
天门冬属 天门冬

Herbs perennial or subshrubs, dioecious or hermaphroditic, usually with short rhizomes. Main stems erect or climbing, generally branched, with cladodes (leaflike stems) in axes of main stems and branches. Cladodes borne in clusters, rarely solitary, green, flat, 3-angled, or subterete. Leaves appressed to stem, not green, scale-like, base spurred, spurs often extended into spines. Inflorescence an axillary cluster of flowers, rarely a solitary flower, sometimes a raceme or umbel. Pedicel articulate, subtended by membranous bracteoles. Perianth campanulate or subglobose; segments free or occasionally connate at base. Stamens 6; filaments usually adnate to perianth segments in varying degrees; anthers dorsifixed. Ovary 3-loculed; ovules few per locule. Fruit a berry. Seeds 1 to few.

Between 160 and 300 species: widespread in temperate and tropical regions of Africa, Asia, and Europe; 31 species (15 endemic, two introduced) in China.

1a. Inflorescence an axillary raceme; plants hermaphroditic.
2a. Spines 15–20 mm on main stems and 5–10 mm on branches ................................................................. 1. A. racemosus
2b. Spines 3–5 mm on main stems and indistinct on branches .......................................................... 2. A. densiflorus
1b. Inflorescence a solitary flower or sessile cluster of flowers; plants dioecious (hermaphroditic in A. setaceus).
3a. Cladodes flat with a distinct midvein or 3-winged.
4a. Stems without sharp spines.
5a. Plants ± climbing; branches sparsely cartilaginous denticulate ................................................. 12. A. subscandens
5b. Plants erect; branches not cartilaginous denticulate.
6a. Cladodes 3-winged basally; stamens equal, filaments free ......................................................... 7. A. schoberioides
6b. Cladodes flat; stamens unequal, filaments adnate to perianth segments for ca. 1/2 their length.
7a. Pedicels 10–20 mm .............................................................................................................. 4. A. filicinus
7b. Pedicels 1–6 mm.
8a. Cladodes (1 or)2 or 3 per fascicle, 5–12 × (1–)2–3 mm ......................................................... 5. A. lycopodineus
8b. Cladodes 5–10 per fascicle, 3–4 × ca. 0.5 mm ......................................................................... 6. A. yanbianensis
4b. Stems with sharp spines.
9a. Male flowers subglobose, 1–1.5 mm ........................................................................................ 13. A. yanyuanensis
9b. Male flowers subcampanulate, 1.5–5 mm.
10a. Branches and branchlets generally without sharp spines; flowers developing after cladodes.
11a. Cladodes usually 3 per fascicle; filaments free ................................................................. 8. A. cochinchinensis
11b. Cladodes 6–9 per fascicle; filaments adnate to perianth segments for ca. 1/2 their length .... 9. A. taliensis
12a. Cladodes 2–5(–7) per fascicle; stems not striate-ridged; spines on branches shorter than or equaling pedicels .................................................................................. 10. A. munitus
12b. Cladodes (3–)6–14 per fascicle; stems distinctly striate-ridged; spines on branches longer than pedicels .................................................................................................................. 11. A. myriacanthus
3b. Cladodes subterete, sometimes slightly flattened, but without clear midvein.
13a. Plants hermaphroditic; cladodes 10–13 per fascicle, filiform, 4–5 mm; secondary branches and cladodes arranged in 1 plane, frond-like ............................................................................. 3. A. setaceus
13b. Plants dioecious (but flowers sometimes with aborted stamens or pistil); cladodes 1–10(–25) per fascicle.
14a. Stems with sharp spines 2–3 mm.
15a. Branches and cladodes ± cartilaginous denticulate.
16a. Plants climbing; roots tuberous, 7–15 mm thick, fleshy ...................................................... 21. A. brachyphyllus
16b. Plants erect or suberect; roots sometimes with swollen, tuberous part near tip, 2–4 mm thick, rather slender.
17a. Plants dwarf subshrubs; branches with woody, sharp spines 2–4 mm; pedicels ca. 1 mm; roots with tuberous part ............................................................................................................ 30. A. kansuensis
17b. Plants tall herbs; branches without pungent spines; pedicels 7–15 mm; roots without tuberous part.
18a. Branches strongly reflexed basally and ascending distally; pedicels 1.2–1.6 cm .................................................. 25. A. trichophyllus
18b. Branches not as above; pedicels 0.6–1.3 cm ...................................................................... 24. A. longiflorus
15b. Branches and cladodes generally not cartilaginous denticulate.
19a. Male flowers 2–4 mm; branches spiny.
20a. Plants suberect; stem indistinctly striate; perianth of male flowers purplish red, subcampanulate, 3–4 mm in diam.; filaments adnate to perianth segments for ca. 1/4 their length ................................................................. 23. A. tibeticus

20b. Plants climbing; stem not striate; perianth of male flowers greenish white, subglobose, 2–2.5 mm in diam.; filaments free .................................................... 29. A. acicularis

19b. Male flowers 6–9 mm; branches unarmed.
21a. Pedicels (1–)1.5–2 cm; perianth yellowish green ............................................. 26. A. oligoclonos
21b. Pedicels 0.5–1.3 cm; perianth purplish.
   22a. Plants suberect; stem cartilaginous denticulate distally; spines straight; pedicels 6–13 mm ................................................................. 24. A. longiflorus
   22b. Plants climbing or nearly so; stem not cartilaginous denticulate; spines curved; pedicels ca. 5 mm .................................................................. 22. A. sichuanicus

14b. Stems and branches unarmed or, if spiny, spines very short, not sharp, and appressed to branches.
23a. Plants climbing.
   24a. Pedicels 6–25 mm; branches not cartilaginous denticulate .................................. 20. A. breslerianus
   24b. Pedicels 2–6 mm; branches usually cartilaginous denticulate.
   25a. Roots tuberous, 7–15 mm thick, fleshy ............................................................ 21. A. brachyphyllus
   25b. Roots not tuberous, 2–5 mm thick .................................................................... 16. A. trichoclados

23b. Plants erect.
   26a. Pedicels more than 1 cm.
       27a. Branchlets ± cartilaginous denticulate.
           28a. Branches strongly reflexed basally and ascending distally; pedicels 1.2–1.6 cm ................................................................. 25. A. trichophyllus
           28b. Branches not as above; pedicels 0.6–1.3 cm ........................................ 24. A. longiflorus
       27b. Branchlets not cartilaginous denticulate.
           29a. Male flowers ca. 3 mm; filaments free; stem striate-ridged distally; cladodes slightly tetragonal or sometimes irregularly trigonous .............................. 14. A. mairei
           29b. Male flowers 5–9 mm; filaments adnate to perianth segments for 1/2–3/4 their length; stem not or minutely striate; cladodes indistinctly grooved or angled.
   30a. Stems and branches soft, usually ± pendulous apically; male flowers 5–6 mm; anthers 1–1.5 mm ............................................................ 27. A. officinalis
   30b. Stems and branches rather rigid; male flowers 7–9 mm; anthers ca. 2 mm ............................................................................... 26. A. oligoclonos

26b. Pedicels less than 1 cm.
   31a. Young branches cartilaginous denticulate.
       32a. Pedicels usually more than 6 mm ............................................................ 24. A. longiflorus
       32b. Pedicels 3–5 mm.
           33a. Roots with tubers; stem and branches densely cartilaginous denticulate; male flowers ca. 2 mm ...................................................... 15. A. meioclados
           33b. Roots without tubers; stem and branches not or only slightly cartilaginous denticulate; male flowers more than 3 mm.
           34a. Plants dwarf shrubs; stems strongly zigzagged toward apex, rigid; cladodes rigid, spinescent ..................................................... 18. A. gobicus
           34b. Plants tall herbs; stems straight or slightly flexuous; cladodes rather soft, never spinescent .................................................... 17. A. dauricus
    31b. Young branches not cartilaginous denticulate.
       35a. Pedicels more than 8 mm.
           36a. Male flowers ca. 3 mm; filaments free; stem striate-ridged distally ....... 14. A. mairei
           36b. Male flowers 5–6 mm; filaments adnate to perianth segments for ca. 1/2 their length; stem not striate-ridged ........................................ 27. A. officinalis
       35b. Pedicels 2–6 mm.
           37a. Stems with cladodes (except near base), usually covered with stripelike remains of whitish, hyaline periderm when old ............. 28. A. neglectus
           37b. Stems with cladodes only near apex, without stripelike remains of periderm when old.
           38a. Plants with creeping, stolonlike rhizomes to 2 mm thick; stems usually simple; cladodes in fascicles of 5–7, falcate ............ 31. A. przewalskyi
           38b. Plants with thick, abbreviated rhizomes 4–20 mm thick; stems always branched; cladodes in fascicles of 1–6, usually straight.
           39a. Roots slender, ca. 2 mm thick; cladodes usually spreading upward at an acute angle ...................................................... 17. A. dauricus

长刺天门冬 chang ci tian men dong

Subshrubs hermaphroditic. Stems climbing, branched to 2 m; branches usually distinctly striate-ridged, ridges ± cartilaginous denticulate. Cladodes in fascicles of 3–6(–8), linear, 1–2.5 cm × ca. 1 mm, flat, midvein distinct. Leaf spur spinescent; spine straight or subcurved, 1.5–2 cm on main stems, 5–10 mm on branches, woody, sharp. Inflorescences developing after cladodes, axillary, each a many-flowered raceme or panicle 1–4 cm; bracts ca. 1 mm. Pedicel 1.5–3 mm, slender, articulate at middle. Perianth campanulate, 2–3 mm. Stamens equal, ca. 0.7 mm; anthers yellow, minute. Fl. Nov. 2n = 20*, 48.

Broad-leaved forests along streams or valleys; 2100–2200 m. S Xizang [Bhutan, India, Malaysia, Myanmar, Nepal, Pakistan, Sikkim; Africa, Australia].


非洲天门冬 fei zhou tian men dong

Asparagusopsis densiflora Kunth, Enum. Pl. 5: 96. 1850; Asparagus sprengeri Regel.

Subshrubs hermaphroditic. Stems ± climbing, branched, to 1 m; branches distinctly striate-ridged. Cladodes in fascicles of 1–5, linear, 1–3 cm × 1.5–2.5 mm, flat. Leaf spur spinescent; spine slightly hooked, 3–5 mm and sharp on main stems, very short and not sharp on branches, woody. Inflorescences developing after cladodes, solitary or paired, axillary, each a many-flowered raceme or panicle 2–2.5 cm; bracts linear, 2–5 mm. Pedicel ca. 2 mm, articulate at middle. Perianth white; segments oblong-ovate, ca. 2 mm. Stamens shorter than perianth; anthers minute. Berry red, 8–10 mm in diam., 1- or 2-seeded. Fl. throughout year. 2n = 40, 60.

Commonly cultivated and occasionally becoming naturalized [native to S Africa].


文竹 wen zhu

Asparagus setacea Kunth, Enum. Pl. 5: 82. 1850; Asparagus plumosus Baker.

Herbs hermaphroditic. Stems climbing, much branched, to several meters, slightly woody near base; branches spreading horizontally, with branchlets and cladodes arranged in 1 plane, frondlike. Cladodes in fascicles of 10–13, 4–5 mm, very slender, slightly trigonous. Leaf spur short, occasionally spinescent on main stems. Inflorescences developing after cladodes. Flowers solitary or in clusters of 2 or 3; pedicel short, articulate at middle. Perianth white; segments widely spreading, lanceolate-oblong, ca. 7 mm. Berry purplish black, 6–7 mm in diam., 1–3-seeded. Fl. Jun. 2n = 20*.

Commonly cultivated and occasionally becoming naturalized [native to S Africa].

The foliage is much used by florists.


羊齿天门冬 yang chi tian men dong


Herbs dioecious. Stems erect, unarmored. Rootstock a short rhizome with a cluster of fusiform roots; roots swollen at base. Stems much branched, 50–70 cm, subsMOOTH; branches generally striate-ridged, ridges sometimes slightly cartilaginous denticulate. Cladodes in fascicles of 5–8, linear, falcate, 3–15 × 0.8–2 mm, flat, midvein distinct. Leaf spur short, not spinescent. Inflorescences developing with cladodes or very soon afterward. Flowers of both sexes solitary or paired; pedicel 1–2 cm, articulate near middle. Male flowers: perianth pale green or sometimes tinged with pale purple, campanulate, ca. 2.5 mm; filaments free; anthers ovate, ca. 8 mm. Berry deep green, 5–6 mm in diam., 2- or 3- seeded. Fl. May–Jun, fr. Jul–Aug. 2n = 18*, 20.

Forests, thickets, shady and moist places along valleys; 1200–3000 m. Gansu, Guizhou, Henan, Hunan, Shaanxi, Shanxi, Sichuan, Yunnan, Zhejiang [Bhutan, India, Myanmar, Thailand].


短梗天门冬 duan geng tian men dong


Herbs dioecious. Roots usually with swollen, tuberous part 1.5–3.5 cm × 5–8 mm. Stems erect, 45–100 cm, unarmored, smooth or slightly striate, sometimes narrowly winged distally; branches narrowly winged. Cladodes in fascicles of 3, linear, falcate, (2–) 5–12 × 1–3 mm, flat, midvein distinct. Leaf spur short. Inflorescences developing after cladodes. Flowers of both sexes solitary or in clusters of 2–4; pedicel 1–1.5 mm or less. Male flowers: perianth white, campanulate, 3–4 mm; stamens unequal; filaments adnate to perianth segments for ca. 1/4 their length. Female flowers: perianth ca. 2 mm. Berry 5–6 mm in diam., 2- or 3-seeded. Fl. May–Jun, fr. Jul–Aug.

Forests, thickets; 500–2600 m. Gansu, Guangxi, Guizhou, Hubei, Hunan, Shaanxi, Sichuan, Yunnan [Bhutan, India, Myanmar].


盐边天门冬 yan bian tian men dong

Herbs dioecious. Stems erect, to more than 40 cm, unarmored, smooth or indistinctly striate; branches striate-ridged. Cladodes in fascicles of 5–10, linear, falcate, 3–4 × ca. 0.5 mm, flat, midvein distinct. Leaf spur short. Inflorescences developing after cladodes. Female flowers: usually paired, sub sessile; perianth yellowish green, campanulate, ca. 3 mm; aborted stamens 6, outer ones with filaments and anthers, inserted at middle of outer perianth segments, inner ones nearly without fila-
7. Asparagus schoberioides Kunth, Enum. Pl. 5: 70. 1850.

Asparagus schoberioides var. subsetaceus Franchet; A. sieboldii Maximowicz.

Herbs dioecious. Roots 2–3 mm thick, slender. Stems erect, to 1 m, unarmed, distinctly striate-ridged distally; branches angled or sometimes narrowly winged. Cladodes usually in fascicles of 3 or 4, linear, falcate, 1–4 cm × ca. 1 mm, flat, basally 3-angled, midvein distinct. Leaf spur short. Inflorescences developing after cladodes, axillary. Flowers of both sexes paired, subequal; pedicel ca. 2 mm, articulate at middle. Male flowers: perianth yellowish, campanulate, 3–3.5 mm; filaments adnate to perianth segments for ca. 1/2 their length; aborted ovary shortly rostrate apically. Berry red, 6–7 mm in diam., usually 1-seeded. Fl. May–Jun, fr. Aug–Sep. 2n = 20*.


Asparagus cochinchinensis var. longifolius (Miquel) C. H. Wright.

Herbs dioecious. Roots with swollen, tuberous part ca. 5 × 1–2 cm. Stems climbing, 1–2 m, slightly woody proximally; branches angled or narrowly winged. Cladodes usually in fascicles of 3, subfalcate, 0.5–8 cm × 1–2 mm, flat or slightly 3-angled. Leaf spur sometimes spinescent; spine 2.5–3.5 mm on main stems, minute or indistinct on branches. Inflorescences developing after cladodes, axillary. Flowers of both sexes usually paired, subequal; pedicel 2–6 mm, articulate at middle. Male flowers: perianth greenish, campanulate, 2.5–3 mm; filaments free. Berry green, 6–7 mm in diam., 1- or 2-seeded. Fl. May–Jun, fr. Sep. 2n = 20*.


Herbs, sometimes slightly subshrubby, dioecious. Stems climbing, to 1 m, slightly woody proximally, indistinctly striate-ridged; branches angled. Cladodes in fascicles of 6–9, linear, 6–13 × ca. 0.5 mm, acutely 3-angled. Leaf spur spinescent; spine 4–6 mm on main stems, very short or indistinct on branches, woody, sharp. Inflorescences developing after cladodes, axillary. Flowers of both sexes paired, subequal; pedicel ca. 2 mm, articulate at middle. Male flowers: perianth yellowish, campanulate, 3–3.5 mm; filaments adnate to perianth segments for ca. 1/2 their length; aborted ovary shortly rostrate apically. Berry red, 6–7 mm in diam., usually 1-seeded. Fl. Jun–Aug, fr. Jul–Aug. 2n = 20*.


Subshrubs dioecious. Roots ca. 3 mm thick, rather slender. Stems slightly diffuse or climbing, 1–2 m, densely striate-ridged; branches angled. Cladodes in fascicles of (3–)6–14, 0.6–2 cm × 0.5–1 mm, acutely 3-angled. Leaf spur spinescent; spine straight, 5–7 mm on main stems, 1.5–2 mm on branches, rather thick, woody. Inflorescences developing with cladodes. Male flowers: paired; pedicel 3–4.5 mm, articulate above middle or near apex; perianth yellowish, campanulate, 4–5 mm; filaments adnate to perianth segments for ca. 1/2 their length. Berry ca. 7 mm in diam., 1–4-seeded. Fl. Apr–May.


Herbs dioecious. Roots with swollen, tuberous part ca. 5 × 1.2 cm. Stems ± climbing, to 1 m, slightly angled when young; branches angled. Cladodes in fascicles of 3–7, falcate, 3–6 × ca. 0.6 mm, flat or slightly 3-angled. Leaf spur not spinescent. Inflorescences developing after cladodes, axillary. Flowers of both sexes solitary or paired, subequal; pedicel 1.5–2 mm, articulate at middle. Male flowers: perianth yellowish green, campanulate, 3–4 mm; stamens unequal; filaments adnate to perianth segments for ca. 1/2 their length.
Herbs dioecious. Roots 3 mm thick, slightly fleshy. Stems climbing, to more than 30 cm, slightly striate; branches angled. Cladodes in fascicles of 4–6, 4–7 × ca. 0.4 mm (immature), 3–angled. Leaf spur spinescent; spine slightly curved, ca. 5 mm on main stems, much shorter on branches. Inflorescences developing with cladodes. Male flowers: pedicel ca. 2 mm, articulate at middle; perianth yellowish green, subglobose, 1–1.5 mm; stamens equal; filaments adnate to perianth segments for ca. 1/2 their length; anthers suboblong, ca. 1 mm. Fl. May.

- Forests along streams. SW Sichuan.


19. Asparagus angulofractus Iljin var. scabridus Kitagawa.

Subshrubs dioecious. Roots slender. Stems suberect, usually flexuous distally, branches strongly flexuous, slightly striate-rigid, sparsely cartilaginous denticulate. Cladodes in fascicles of 3–8, usually spreading horizontally or downward at an obtuse angle, 0.5–2.5 cm × ca. 1 mm, subterete, irregularly grooved, rather rigid. Leaf spur short, not spinescent. Inflorescences developing after cladodes. Flowers of both sexes solitary or paired; pedicel 2–4 mm. Male flowers: perianth yellowish green, narrowly campanulate, 2 mm; filaments adnate to perianth segments for ca. 1/2 their length. Berry red, 5–6 mm in diam., usually 1- or 2-seeded. Fl. May–Jul, fr. Aug.

- Forests, grassy slopes along valleys and streams; 1300–3500 m. Guizhou, Sichuan, Yunnan.
Herbs dioecious. Roots 4–5 mm thick. Stems erect, 30–80 cm, smooth; branches usually slightly flexuous, sometimes indistinctly striate. Cladodes in fascicles of 1–5, generally spreading horizontally or downward at an obtuse angle, usually straight, 1–2.5 cm × 1–1.5 mm, suberete, slightly flattened, sometimes irregularly grooved. Leaf spur short, not spinescent. Inflorescences developing after cladodes. Flowers of both sexes paired. Male flowers: pedicel 4–6 mm; perianth yellowish green, campanulate, 4–5 mm; filaments adnate to perianth segments for ca. 1/2 their length. Female flowers: pedicel 5–7 mm, articulated at or near apex; perianth 3–4 mm. Fl. May–Jun.

Sandy soil; 1300–2000 m. SW Xinjiang [Kazakhstan].


Herbs dioecious. Roots 2–3 mm thick, rather slender. Stems climbing, 30–100 cm; branches not or only slightly striate. Cladodes in fascicles of 4–8, generally straight, 0.5–1.5 (–3.5) cm × 0.4–0.7 mm, suberete, slightly flattened, grooved. Leaf spur short, not or only slightly spinescent. Inflorescences developing after cladodes. Flowers of both sexes in clusters of 2–4; pedicel 6–18 mm, usually articulate above middle. Male flowers: perianth reddish purple or greenish white, campanulate, ca. 6 mm; filaments adnate to perianth segments for ca. 1/2 their length; anthers pubescent. Female flowers: perianth ca. 3 mm. Berry red, ca. 6 mm in diam., 5- or 6-seeded. Fl. May, fr. Jul–Sep. 2n = 40*

River banks, wastelands, saline soil; near sea level to 2900 m. Gansu, Ningxia, Qinghai, Xinjiang [Kazakhstan, Mongolia, Russia, Turkmenistan, Uzbekistan, SW Asia].

This species was misidentified in FRPS as Asparagus persicus Baker.


Herbs dioecious. Roots rather slender. Stems suberect, 30–80 cm; branches striate-ridged, ridges usually cartilaginous denticulate. Cladodes in fascicles of 4–10, 4–12 × ca. 0.5 mm, suberete, slightly flattened, irregularly grooved, usually cartilaginous denticulate. Leaf spur not or only slightly spinescent; spine 1–2 mm. Inflorescences developing after cladodes. Flowers of both sexes in clusters of 2–4; pedicel 3–6 mm. Male flowers: perianth pale purplish brown, campanulate, ca. 7 mm; filaments adnate to perianth segments for ca. 1/2 their length. Female flowers: perianth ca. 3 mm. Berry red, 6–7 mm in diam., 4- or 5-seeded. Fl. May–Jun, fr. Aug. 2n = 40*

Thickets, open grassy slopes, field margins; 800–2000 m. Hebei, Jilin, Liaoning, Ningxia, Shaanxi, Shanxi [Kazakhstan, Korea, Mongolia, Tajikistan, Turkmenistan, Uzbekistan].


Herbs slightly subshrubby, dioecious. Stems climbing, much branched, to 40 cm or more, slightly striate; branches spreading; branchlets occasionally cartilaginous denticulate. Cladodes in fascicles of 6–8(–16), ± appressed to branches, 5–9 × ca. 0.4 mm, suberete, slightly flattened, occasionally cartilaginous denticulate. Leaf spur spinescent; spine 2–3 mm on main stems, indistinct on branches, sharp. Inflorescences developing with cladodes. Male flowers: paired; pedicel ca. 5 mm; perianth purplish brown, campanulate; filaments adnate to perianth segments for 1/3–3/4 their length; anthers ca. 2 mm. Berry red, 9–10 mm in diam., 4- or 5-seeded. Fl. Apr–May, fr. Aug–Sep.

Subshrubs dioecious. Stems suberect, 30–60 cm, indistinctly striate, yellowish when dried, ± covered with strielike remains of whitish, hyaline periderm; branches slightly striate. Cladodes in fascicles of 4–7, slightly curved, 5–10 × ca. 0.5 mm, suberete, slightly flattened, irregularly grooved. Leaf spur spinescent; spine slightly hooked, 4–6 mm on main stems, 3.5–4 mm on branches, woody, sharp. Inflorescences developing with cladodes. Male flowers: in clusters of 2–4; pedicel 3–4 mm, articulate below middle; perianth purplish red, subcampanulate, ca. 3.5 mm; filaments adnate to perianth segments for ca. 1/4 their length. Berry 6–7 mm in diam. Fl. May–Jun, fr. Jul.

Hillsides, river flats; 3800–4000 m. Xizang.


Herbs dioecious. Roots rather slender. Stems suberect, 20–170 cm, slightly striate-ridged distally; branches distinctly striate-ridged, ridges usually cartilaginous denticulate, particularly on young branches. Cladodes in fascicles of 4–12, straight, 6–15 × ca. 0.6 mm, suberete, slightly flattened, irregularly grooved, usually cartilaginous denticulate. Leaf spur slightly spinescent; spine 1–5 mm on main stems, very short on branches. Inflorescences developing after cladodes. Flowers of both sexes paired; pedicel usually 6–13 mm. Male flowers: perianth purplish, 6–7 mm; filaments adnate to perianth segments for ca. 1/2 their length. Female flowers: perianth ca. 3 mm. Berry red, 7–10 mm in diam., 4- or 5-seeded. Fl. Apr–May, fr. Jun–Aug.

Forests, thickets, grassy slopes; 2400–3300 m. Gansu, Hebei, Henan, Qinghai, Shaanxi, Shandong, Shanxi.


Herbs dioecious. Roots rather slender. Stems suberect, strongly flexuous distally, 60–100 cm, sometimes sparsely cartilaginous denticulate; branches strongly reflexed basally, ascending distally; branchlets ± cartilaginous denticulate. Cla-
dodes in fascicles of 5–8, usually appressed to branches, filiform, 0.7–1.8 cm × ca. 0.3 mm, irregularly grooved. Leaf spur slightly spinescent; spine 1–3 mm on main stems, indistinct on branches. Inflorescences developing after cladodes. Flowers of both sexes paired; pedicel 1.2–1.6 cm. Male flowers: perianth yellowish green, usually tinged with pale purple, campanulate, 6–8 mm; filaments adnate to perianth segments for ca. 1/2 their length. Female flowers: perianth 2.5–3.5 mm. Berry 6–7 mm in diam., 3–5-seeded. Fl. May, fr. Jul–Sep. 2n = 30*.

Grassy slopes, roadsides, field margins, waste lands; near sea level to 2100 m. Hebei, Liaoning, Nei Mongol, Shanxi [Mongolia, Russia (E Siberia)].


The tuberous roots are edible.


Asparagus officinalis var. purpurascens X. J. Xue & H. Yao; A. tamahoki Yatabe.

Herbs dioecious. Roots 2–3 mm thick, rather slender. Stems erect, 40–80 cm, sometimes slightly striate; branches rather rigid, strigate. Cladodes in fascicles of 5–12, 1–3 cm × ca. 0.5 mm, subterete, slightly flattened, irregularly grooved. Leaf spur short or indistinct, rarely shortly spinescent. Inflorescences developing after cladodes. Flowers of both sexes solitary or paired; pedicel (1–)1.5–2 cm. Male flowers: perianth yellowish green, campanulate, 7–9 mm; filaments adnate to perianth segments for ca. 3/4 their length; anthers ca. 2 mm. Female flowers: perianth ca. 3 mm. Berry 8–10 mm in diam. Fl. Apr–May, fr. Jul–Sep. 2n = 20*.

Forests, meadows, moist places; near sea level to 500 m. Hebei, Heilongjiang, Henan, Jilin, Liaoning, Shandong [Japan, Korea, Mongolia, Russia (Far East, Siberia)].


New疆天冬 xin jiang tian men dong

Herbs dioecious. Roots slender. Stems suberect, densely branched, to 1 m, usually slightly striate, usually covered with stripelike remains of whitish, hyaline periderm when old; branches slightly striate when young. Cladodes usually in fascicles of 7–25, filiform, 0.5–1.7 cm × ca. 0.3 mm, irregularly grooved, usually several fascicles at each node of stem. Leaf spur slightly spinescent; spine 2–3 mm on main stems, very short or indistinct on branches. Inflorescences developing after cladodes. Flowers of both sexes solitary or paired; pedicel 1–1.5 cm. Male flowers: perianth campanulate, 5–7 mm; filaments adnate to perianth segments for ca. 1/2 their length. Female flowers: perianth ca. 3 mm. Berry red, 6–7 mm in diam., 1–3-seeded. Fl. May–Jun, fr. Aug.

Thickets, grassy slopes, river banks, sandy flats of rivers; 600–1700 m. N Xinjiang [Afghanistan, Kazakhstan, Mongolia, Pakistan, Russia (E Siberia), Tajikistan, Turkmenistan, Uzbekistan].

One of us (Tamanian) notes that Asparagus neglectus is very similar to, and may be synonymous with, A. trichophyllus.


山文竹 shan wen zhu

Herbs dioecious. Roots 2–4 mm thick basally, thickening toward tip. Stems climbing, to 1 m or more; branches slender. Cladodes in fascicles of 3–7, needlelike, 6–12(–15) × ca. 0.3 mm, irregularly grooved. Leaf spur spinescent; spine 4–6 mm on main stems, 1–2 mm on branches, woody, sharp. Inflorescences developing with cladodes. Male flowers: paired; pedicel 4–5 mm, articulate at middle; perianth greenish white, subglobose, ca. 2 mm in diam.; filaments free. Berry 5–6 mm in diam., usually 1-seeded. Fl. Jun–Jul, fr. Aug.

• Thickets, grasslands, lake margins; near sea level to 200 m. Guangdong, Guangxi, Hunan, Jiangxi.


甘肃天冬 gan su tian men dong

Subshrubs dioecious. Roots with subterminal tuber 2–3 cm thick. Stems erect, much branched, 17–27 cm, densely noded; stem and branches striate-ridged, ridges cartilaginous denticulate. Cladodes in fascicles of (3–)5–10, needlelike, 5–8 × ca. 0.4 mm, irregularly grooved. Leaf spur spinescent; spine spreading horizontally, straight, 2–5 mm on main stems, slightly shorter toward base of plant, slender, sharp. Inflorescences developing after cladodes. Flowers of both sexes solitary or paired; pedicel ca. 1 mm. Male flowers: perianth campanulate, 2–2.5 mm; filaments adnate to perianth segments for ca. 1/4 their length. Fl. Jun.

• Slopes; 900–1600 m. S Gansu.

The tuberous roots are edible.


北天冬 bei tian men dong
**Asparagus borealis** S. C. Chen; **A. dolichorhizomatus** J. M. Ni & R. N. Zhao.

Herbs dioecious. Rhizomes creeping, stolonlike, 1.2–1.8 mm thick, with spaced roots. Stems erect, usually simple, 10–30 cm, striate or striate-ridged. Cladodes in fascicles of 5–7, spreading, falcate, 0.4–2(–3.2) cm × ca. 0.7 mm, suberete, slightly flattened, indistinctly grooved. Leaves scarcely spurred. Inflorescences developing after cladodes. Flowers of both sexes paired; pedicel 3.5–4 mm, articulate distally. Male flowers: perianth pale purple, ca. 7 mm; stamens unequal, outer ones longer than inner, filaments adnate to perianth segments for ca. 3/4 their length. Female flowers: perianth ca. 4 mm; aborted stamens 6. Berry ca. 7 mm in diam., ca. 3-seeded. Fl. May, fr. Aug.

- Thickets; 2200–2300 m. Qinghai.