophyllum xanthoxylon (Bunge) Maximowicz, Fl. Tangut. 103. 1889.

霸王 ba wang

Sarcozygium xanthoxylon Bunge, Linnaea 17: 7. 1843; Zygophyllum ferganense (Drobow) Borissova.

Shrubs, 30–80 cm tall. Branches zigzag, spiny-pointed; bark bright gray; xylem yellow. Leaves on old branches fascicled and on current year branchlets opposite, with 2 leaflets; petiole 0.6–1.5 cm; leaflet blades linear, equal in length to petiole, fleshy. Flowers axillary, solitary or paired. Pedicel 6–10 mm. Sepals 4, elliptic, fleshy, often persistent. Petals 4. Capsule linearly ovoid, spindledike, or obovoid, 1.16–2.4 × 0.8–1.6 cm, pendulous, wings 2–3 mm wide. Fl. Jul.

Hillsides, alluvial fans, saline serozem soil. Xinjiang [Kazakhstan, Mongolia].


甘肅霸王 gan su ba wang

Herbs, perennial, 7–15 cm tall, much branched, papillose or bristled when young. Roots thick, woody. Stipules distinct, rotund-lanceolate, margin membranous. Leaves with 2 leaflets; petiole 2–4 mm, papillose-bristled, narrowly winged; leaflet blades oblong to oblanceolate, 6–15 × 3–5 mm, apex obtuse. Flowers axillary, solitary or paired. Pedicel 1–3 mm, papillose, later deciduous. Sepals 5, ovate to elliptic, 5 mm, margin white. Petals 5, white or slightly orangish red, as long as sepals. Stamens shorter than petals, with scale-form appendages. Capsule lanceolate, 1.3–2 × 0.5 cm, slightly ribbed, apex acuminate. Fl. May–Jul, fr. Jun–Sep.

Deserts, plains. Gansu.


长梗霸王 chang geng ba wang

Herbs, perennial, 30–80 cm tall. Roots numerous, thick. Branches ascending to spreading. Stipules conuate on basal stems, distinct on apical stems. Leaves with 2 leaflets; petiole winged; leaflet blades obliquely ovate, 1–2 × 0.7–1 cm, glaucous, base cuneate, apex acute. Flowers axillary, solitary or paired. Pedicel 1–1.8 cm. Sepals 5, ovate to oblanceolate, 5–8 mm. Petals orange at base, 6–10 mm. Stamens shorter than petals; appendages oblong, half as long as stamens. Capsule cylindric, 3 cm × 5–8 mm, both ends obtuse. Seeds ovoid, 5-angular. Fl. Jun–Aug, fr. Jul–Sep.

Hillsides, sandy gravel beach, valleys. Gansu, Xinjiang [Kazakhstan, Kyrgyzstan, Tajikistan].

Herbs, perennial, 40–80 cm tall. Roots thick, woody. Stems ribbed. Leaves with 2 leaflets; petiole with angular wings; leaflet blades obliquely ovate to oblong, 2–4 × 1.5–3 cm, apex slightly rounded. Flowers axillary, paired. Pedicel 5–12 mm. Sepals 5, ca. 8 mm, 3 broadly ovate and ca. 5 mm wide, 2 ovate. Stamens 10, 5 longer than others; scales as long as half of filament or longer. Capsule cylindric to oblong, 10–16 × ca. 5 mm, with 5 ridges. Seeds numerous, black, ovate, ca. 3 × 2.5 mm, surface and margin smooth. Fl. May–Jun, fr. Jul–Sep.

Wastelands, farmland margins, saline sandy areas. Xinjiang [Kazakhstan].


Herbs, perennial, 20–25 cm tall. Roots thick, woody. Stems thick, internodes to 4 cm. Stipules distinct, triangular, margin membranous. Leaves with 2 leaflets; petiole 0.8–1.8 cm, connected; leaflet blades obovate to nearly round, 2–4 × 1.5–3 cm, slightly fleshy, flat, apex rounded. Flowers axillary, paired. Pedicel ca. 5 mm. Sepals obovate. Petals slightly angular. Stamens longer than petals; appendages on middle part of filaments. Capsule obovate to oblong, 2.5–4 × 1–1.5 cm, slightly ridged, dehiscent. Seeds 4 or 5 per carpel, ovoid, bony, margin irregular. Fl. May–Jun, fr. Jul.

- Hillside, valleys. Xinjiang.


Herbs, perennial, 15–20 cm tall. Roots thick, woody. Stems much branched, spreading, glabrous, with ribs. Leaves with 2 leaflets; petiole distinct, ovate, 2–3 cm, white membranous. Leaves with 2 leaflets; petiole 2–7 mm; leaflet blades ovate, round, or oblong, 0.8–2.5 × 0.5–0.8 cm, apex acuminate to oblong. Flowers axillary, solitary or paired. Pedicel 5–6 mm. Sepals elliptic to obovate-oblong, 5–8 × 2–3 mm, margin membranous. Petals 5, white but orange at base, obovate, nearly same size as sepals. Stamens orange, longer than petals; appendages oblong, apex toothed or entire. Capsule linear-lanceolate, 1.8–5 × 0.5–0.7 cm, pendulous, slightly curved or falcate, apex acuminate. Seeds grayish blue, oblong-ovoid. Fl. Mar–Jun, fr. Jun–Jul.

Gravel hills, alluvial gravel slopes, rocky areas with gravel and sand; 400–1000 m. Gansu, Nei Mongol, Xinjiang [Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan].

1a. Leaflets ovate, 0.8–1.8 cm; capsule
1b. Leaflets round to oblong, 1.5–2.5 cm; capsule 3–5 cm

10a. *Zygophyllum rosowii* var. *rosowii*

Herbs, perennial, 10–20 cm tall. Roots to 3 cm thick, woody. Stems much branched, spreading, glabrous, with ribs. Leaves with 2 leaflets; petioles shorter than leaflets; leaflet blades obovate to oblong-obovate, 1.5–3.3 × 0.6–2 cm, thick, apex rounded. Flowers axillary. Pedicel 4–10 mm. Sepals ovate to elliptic, 6–8 × 3–4 mm, margin white and membranous, apex obtuse. Petals basally orangish red and apically white, obovate, as long as sepals. Stamens longer than petals, 1.1–1.2 cm; appendages oblong, half as long as anthers. Capsule oblong to cylindric, 2–3.5 × 0.4–0.5 cm, pendulous, with 5 ridges. Seeds numerous, ca. 3 × 2 mm, surface with dots. Fl. May–Jun, fr. Jul–Sep. 2n = 22, 28.

Alluvial plains, oases, wet sand, wastelands. NW Gansu, W Nei Mongol, Qinghai, Xinjiang [Afghanistan, Kazakhstan, Pakistan, Russia, Turkmenistan; N Africa, W Asia, SE Europe].


Plants 15–20 cm tall. Leaflet blades ovate, 0.8–1.8 cm, apex acuminate to obtuse. Capsule 1.8–2.5 × 0.5 cm. Fl. Mar–Jun, fr. Jun–Jul.

Gravel hills, alluvial gravel slopes, rocky steep slopes, weakly sandy areas with gravel and sand; 400–1000 m. Gansu, Xinjiang [Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan].

长果霸王 chang guo ba wang

Herbs, perennial, 15–30 cm tall. Roots woody. Stems much branched, spreading or prostrate. Stipules widely triangular, membranous, margin serrate. Leaves with 2–6 leaflets; petiole 1–2 cm; compressed; leaflet blades narrowly oblong, oblanceolate, 1–2.5 cm × 3–5 mm. Flowers axillary, solitary or paired. Pedicel 4–7 mm. Sepals oblanceolate, 7–8 mm, margin membranous. Petals orange, nearly as long as sepals. Stamens unequal, 5–10 mm; appendages only on apical part of stamens, oblong-linear. Capsule cylindric, 2.5–4 cm × 4–5 mm, cylindric, pendulous, falcately curved, with acute ridges, apex acuminate to acute. Seeds oblanceolate, 4–5 × ca. 1.5 mm, scabrous, apex acute. Fl. Apr–May, fr. Jun–Jul.

Saline plains, saline soil in deserts, sandy areas at lakeshores. Xinjiang [Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan].


粗茎霸王 cu jing ba wang

Herbs, annual or biennial, 5–25 cm tall. Stems spreading or erect, branched basally. Stipules membranous or herbaceous, connate and semirotund on basal stems, distinct and triangular on apical stems. Leaves with 2–6 leaflets; petiole 1–2 cm; compressed; leaflet blades narrowly oblong, oblanceolate, 1–2.5 cm × 3–5 mm, apex obtuse. Flowers axillary, solitary or paired. Pedicel 2–6 mm. Sepals green with white margin, elliptic, 5–6 mm, margin membranous. Petals orange with white margin, ovate, shorter or equal to sepals. Stamens longer than petals. Capsule cylindric, 1.6–2.5 × 0.5–0.6 cm, ovate acute to obtuse. Seeds numerous, ovoid, 3–4 mm, surface maculate, apex acute. Fl. Mar–Jul, fr. Jul–Aug.

Hills, alluvial plains, gravel deserts, saline sands; 700–3000 m. Gansu, W Nei Mongol, Ningxia, Qinghai, Xinjiang [Kazakhstan].


蝎虎霸王 xie hu ba wang

Herbs, perennial, 15–25 cm tall. Stems spreading or erect, branched basally. Stipules membranous or herbaceous, connate and semirotund on basal stems, distinct and triangular on apical stems. Leaves with 2–6 leaflets; petiole 4–6 basally on stems, usually 2 apically on stems; petiole shorter than leaflets, winged; leaflet blades elliptic to oblanceolate, 0.6–2.5 × 0.4–1.5 cm, apex obtuse. Flowers axillary, solitary or paired. Pedicel 2–6 mm. Sepals green with white margin, elliptic, 5–6 mm, margin membranous. Petals orange with white margin, ovate, shorter or equal to sepals. Stamens longer than petals. Capsule cylindric, 1.6–2.5 × 0.5–0.6 cm, ovate acute to obtuse. Seeds numerous, ovoid, 3–4 mm, surface maculate, apex acute. Fl. Mar–Jul, fr. Jul–Aug.

Hills, alluvial plains, gravel deserts, saline sands; 700–3000 m. Gansu, W Nei Mongol, Ningxia, Xinjiang [Kazakhstan].


拟豆叶霸王 ni dou ye ba wang

Herbs, perennial, 20–40 cm tall. Root woody. Basal stems yellow, woody, with ribs; apical stem bright green; internodes 6–7 cm. Stipules herbaceous, connate basally on stems, semirotund and 2–3 mm, distinct apically on stems, triangular-ovate and 1–2 mm. Leaves with 2 leaflets; petiole 0.8–2 cm; leaflet blades, obliquely oblong to ovate, 1–2.5 cm × 6–10 mm, apex obtuse. Flowers axillary, paired. Pedicel 6–10 mm, slender. Sepals 5, unequal in size, smaller one 6–8 × ca. 5 mm, larger one ca. 5 × 4 mm, ovate. Petals white but orange at base. Stamens 1–1.2 cm; appendages narrowly oblong, 3–4 mm. Capsule nearly globose, ca. 1 cm, pendulous, narrowly winged. Fl. May–Jul, fr. Aug.

Moving sands, sandy areas, riverbanks in desert zones. Gansu, Xinjiang [Kazakhstan].


大花霸王 da hua ba wang

Herbs, perennial, 10–25 cm tall. Stems thick, erect or spreading, basally much branched. Stipules connate, ca. 3 mm, herbaceous. Leaves with 2 or 4 leaflets; petiole 3–8 mm, winged; leaflet blades obliquely obovate, elliptic, or rotund, 1–2.5 × 0.5–2 cm, thick. Flowers axillary, paired or in threes, pendulous. Pedicel shorter than sepals, elongating after anthesis. Sepals yellowish brown, obovate, 6–11 × 4–5 mm. Petals white but orange at base, spatulate-ovate, shorter than sepals. Stamens longer than sepals; appendages linear-elliptic, half as long as filaments. Capsule ovoid-globose to globose, 1.5–2.5 × 1.5–2.6 cm, pendulous, 5-loccular, with 5 wings, wings 5–7 mm, 4 or 5 seeds per locule. Seeds obliquely ovoid, ca. 5 × 3 mm. Fl. May–Jun, fr. Jun–Sep.

Deserts, gravel hills. Gansu, W Nei Mongol, Xinjiang [Kazakhstan, Mongolia].


大翅霸王 da chi ba wang

Herbs, perennial, 5–25 cm tall. Root thick, woody. Stems spreading to erect, scabrous. Stipules white, distinct, ovate to lanceolate, membranous, margin serrate or fringed. Leaves with 6–10 leaflets; petiole 1–2 cm; leaflet blades obvate to oblanceolate, 5–12 × 2–8 mm. Flowers axillary, 1 or 2. Pedicel 2–7 mm, erect at anthesis but later pendulous. Sepals elliptic, 5–6 × 4–5 mm, apex obtuse to acute. Petals orange, obvate, longer than sepals, apex obtuse to emarginate. Stamens 10, 5 equal to petal length, 5 shorter than petal length; appendages oblong. Capsule globose to yellowish brown, ellipsoid to ovoid, surface with dense cavities. Fl. Jun–Aug, fr. Jul–Sep.

Hilly slopes, plains, alluvial fans, terraces, sandy soil, loess hills; 800–3500 m. Gansu, W Nei Mongol, Ningxia, Qinghai, Xinjiang [Mongolia].
or glabrous, with 5 carpels with 2 hardened 4–6 mm spines at per locule; stigma 5-parted. Schizocarp 4–6 mm, hard, pubescent
Branches 20–60 cm. Leaves opposite, even-pinnate, 1.5–5 cm,


2. TRIBULUS Linnaeus, Sp. Pl. 1: 386. 1753.

Herbs, annual or biennial, prostrate. Leaves opposite, pinnate. Flowers axillary, solitary. Sepals 5. Petals 5, yellow, imbricate. Disk ring-shaped. Stamens 10, with glands, outer 5 longer and opposite petals, inner 5 shorter and alternate with petals. Fruit a schizocarp of 4 or 5 indehiscent prickly carpels. Seeds obliquely pendulous; endosperm thinly membranous.

About 15 species: mainly in the temperate zone; two species in China.

1a. Annual herbs; flowers ca. 1 cm in diam.; pedicel shorter than leaves ................................................................. 1. *T. terrestris* 1b. Perennial herbs; flowers ca. 3 cm in diam.; pedicel equal to or longer than leaves .................................................. 2. *T. cistoides*


Herbs, annual, prostrate, glabrous, pubescent, or hispid. Branches 20–60 cm. Leaves opposite, even-pinnate, 1.5–5 cm, with 6–16 leaflets; leaflet blades oblong to obliquely oblong, 5–10 × 2–5 mm, base slightly oblique, margin entire, apex acute to obtuse. Flower ca. 1 cm in diam. Pedicel shorter than leaves. Sepals persistent. Stamens inserted on base of disk, with scale-appendages. Ovary 5-angled, 5-locular, with 3 or 4 ovules per locale; stigma 5-parted. Schizocarp 4–6 mm, hard, pubescent or glabrous, with 5 carpels with 2 hardened 4–6 mm spines at mid margin, surface spiny or prickly. Fl. May–Aug, fr. Jun–Sep. 2n = 24, 30, 36, 48.

Sandy areas, wastelands, hillsides, residential areas; below 3300 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [almost worldwide].


Herbs, perennial, 10–20 cm tall. Roots thick, woody. Stems much branched, spreading. Stipules ovate to lanceolate, 1–2 mm. Leaves with 4 or 6 leaflets; petiole 4–6 mm, flat, winged; leaflet blades linear-oblong to lanceolate, 5–15 × 2–5 mm, glaucous, apex acute to obtuse. Flowers axillary, solitary or paired. Pedicel 4–8 mm, elongated after anthesis. Sepals oblong, 5–7 × ca. 4 mm, apex obtuse. Petals basally orange and apically white, oblong-obovate, 7–8 mm, base cuneate, apex obtuse. Stamens shorter than petals; appendages 1/3 as long as filaments. Capsule oblong-ovoid to ovoid, 1–2 × 0.6–1.5 cm, with narrow wings to 2–3 mm, both ends obtuse. Fl. May–Jun, fr. Jun–Sep.

Gravel hills, alluvial fans, saline soil, under *Haloxylon ammodendron*. Gansu, W Nei Mongol, Xinjiang [Kazakhstan, Mongolia, Russia (Siberia)].
Herbs, perennial, prostrate to ascending. Stems 30–60 cm, densely pubescent; old branches with nodes, furrowed. Stipules opposite, 2.5–4.5 cm. Leaves with 8–14 leaflets; petiole very short; leaflet blades obovate-oblong, 6–15 × 3–6 mm, abaxially pilose, adaxially villous, base oblique, apex obtuse to acute. Flower ca. 3 cm in diam. Pedicel equal to or longer than leaves. Sepals lanceolate, ca. 8 mm, villous. Petals obovate-oblong, ca. 2 cm. Ovary yellowish hispid. Schizocarp 0.8–1.2 cm, with 4 spines or murications. Fl. May–Jun. 2n = 12, 24, 36.

Beaches, sandy areas along seashores or river margins; usually near sea level. Hainan, Taiwan, Yunnan (along Yuan Jiang) [throughout tropics].


Petrusia Baillon.


● One species: China.

B.-A. Beier et al. (Pl. Syst. Evol. 240: 11–39. 2003) proposed a new phylogenetic system in the subfamily of Zygophylloideae based on molecular and morphological data. This treatment recognized 40 species under the genus Tetraena, most of which were new combinations transferred from the genus Zygophyllum. According to this concept, Tetraena is distributed from Africa to Asia in a very wide range, which contrasts with the traditional concept that recognizes Tetraena as a unispecific genus endemic to Nei Mongol.


四合木 si he mu

Shrubs 40–80 cm tall, much branched. Old branches dark purple to brownish red, glabrate; current branchlets yellowish white, with T-shaped trichomes. Stipules white, ovate, membranous. Leaves on old branches fascicled and on current branchlets nearly opposite, sessile; leaflet blades grayish blue, oblanceolate, 5–7 × 2–3 mm, both surfaces with T-shaped trichomes, margin entire, apex acute with short sharp tip. Flowers axillary, solitary. Pedicel 2–4 mm. Sepals 4, grayish, ovate to elliptic, ca. 3 × 2.5 mm, with T-shaped trichomes. Petals 4, white, elliptic to rotund, ca. 2 × 1.5 mm. Stamens 8, in 2 whorls, outer ones shorter; filament with white membranous appendages at base. Ovary 4-carpellate. Fruit pendulous, 4-valved. Schizocarp linear-ovoid to crescent-shaped, 5–6 mm, with 4 carpels. Seeds oblong-ovoid, muriculate. Fl. May–Jan, fr. Jul–Oct.

● River terraces, low mountains in steppes, desert areas. Nei Mongol.