

# Chapter 5

## Medicinal Angiosperms of Orobanchaceae, Gesneriaceae, Bignoniaceae



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This chapter introduces 22 species of medicinal plants in three families, mainly including *Aeginetia indica*, *Cistanche deserticola*, *Cistanche tubulosa*, *Cistanche sinensis*, *Lathraea japonica*, *Orobanche coerulescens* of Orobanchaceae, *Aeschynanthus acuminatus*, *Boea hygrometrica*, *Chirita eburnean*, *Corallodiscus kingianus*, *Didymocarpus hancei*, *Hemiboea subcapitata*, *Paraboea crassifolia*, *Paraboea sinensis* of Gesneriaceae, *Campsis grandiflora*, *Catalpa ovata*, *Incarvillea mairei*, *Oroxylum indicum*, *Radermachera sinica*, and *Tecoma capensis* of Bignoniaceae.

This chapter introduces the scientific names, medicinal names, morphologies, habitats, distributions, acquisition and processing methods of these medicinal plants, the content of medicinal properties, therapeutic effects, usage, and dosage of these medicinal plants, and attaches unedited color pictures and pictures of part herbal medicines of each species.

## 5.1 Family: Orobanchaceae

### 5.1.1 *Aeginetia indica*

**Chinese Name(s):** ye gu, she jian cao, shao bu si.

**Source:** This medicine is made of the whole plants of *Aeginetia indica* (*Aeginetia indica* Linn [*Aeginetia japonica* Sieb. et Zucc.])

**Morphology:** The plant is a parasitic herb, annual, 15–40(–50) cm tall. The rhizomes are slightly fleshy, with small branches. The stems are yellowish brown or purplish red. The mesophyll is red, ovate-lanceolate or lanceolate, 5–10 mm long and 3–4 mm wide, glabrous on both surfaces. The flowers are terminal at stem apices, slightly drooping. The pedicels are stout, often erect, 10–30(–40) cm long and ca. 3 mm in diameter, glabrous, often with purplish red strips. The calyxes are cleft to near base at one side, 2.5–4.5(–6.5) cm long, purplish red, yellow and yellowish white, purplish red striate, apically acute or acuminate, glabrous on both surfaces. The corollas are often as same color as calyxes, or sometimes white at lower part and purple at upper part, greenish black after deciduous, blackened when dry, 4–6 cm long, indistinctly bilabiate; the tubes are broad, slightly curved, apically 5-lobed; the upper lips and the lateral lobes of the lower ones are more short, suborbicular, entire; the middle lobes of lower lips are slightly larger. There are 4 stamens, which are included; the filaments are borne next to tube bases by 1.4–1.5 cm, 7–9 mm long, purple, glabrous; the anthers are yellow, adherent by pairs, only one cell being fertile; the connective bases of a pair of lower stamens are elongated to spurs. The ovaries are 1-locular, with 4 parietal placentas; the styles are glabrous, 1–1.5 cm long; the stigmas are dilated, fleshy, pale yellow, peltate. The capsules are conical or long ovoid-globose, ca. 2–3 cm long, dehiscent by 2 valves. The flowering period is from April to August. The fruiting period is from August to October.

**Habitat:** It is parasitic on roots of species of Poaceae in wet places.

**Distribution:** It is distributed in Hong Kong, Guangdong, Macao, Hainan, Taiwan, Fujian, Jiangxi, Zhejiang, Jiangsu, Anhui, Hunan, Guangxi, Guizhou, Yunnan and Sichuan of China, as well as in India, Sri Lanka, Myanmar, Vietnam, Philippine, Malaysia and Japan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, and dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cool in property, a little toxic.

**Functions:** Detoxicating and relieving swelling, clearing heat and cooling blood, it is often used for treatment of tonsillitis, pharyngitis, urinary tract infection, osteomyelitis, as well as external treatment for snakebite and sores.

**Use and Dosage:** 3–9 g per dose, decocted in water for oral use.





## 5.2 Family: Orobanchaceae

### 5.2.1 *Cistanche deserticola*, *Cistanche tubulosa*

**Chinese Name(s):** rou cong rong, rou song rong, zong rong, di jing, jin sun, da yun.

**Source:** This medicine is made of the fleshy stem with scaly leaves of *Cistanche deserticola* (*Cistanche deserticola* Y. C. Ma) and *Cistanche tubulosa* (*Cistanche tubulosa* (Schrenk)Wight).

**Morphology:** A. *Cistanche deserticola*. The herb is perennial, parasitic and tall, 40–160 cm tall. The stems are unbranched or 2–3 branched from base. The leaf blades are broadly ovate or triangular-ovate, 0.5–1.5 cm long and 1–2 cm wide. The inflorescences are spicate, 15–50 cm long. There are 2 bracteoles, which are ovate-lanceolate or narrowly lanceolate, as long as calyxes or slightly longer. The calyxes are campanulate, 1–1.5 cm long, apically 5-lobed, lobes being suborbicular. The corollas are tubular-campanulate, 3–4 cm long, apically 5-lobed, margins being slightly revolute, various in colors, pale yellowish white or purple, often turning brown after drying. There are 4 stamens; the filaments are 1.5–2.5 cm long, curved villous basally; the anthers are long ovoid, densely villous. The ovaries are ellipsoid, ca. 1 cm long; the styles are slightly longer than stamens; the stigmas are subglobose. The capsules are ovoid-globose, dehiscent by 2 valves. The seeds are ellipsoid or subovoid, surfaces being reticulate, shiny. The flowering period is from May to June. The fruiting period is from June to July.

**Habitat:** It grows on sandy places, slopes and lakesides of desert zones.

**Distribution:** It is distributed in the provinces of Inner Mongolia, Gansu, Xinjiang, and Ningxia.





**Morphology:** *B. Cistanche mongolica*. The herb is perennial, parasitic, 60–75 cm tall. The stems are unbranched, 2–3 cm in diameter at base. The leaves are triangular-lanceolate, 2–3 cm long and ca. 0.5 cm wide, gradually narrowed upward. The inflorescences are spikes, 13–25 cm long and 4–5 cm in diameter; the bracts are triangular-lanceolate, 1.5–2 cm long and ca. 0.6 cm wide. There are 2 bracteoles, which are linear-lanceolate, 1.1–1.3 cm long and 1–1.5 cm wide. The calyxes are tubular, ca. 4 mm long, apically 5-cleft to middle, lobes being subequal, long ovate or long elliptic, ca. 6 mm long and ca. 4 mm wide. The corollas are tubular-funnelform, ca. 3.5 cm long, apically 5-lobed, lobes being subequal, suborbicular, ca. 5 mm long and ca. 7 mm wide, glabrous. There are 4 stamens; the filaments are borne next to tube bases by 8–9 mm, 1.5–1.7 mm long, basally slightly dilated, densely yellowish white villous; the anthers are ovoid-globose, 4–5 mm long, densely yellowish white pubescent, 2–3 mm long, basally obtuse-orbicular, without small tips. The capsules are oblong, ca. 1.5 cm long and ca. 1 cm in diameter. There are numerous seeds, which are subglobose, 0.8–1 mm long, blackish brown, reticulate outside, shiny. The flowering period is from May to June. The fruiting period is from July to August.

**Habitat:** It grows on desert margins of Junggar Basin and Tarim Basin, parasitic on the roots of species of *Tamarix* L.

**Distribution:** It is distributed in the province of Xinjiang, as well as in Africa, Arabian Peninsula, Pakistan, India, and Kazakhstan.









**Acquisition and Processing:** The products are mostly dug up in spring when the seedlings were not unearthed or just unearthed, the inflorescences removed, cut into segments, and dried in the sun.

**Medicinal Properties:** *Cistanche deserticola*: The product harvested in spring is irregular flat columnar, often curved, 10–20 cm long, densely covered with fleshy scaly leaves or their residues. It is heavy, firm and tough, not easy to break, light brown or brownish black on section, with radial or wavy patterns, and a medullary heart in the center. It is slight in odor, with the smell of bean paste, and a little sweet in taste. The product harvested in autumn is similar to that in spring, but dark brown on surfaces and covered with white salt frost. It is soft and moist, easy to break, blackish brown or black on section. It is slight in odor and salty in taste.

*Cistanche tubulosa*: The product is fusiform, oblate fusiform or oblate columnar, slightly curved, 5–25 cm in length and 2.5–9 cm in diameter, brown to dark brown, granular on the cross section, grayish brown to brown, with scattered punctate vascular bundles.

**Natural Taste and Meridian Tropism:** It is sweet and salty in taste, warm in property, belonging to the meridians of kidneys and large intestine.

**Functions:** Tonifying kidneys Yang, boosting essence blood, moistening intestines, and relieving constipation, and it is often used for treatment of impotence, infertility, waist and knee weakness, myasthenia, constipation due to intestinal dryness.

**Use and Dosage:** 6–10 g per dose, decocted in water for oral use, or made into pills, powder, or soaked in wine to take.

**Prescription Example(s):**

1. Clinical diagnoses and symptoms: impotence due to kidneys deficiency: *Cistanche deserticola*, leek seed each 30 g, made into powder and decocted in water, 3–5 g each time, 1–2 times a day.
2. Clinical diagnoses and symptoms: habitual constipation: *Cistanche deserticola* 100 g, *Cannabis sativa* seed, *Angelica sinensis* each 50 g made into powder and decocted in water, 3–5 g each time, 1–2 times a day.

## 5.3 Family: Orobanchaceae

### 5.3.1 *Cistanche sinensis*

**Chinese Name(s):** sha cong rong, cong rong, rou cong rong.

**Source:** This medicine is made of the fleshy stems of *Cistanche sinensis* (*Cistanche sinensis* G. Beck).

**Morphology:** The herb is perennial. The stems are erect, fleshy, terete, yellow, unbranched or 2-branched from base, the upper parts are unbranched. The leaves are scalelike, ovate, ovate-lanceolate to narrowly lanceolate. The spikes are terminal, terete. The bracts are oblong-lanceolate to linear-lanceolate, white or yellowish white arachnoid pilose abaxially and along margins. There are 2 bracteoles, which

are linear or narrowly oblong-lanceolate, basally attenuate. The calyxes are campanulate, 4-lobed, deeply parted to base adaxially. The corollas are tubular-campanulate, pale yellow, lobes being rarely pale red; the place that stamens inserted on has a ring of long hairs in corolla tube. The filaments are 1.4–1.6 cm long, villous at base. The capsules are deeply 2-lobed. The flowering period is from May to June. The fruiting period is from June to July.

**Habitat:** It grows on sandy places or hills slopes.

**Distribution:** It is distributed in the provinces of Inner Mongolia, Gansu, etc.

**Acquisition and Processing:** The products are mostly dug up in spring when the seedlings were not unearthed or just unearthed, removed the inflorescences, cut into segments and dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and salty in taste, warm in property.

**Functions:** Tonifying Yang, boosting essence, moistening intestines, and relieving constipation, and it is often used for treatment of consumptive disease, internal injury, spermatorrhoea, impotence of men, infertility, waist and knee cold pain of women.

**Use and Dosage:** 9–30 g per dose, decocted in water or made into pills and powder to take.





## 5.4 Family: Orobanchaceae

### 5.4.1 *Lathraea japonica*

**Chinese Name(s):** chi lin cao, jia tian ma.

**Source:** This medicine is made of the whole plants of *Lathraea japonica* (*Lathraea japonica* Miq.)

**Morphology:** The herb is parasitic, fleshy, 20–30 cm tall, densely yellow-brown glandular pubescent entirely. The stems are 10–20 cm tall. The leaves are white, borne at stem base, rhomboid, broadly ovate or semiorbicular, 0.5–0.8 mm long and 0.7–0.9 cm wide; the upper leaves are narrowly lanceolate, 1–2 mm wide. The inflorescences are racemes, narrowly terete, 10–20 cm long and 1.5–2.5 cm in diameter. There is 1 bract, borne at pedicel base, ovate-lanceolate or lanceolate, 0.6–0.9 cm long. The calyxes are campanulate, 7–9 mm long, irregularly 4-lobed, lobes being triangular, 4–5 mm long. The corollas are purple or bluish purple, 1.5–1.7 cm long, tubes being white, longer than calyxes. There are 4 stamens; the filaments are borne next to corolla tube bases by 6–7 mm, 5–7 mm long, pilose; the anthers are long ovoid, 1.8–2 mm long, densely white villous, mucronulate basally, slightly divergent. The ovaries are obovoid, 1.5–2.5 mm long; the styles are 1.2–1.4 cm long; the stigmas are 2-lobed. The capsules are obovoid, 5–7 mm long and 3–4 mm in diameter, with short beaks at apex. There are 4 seeds, which are pale yellow after drying, irregularly globose, 1.8–2 mm in diameter. The flowering period is from March to May. The fruiting period is from May to July.

**Habitat:** It grows on trailside and wet places under forests between 1500–2200 m.

**Distribution:** It is distributed in the provinces of Shaanxi, Gansu, Guangdong, Chongqing, and Guizhou, as well as in Japan.

**Acquisition and Processing:** The products are dug up from March to April when the flowers are not in full blossom, washed off the soils and dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cold in property.

**Functions:** Detoxicating, relieving swelling and pain, it is often used for treatment of rheumatic joint pain, injury caused by knocks and falls, etc.

**Use and Dosage:** 8–12 g per dose, decocted in water for oral use.



## 5.5 Family: Orobanchaceae

### 5.5.1 *Orobanche coerulescens*

**Chinese Name(s):** lie dang, cao cong rong.

**Source:** This medicine is made of the whole plants of *Orobanche coerulescens* (*Orobanche coerulescens* Steph.)

**Morphology:** The herb is parasitic, annual, 14–23 cm tall, villous entirely. The stems are erect, stout, fleshy, yellowish brown or dark brown. The leaves are scale-like, narrowly ovate, ovate-lanceolate or lanceolate, yellowish brown, apically acute. The spikes are terminal, 7–10 cm long and 2.5–3.5 cm in diameter. The bracts are ovate-lanceolate, slightly shorter than flowers, apically caudate-acuminate. The calyxes are 1.0–1.2 cm long, deeply 2-lobed to base, each lobe being 2-lobed. The corollas are tubular, ca. 2 cm long, bluish purple or pale purple; the tubes are slightly curved; the limbs are bilabiate; the upper lips are broad, apically emarginate; the lower ones are 3-lobed; the middle lobes are larger. There are four stamens, which are borne below middle of corolla tubes; the filaments are ca. 1 cm long, hairy at base; the anthers are glabrous. The ovaries are superior, ellipsoid, ca. 7 mm long; the stigmas are capitate. The capsules are ovoid-ellipsoid, ca. 1 cm long, 2-valved. The flowering time is July. The fruiting time is August.

**Habitat:** It grows on sandy places, mountain slope grasslands, along fields, ditches, and banks.

**Distribution:** It is distributed in the provinces and regions of northeast, north, northwest China and Shandong, Sichuan.

**Acquisition and Processing:** The products are dug up in summer, removed the soils and dried to 80% in the sun, tied into small bundles, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet in taste, warm in property.

**Functions:** Tonifying liver and kidneys, strengthening muscles and bones, moistening intestines to relieve constipation, and stopping diarrhea, and it is often used for treatment of liver and kidneys insufficiency, dizziness and tinnitus, weakness of waist and knee, impotence, spermatorrhea, intestinal dryness, constipation, diarrhea, and dysentery.

**Use and Dosage:** 6–10 g per dose, decocted in water for oral use.

**Prescription Example(s):**

1. Clinical diagnoses and symptoms: liver and kidneys deficiency, waist and knee weakness: *Orobanche coerulescens*, prepared *Fallopia multiflora*, *Taxillus sutchuenensis*, *Dipsacus asper*, each 9 g, decocted in water for oral use.
2. Clinical diagnoses and symptoms: impotence due to kidneys deficiency: *Orobanche coerulescens* 9 g, *Cistanche deserticola*, *Epimedium brevicornu*, *Lycium chinense* each 12 g, decocted in water for oral use.
3. Clinical diagnoses and symptoms: enteritis, bacillary dysentery: *Orobanche coerulescens* 30 g, added with 1000 ml of water, boiled for 10–20 min, cooled for a while, and used for washing the feet for 5–10 min, once a day.







## 5.6 Family: Gesneriaceae

### 5.6.1 *Aeschynanthus acuminatus*

**Chinese Name(s):** mang mao ju tai, da ye rong teng, shi rong.

**Source:** This medicine is made of the whole plants of *Aeschynanthus acuminatus* (*Aeschynanthus acuminatus* Wall. ex A. DC. [*A. chinensis* Garden. et Champ.])

**Morphology:** The plant is a small shrub, epiphytic. The stems are ca. 90 cm long, glabrous, often many branched. The branches are opposite, gray or glaucous. The leaves are opposite, glabrous. The leaf blades are thin papery, oblong, elliptic or narrowly oblanceolate, 4.5–9 cm long and 1.7–3 cm wide, apically acuminate or shortly acuminate, basally cuneate or broadly cuneate, margins being entire; there are ca. 5 lateral veins per side. The petioles are 2–6 mm long. The inflorescences are axillary on stem apex, with 1–3 flowers. The peduncles are 0.8–3 cm long, glabrous. The bracts are opposite, broadly ovate, 3–9 mm long and 4–10 mm wide, apically obtuse or orbicular, glabrous. The pedicels are ca. 10 mm long, glabrous. The calyxes are 2.5–7 mm long, glabrous, 5-lobed to base, lobes being narrowly ovate to ovate-oblong, 2–3 mm wide, apically obtuse or orbicular. The corollas are red, 1.5–2.2 cm long, glabrous outside, inside being puberulent at mouth and the base of lower lips. The tubes are 8–16 mm long; the mouth are 5–6 mm in diameter. The upper lips are 4–6 mm long, 2-lobed; the lower ones are slightly longer, 3-lobed, lobes being narrowly ovate. The stamens are exerted; the filaments are borne slightly below middle of corolla tubes, 1.2–2.2 cm long, with sparse short glandular hairs at lower part and apex; the anthers are 1.5–2 mm long, glabrous. The staminal nodes are filiform, 1.2–2 mm long, glabrous. The pistils are linear, 1.6–2 cm long, glabrous. The capsules are linear, 6.5–10 cm long, glabrous. The seeds are narrowly ellipsoid, ca. 0.6 mm long, with 1 hair at each end; the hairs are 1.4–4 mm long. The flowering period is from October to December.

**Habitat:** It grows on valley forests or rocks.

**Distribution:** It is distributed in Hong Kong, Guangdong, Hainan, Taiwan, Guangxi, Yunnan, Sichuan, and Tibet of China, as well as in Bhutan, India, Thailand, Laos, and Vietnam.

**Acquisition and Processing:** The products are harvested in summer and autumn, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and bland in taste, neutral in property.

**Functions:** Nourishing Yin and calming the mind. It is often used for treatment of neurasthenia and chronic hepatitis.

**Use and Dosage:** 30–60 g per dose, decocted in water for oral use.



## 5.7 Family: Gesneriaceae

### 5.7.1 *Boea hygrometrica*

**Chinese Name(s):** xuan shuo ju tai, mao er duo, niu er cao, shi hua zi.

**Source:** This medicine is made of the whole plants of *Boea hygrometrica* (*Boea hygrometrica* (Bunge) R. Br.)

**Morphology:** The herb is perennial. The leaves are basal entirely, arrange in rosette, sessile, suborbicular, orbicular-ovate or ovate, 1.8–7 cm long and 1.2–5.5 cm wide, adaxially appressed white villous, abaxially appressed white or pale brown woolly, apically orbicular, margin being shallowly dentate; the veins are inconspicuous. The cymes are umbelliform, with 2–5 flowers per inflorescence. The peduncles are 10–18 cm long, pale brown pubescent and glandular pilose. There are 2 bracts, which are tiny or inconspicuous. The pedicels are 1–3 cm long, pubescent. The calyxes are campanulate, 5-cleft to near base, lobes being slightly unequal; the upper 2 lips are slightly smaller, linear-lanceolate 2–3 mm long and ca. 0.8 mm wide, pubescent outside, apically obtuse, margins being entire. The corollas are pale bluish purple, 8–13 mm long and 6–10 mm in diameter, glabrescent outside; the tubes are ca. 5 mm long; the limbs are slightly bilabiate; the upper lips are 2-lobed, lobes being equal, oblong, ca. 4 mm long, shorter and narrower than the lower lip lobes; the lower lips are 3-lobed, lobes being equal, broadly ovate or ovate, 5–6 mm long and 6–7 mm wide. There are 2 stamens, whose filaments being flattened, ca. 1 mm long, glabrous, borne next to corolla base by 3 mm; the anthers are ovoid-globose, ca. 2.5 mm long, apically coherent. The pistils are ca. 8 mm long, not exerted from corollas; the ovaries are ovoid-ellipsoid, ca. 4.5 mm long and ca. 1.2 mm in diameter, pubescent; the styles are ca. 3.5 mm long, glabrous; there is 1 stigma, capitate. The capsules are oblong, 3–3.5 cm long and 1.5–2 mm in diameter, pubescent outside, spirally twisted. The flowering period is from July to August. The fruiting time is September.

**Habitat:** It grows on mountain slope trailside rocks.

**Distribution:** It is distributed in Fujian, Jiangxi, Hong Kong, Zhejiang, Hunan, Hubei, Henan, Hebei, Shandong, Liaoning, Shanxi, Shaanxi, Guangdong, Guangxi, Yunnan, and Sichuan of China.

**Acquisition and Processing:** The products are harvested in summer and autumn, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, neutral in property.

**Functions:** Dispersing blood stasis and stopping bleeding, clearing heat and detoxicating, resolving phlegm, and relieving cough. It is often used for treatment of traumatic bleeding, injury caused by knocks and falls, vomiting and diarrhea, otitis media, infantile malnutrition, food accumulation, cough, and asthma.

**Use and Dosage:** 20–30 g per dose, decocted in water for oral use.

**Prescription Example(s):**

1. Clinical diagnoses and symptoms: enteritis: the whole plants of *Boea hygrometrica* are washed with cold water, added with 500 ml water and boiled for 5–10 min, cooled and used for washing the feet with, 10–15 strains for adults and 5–10 for children, once a day, for 2–3 days (the solution was heated and then washed), and there was no side effect after washing.
2. Clinical diagnoses and symptoms: otitis media: the fresh products are mashed and dripped into the ear.





## 5.8 Family: Gesneriaceae

### 5.8.1 *Chirita eburnea*

**Chinese Name(s):** niu er duo, yan bai cai, shi hu er.

**Source:** This medicine is made of the whole plants of *Chirita eburnea* Hance (*Chirita eburnea* Hance [*Didymocarpus eburneus* (Hance) Lévl.])

**Morphology:** The herb is perennial. The leaves are basal entirely, fleshy. The leaf blades are ovate or narrowly ovate, 3.5–17 cm long and 2–9.5 cm wide, apically mucronulate or obtuse, basally attenuate or broadly cuneate, margins being entire, appressed pubescent on both surfaces; the lateral veins are in ca. 4 pairs. The petioles are flattened, 1–8 cm long and up to 1 cm in width, densely pubescent. The inflorescences are cymes, unbranched or 1-time dichotomously branched, with 2–13 flowers per inflorescence. The peduncles are 6–30 cm long, pubescent. There are 2 bracts, which are opposite, ovate, broadly ovate or orbicular-ovate, 1–4.5 cm long and 0.8–2.8 cm wide, densely pubescent. The pedicels are up to 2.3 cm in length, densely pubescent and with short glandular hairs. The calyxes are 0.9–1 cm long, 5-cleft to base, lobes being narrowly lanceolate, 2–2.5 mm wide, pubescent and with glandular hairs outside, sparsely pilose inside. The corollas are purple or pale purple, sometimes white; the throats are yellow, 3–4.5 cm long, sparsely pubescent on both surfaces; the tubes are 2–3 cm long; the mouths are 1–1.4 cm in diameter. The adaxial lips are 5–9 mm long, 2-lobed; the abaxial ones are 1.2–1.8 cm long, 3-lobed. The filaments of stamen are borne next to corolla bases by 1.2–1.6 cm, 9–10 mm long, broad at lower part, sparsely pilose, gradually narrowed upward; the anthers are ca. 5 mm long. There are 2 staminodes, which are 4–6 mm long, sparsely pilose. The pistils are 2.2–3 cm long; the ovaries and the lower part of styles are densely pubescent; the stigmas are 2-lobed. The capsules are 4–6 cm long, pubescent. The flowering period is from April to July.

**Habitat:** It grows on limestone or along streamsides in forests.

**Distribution:** It is distributed in the provinces of Hunan, Hubei, Guangdong, Guangxi, Guizhou, and Sichuan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and slightly bitter in taste, cool in property.

**Functions:** Clearing the lungs and relieving coughing, cooling the blood and stopping bleeding, detoxicating, and diminishing carbuncle, and it is often used for treatment of coughing due to Yin deficiency of the lungs, pulmonary tuberculosis hemoptysis, metrorrhagia, and leucorrhea.

**Use and Dosage:** 9–15 g per dose, decocted in water for oral use.

**Prescription Example(s):**

1. Clinical diagnoses and symptoms: coughing due to Yin deficiency: fresh *Chirita eburnea* 120 g, stewed with meat to take.
2. Clinical diagnoses and symptoms: hemoptysis due to pulmonary tuberculosis: *Chirita eburnea* root 9 g of bovine ear root, ground in water to make thick juice, and swallowed.
3. Clinical diagnoses and symptoms: *Chirita eburnea* 60 g, stewed with meat to take.





## 5.9 Family: Gesneriaceae

### 5.9.1 *Chirita fimbriosepala*

**Chinese Name(s):** ma huang qi, jie e chang shuo ju tai, shi pang xie.

**Source:** This medicine is made of the roots and stems of *Chirita fimbriosepala* (*Chirita fimbriosepala* Hance).

**Morphology:** The herb is perennial, with stout rhizomes. The leaves are basal entirely. The leaf blades are herbaceous, not zygomorphic, ovate, broadly ovate or suborbicular, 4–10 cm long and 3.5–11 cm wide, apically acute or slightly obtuse, basally obliquely cuneate or truncate, or one side being obtuse or broadly cuneate, while another side being cordate, margins being small or coarsely dentate; the leaf

blades are adaxially densely pubescent and scattered strigose, abaxially sparsely pubescent; there are 3–4 lateral veins on narrowed side. The petioles are 2–8.5 cm long, sparsely pilose. There are 1–5 cymes, which are 2–5 flowered. The peduncles are 6–28 cm long, pilose. The bracts are narrowly ovate to narrowly triangular, 5–11 mm long and 1–7 mm wide, pilose. The pedicels are 0.5–3.8 cm long, pilose. The calyxes are 7–11 mm long, 5-cleft to base, lobes being lanceolate-linear, 1.5–3 mm wide, margins being denticulate, pilose. The corollas are pale purple or purple, 3.5–6.4 cm long, sparsely pilose at the lower part, inside with 2 longitudinal hairs below adaxial lip on purple lines. The tubes are finely funnellform, 2.5–3.8 cm long; the mouths are 0.8–1.4 cm thick. The adaxial lips are 0.7–1.2 cm long; the abaxial lips are 1.5–2.4 cm long. The filaments of stamens are borne next to corolla base by 1.3–1.6 cm, ca. 1.3 cm long; the anthers are ca. 4 mm long, sparsely pubescent basally. The staminodes are ca. 4 mm long, glabrous. The pistils are 2.7–3 cm long; the ovaries and styles are densely pubescent; the stigmas are ca. 2 mm, 2-lobed. The capsules are 6–8 cm long, ca. 2.5 mm thick, pubescent. The seeds are fusiform, 6–8 mm long. The flowering period is from March to April.

**Habitat:** It grows on rocks of mountain forests.

**Distribution:** It is distributed in the provinces of Fujian, Jiangxi, Hunan, Guangdong, Guangxi, and Guizhou.

**Acquisition and Processing:** The roots and stems are harvested in summer and autumn, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cool in property.

**Functions:** Invigorating spleen to promote digestion, clearing heat and dampness, relieving swelling and pain, and cooling blood, and it is often used for treatment of stomachache, dysentery, malnutrition, bruise, hepatitis, pulmonary tuberculosis, hemoptysis, knife wound bleeding, and nameless sores.

**Use and Dosage:** 10–20 g per dose, decocted in water for oral use. For external treatment, the fresh products are mashed for application.







## 5.10 Family: Gesneriaceae

### 5.10.1 *Corallodiscus kingianus*

**Chinese Name(s):** juan si ju tai, da ye shan hu ju tai.

**Source:** This medicine is made of the whole plants of *Corallodiscus kingianus* (*Corallodiscus kingianus* (Craib) Burtt).

**Morphology:** The herb is perennial. The rhizomes are stout and short. The leaves arrange in rosette, leathery, narrowly rhomboid-ovate or ovate-lanceolate, 2–9 cm long and 1.4–3 cm wide, apically acute, basally cuneate, abaxially rust-brown woolly. There are 2–6 cymes, which are with 7–20 flowers per inflorescence. The calyxes are campanulate, deeply 5-lobed, lobes being oblong, 2–3 mm long and ca.

0.6 mm wide. The corollas are tubular, pale purple or purplish blue, 15–16 mm long, inside with 2 deep brown spotted striae on one side of adaxial lip; the tubes are 8–13 mm long and 3–4 mm in diameter. The adaxial lips are 2-lobed, lobes being semiorbicular; the abaxial lips are 3-lobed, lobes being ovate to suborbicular. There are 4 stamens; the upper ones are ca. 3 mm long, and the lower ones are ca. 6 mm long; the filaments are glabrous; the anthers are oblong, ca. 0.5 mm long. The staminodes are ca. 1.5 mm long. The pistils are glabrous; the ovaries are oblong, ca. 3 mm long; the styles are ca. 6 mm long; the stigmas are capitate. The capsules are oblong, ca. 2 cm long. The flowering period is from June to July. The fruiting period is from August to September.

**Habitat:** It grows on mountain slope grasslands or under forest rocks between 2800–4600 m.

**Distribution:** It is distributed in the provinces of Tibet, Qinghai, Sichuan, and Yunnan, as well as in India and Bhutan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, the dead leaves and impurities removed, washed, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and slightly bitter in taste, cold in property.

**Functions:** Clearing heat and detoxicating, tonifying the kidneys, and stopping bleeding, and it is often used for treatment of febrile diarrhea, impotence, premature ejaculation, menstrual disorder, leucorrhea, and can detoxicate wild vegetables, meat, and Aconitum poisoning.

**Use and Dosage:** 20–30 g per dose, decocted in water for oral use.





## 5.11 Family: Gesneriaceae

### 5.11.1 *Didymocarpus hancei*

**Chinese Name(s):** dong nan chang shuo ju tai, shi ma po zi cao, shi jie cai.

**Source:** This medicine is made of the whole plants of *Didymocarpus hancei* (*Didymocarpus hancei* Hemsl.)

**Morphology:** The herb is perennial. The rhizomes are terete, ca. 4 cm long. The leaves are 4–16-foliolate, basal entirely, petiolate. The leaf blades are papery, oblong or oblong-elliptic, 2.2–10 cm long and 1–3.6 cm wide, apically acute or acuminate,

basally cuneate or broadly cuneate, margins being densely denticulate, with short appressed hairs on both surfaces, denser along veins abaxially; there are 5–7 lateral veins per side. The petioles are 1.8–8 cm long, stout, short strigose. The cymes are umbel-like, 2–4 cymes, 2–3-times dichotomously branched, with 4 to numerous flowers per inflorescence. The peduncles are 7–18 cm long, sparsely pubescent. The bracts are opposite, linear, 5–14 mm long and 1–1.5 mm wide, with short appressed hairs. The pedicels are 5–12 mm long, pubescent. The calyxes are 4.5–7 mm long, 5-cleft to base, lobes being narrowly linear, 0.5–1.2 mm wide, with sparse short appressed hairs outside, glabrous inside. The corollas are 1.5–2 cm long, sparsely pubescent outside, glabrescent inside. The tubes are narrowly campanulate, 1.1–1.3 cm long; the mouths are 4–6 mm in diameter. The adaxial lips are 3–5 mm long, 2-lobed to middle, lobes being obliquely flattened triangular; the abaxial lips are 4–8.5 mm long, 3-lobed to middle, lobes being ovate. The stamens are glabrous, and filaments borne next to corolla base by 6–7 mm, ca. 0.5 mm long. The disks are ring-shaped, ca. 0.6 mm tall. The pistils are 1.6 cm long, with sparsely small glands; the ovaries are ca. 5.5 cm long, sessile; the stigmas are ca. 10 mm long, oblate. The capsules are linear, 2–3.4 cm long, glabrous. The seeds are narrowly ellipsoid or fusiform, 0.4–0.5 mm long. The flowering time is ca. April.

**Habitat:** It grows on valley forests, rocks or stony cliffs of mountain slope.

**Distribution:** It is distributed in the provinces of Fujian, Guangdong, Jiangxi, and Hunan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is pungent and bitter in taste, cool in property.

**Functions:** Dispersing wind and heat, reducing swelling and detoxicating, it is often used for treatment of upper respiratory tract infection, pharyngitis, tonsillitis, cold of wind-heat type, nasal congestion, runny nose, sneezing, and cough.

**Use and Dosage:** 6–9 g per dose, decocted in water for oral use.





## 5.12 Family: Gesneriaceae

### 5.12.1 *Hemiboea subcapitata*

**Chinese Name(s):** xiang long cao.

**Source:** This medicine is made of the whole plants of *Hemiboea subcapitata* (*Hemiboea subcapitata* Clarke).

**Morphology:** The herb is perennial. The stems are 10–40 cm tall, fleshy, scattered purplish brown spotted, unbranched. The leaves are alternate. The leaf blades are slightly fleshy, elliptic, ovate-lanceolate or obovate-lanceolate, 3–22 cm long and 1.4–8 cm wide, apically acute or acuminate, basally cuneate or decurrent, dark green, abaxially pale green or purplish red. There are vermiform scleroids dispersed in leaf mesophyll. The cymes are axillary or pseudoterminal; the peduncles are 2–4 cm long, glabrous. The involucre are globose, 1.5–2.2 cm in diameter, apically cuspidate. The pedicels are stout, 2–5 mm long. There are 5 sepals, which are long elliptic, 6–9 mm long and 3–4 mm wide. The corollas are white, purple spotted, 3.5–4.2 cm long; the tubes are 2.8–3.5 cm long, sparsely glandular pubescent outside, inside with a ring of hairs above base by 5–6 mm. The mouths are 13–15 mm in diameter, and 5–6 mm in diameter above base. The adaxial lips are 2-lobed, lobes being semiorbicular; the abaxial lips are 3-lobed, lobes being semiorbicular. The filaments of stamens are narrowly linear; the anthers are ellipsoid. There are 3 staminodes; the central one is ca. 2 mm long, while the lateral two are 5–8 mm long. The pistils are 3.2–3.5 cm long; the ovaries are linear, stigma being obtuse and slightly wider than styles. The capsules are linear-lanceolate, somewhat curved, 1.5–2.2 cm long, 3–4 mm wide at base, glabrous. The flowering period is from September to October. The fruiting period is from October to December.

**Habitat:** It grows on rocks in valley forests or wet places along streams between 100–2100 m.

**Distribution:** It is distributed in the provinces of Shaanxi, Gansu, Zhejiang, Jiangxi, Hubei, Hunan, Guangdong, Guangxi, Sichuan, Chongqing, Guizhou, and Yunnan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, washed, cut up, and then dried in the sun.

**Natural Taste and Meridian Tropism:** It is slightly bitter and astringent in taste, cool in property, a little toxic.

**Functions:** Clearing heat and detoxicating, promoting secretion of body fluid, relieving coughing and promoting diuresis, It is often used for treatment of heat, snake bites, swelling of sore and boil, burn and scald.

**Use and Dosage:** 15–30 g per dose, decocted in water for oral use. For external treatment, the fresh products are mashed and applied to the affected areas.





## 5.13 Family: Gesneriaceae

### 5.13.1 *Paraboea crassifolia*

**Chinese Name(s):** hou ye zhu mao ju tai, hou lian pi, shi tou cai.

**Source:** This medicine is made of the whole plants of *Paraboea crassifolia* (*Paraboea crassifolia* (Hemsl.) Burt).

**Morphology:** The herb is perennial. The rhizomes are terete, 0.5–1.5 cm long and 5–9 mm in diameter, with many fibrous roots. The leaves are basal, sessile. The leaf blades are thick and fleshy, narrowly obovate, 3.5–9 cm long and 1.5–3.2 cm wide, apically orbicular or obtuse, basally attenuate, adaxially glaucous woolly, abaxially pale brown cobwebby woolly. There are 2–4 cymes, which are with 4–12 flowers per inflorescence. The peduncles are 8–12 cm long, pale brown cobwebby woolly. The calyxes are ca. 3 mm long, 5-cleft to near base, lobes being equal. The corollas are purple, glabrous, 1–1.4 cm long and ca. 9 mm in diameter. The tubes are short and broad, 6–7 mm long and ca. 6 mm in diameter. The limbs are bilabiate, the adaxial lips are 2-lobed, lobes being equal, 3–4 mm long; the abaxial lips are 3-lobed, lobes being suborbicular, 3–4 mm long. There are 2 stamens, which borne near base of corolla; the filaments are narrowly linear; the anthers are narrowly oblong, 2.5–3 mm long and 1–1.2 mm wide. There are 2 staminodes, which are 2–2.5 mm long, borne next to corolla base by 1.5 mm. The pistils are glabrous, 8–10 mm long; the ovaries are oblong, shorter than styles, 3–4 mm long and 0.8–1 cm in diameter; the styles are 5.5–6 mm long; the stigmas are capitate. The flowering period is from June to July. The fruiting period is from August to September.

**Habitat:** It grows on stony cliffs on mountains ca. 700 m.

**Distribution:** It is distributed in the provinces of Hubei, Chongqing, and Guizhou.

**Acquisition and Processing:** The whole plants are harvested all year round, washed, used when fresh or dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cool in property.

**Functions:** Clearing heat and dampness, relieving coughing and asthma, It is often used for treatment of jaundice hepatitis, cough, bronchitis, asthma, and dysentery.

**Use and Dosage:** 6–10 g per dose, decocted in water for oral use. For external treatment, the products are decocted for washing with or ground to powder for application to the affected areas.





## 5.14 Family: Gesneriaceae

### 5.14.1 *Paraboea sinensis*

**Chinese Name(s):** zhu mao ju tai.

**Source:** This medicine is made of the whole plants of *Paraboea sinensis* (*Paraboea sinensis* (Oliv.) B. L. Burtt).

**Morphology:** The plant is a small shrub. The stems are often curved, up to 30 cm in height; the young branches are brown pannose, internodes being short. The leaves are opposite, petiolate. The leaf blades are oblong, oblong-ob lanceolate or lanceolate, 5.5–25 cm long and 2.4–9 cm wide, apically mucronate, basally cuneate or broadly cuneate, adaxially glaucous or pale brown woolly, then glabrous, abaxially densely pale brown pannose. The cymes are axillary by pairs, with ca. 10 flowers. The peduncles are 2.5–5.5 cm long; the pedicels are 8–10 mm long. The calyxes are greenish white, often purplish. The corollas are purplish blue, 1.5–2 cm long and ca. 1.5 cm in diameter. The tubes are 1–1.3 cm long. The limbs are broad, bilabiate; the adaxial lips are short, 2-lobed, lobes being ca. 7 mm long and ca. 5 mm wide; the abaxial lips are 3-lobed, lobes being ca. 5 mm long and ca. 5.5 mm wide. The upper parts of filaments are dilated, while the lower parts are flattened. The anthers are narrowly oblong, ca. 4 mm long and ca. 2 mm wide. There are 1 or 3 staminodes, which are 2–3 mm, borne next to corolla base by 2 mm. The pistils are glabrous, 6.5–10 mm long. The ovaries are oblong, ca. 5 mm long and ca. 1.2 mm in diameter. The styles are terete, ca. 5 mm long; the stigmas are capitate. The capsules are linear, 3.5–4.5 cm long and 2–3 mm in diameter, spirally twisted. The seeds are narrowly oblong, ca. 0.7 mm long. The flowering period is from June to July. The fruiting time is August.

**Habitat:** It grows on crevices of rocks or on cliffs in mountain forests.

**Distribution:** It is distributed in the provinces of Guangxi, Yunnan, Guizhou, Chongqing, and Hubei, as well as in Myanmar, Thailand, and Vietnam.

**Acquisition and Processing:** The whole plants are harvested all year round, washed, used when fresh or dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cool in property.

**Functions:** Clearing heat and dampness, relieving cough and asthma, it is often used for treatment of jaundice hepatitis, cough, bronchitis, asthma, and dysentery.

**Use and Dosage:** 6–10 g per dose, decocted in water for oral use. For external treatment, the products are decocted for washing with or ground to powder for application to the affected areas.





## 5.15 Family: Bignoniaceae

### 5.15.1 *Campsis grandiflora*

**Chinese Name(s):** ling xiao hua, hong hua dao shui lian, shang shu long.

**Source:** This medicine is made of the dried flowers of *Campsis grandiflora* (*Campsis grandiflora* (Thunb.) Schum.)

**Morphology:** The plant is a woody liana, deciduous, usually climbing trees or walls by aerial roots. The leaves are opposite, odd-pinnately compound, often 7–9-foliolate. The leaflets are opposite, papery, ovate or narrowly ovate, 4–6 cm long and 1.5–4 cm wide, apically acuminate, basally broadly cuneate, margins being serrate. There are 5–8 lateral veins per side. The petiolules are ca. 5 mm long. The flowers are red, large, forming terminal panicles, lax. The calyxes are campanulate, leathery, ca. half of corollas length, deeply 5-lobed to near middle; the lobes are triangular, acuminate. The corollas are funnelform-campanulate, 4–6.5 cm long or slightly longer, ca. 5 cm long at anthesis; the limbs are 5-lobed, lobes being orbicular, subequal, spreading. There are 4 stamens, 2 longer ones and 2 shorter ones, which do not exerted. The capsules are loculicidal, with numerous winged seeds. The flowering period is from May to August.

**Habitat:** It grows on valleys, streamside, and sparse forests.

**Distribution:** It is distributed in the Yangtze River Basin, and Taiwan, Fujian, Henan, Hebei, Shandong, Shaanxi, Guangxi, Guangdong of China, as well as in Japan, Vietnam, and India.

**Acquisition and Processing:** The flowers are collected in summer and autumn when blooming, and dried in the sun.

**Medicinal Properties:** The product is mostly curved, about 5 cm long when flattened. The calyx is fusiform, leathery, about 2 cm long, dark brown, with 5 long and acute lobes and 5 obvious longitudinal veins. The corolla is yellowish brown, campanulate, bell shaped, 5-lobed, lobes being semicircular, with brownish red veinlets and brown patches on the outside. There are 4 stamens, which inserted to the corolla tube, 2 longer ones and 2 shorter ones. It is slightly fragrant, slightly bitter and slightly sour in taste. The products complete and yellowish brown are better in quality.

**Natural Taste and Meridian Tropism:** It is sour in taste, slightly cold in property, belonging to the meridians of liver and pericardium.

**Functions:** Promoting blood circulation and unblocking meridians, cooling blood and expelling pathogenic wind, and it is often used for treatment of irregular menstruation, amenorrhea, abdominal distention and pain, leucorrhea, rubella, and pruritus.

**Use and Dosage:** 3–9 g per dose for flowers, decocted in water for oral use. For external treatment, fresh products are mashed for application to the affected areas. Pregnant women should use it with caution.

**Prescription Example(s):**

1. Clinical diagnoses and symptoms: irregular menstruation, amenorrhea due to blood stasis: *Campsis grandiflora*, rose each 9 g, *Leonurus japonicus*, *Salvia miltiorrhiza* each 15 g, *Carthamus tinctorius* 6 g, decocted in water for oral use.
2. Clinical diagnoses and symptoms: acute gastroenteritis: *Campsis grandiflora* root 30 g, ginger 3 tablets, decocted in water for oral use, one dose a day.





## 5.16 Family: Bignoniaceae

### 5.16.1 *Catalpa ovata*

**Chinese Name(s):** zi shu, chou wu tong, huang jin shu, jiang dou shu.

**Source:** This medicine is made of the root barks of *Catalpa ovata* (*Catalpa ovata* G. Don.)

**Morphology:** The plant is a tree, up to 15 m in height. The crowns are umbel-like; the stems are erect; the young branches are sparsely pilose. The leaves are opposite or nearly so, sometimes whorled, broadly ovate, nearly as long as wide, ca. 25 cm long, apically acuminate, basally cordate, margins being entire or sinuate, often 3-lobed; the leaf blades are coarse on both surfaces, puberulent or glabrescent; the lateral veins are in 4–6 pairs, palmately 5–7-veined basally. The petioles are 6–18 cm long. The panicles are terminal. The peduncles are sparsely puberulent, 12–28 cm long. The calyxes are globose in bud, bilabiate, 6–8 mm long. The corollas are campanulate, pale yellow, yellow 2-striate and purple spotted inside, ca. 2.5 cm long and ca. 2 cm in diameter. There are 2 fertile stamens; the filaments inserted at corolla tubes; the anthers are divergent. There are 3 staminodes. The ovaries are superior, rod-shaped. The styles are filiform; the stigmas are 2-lobed. The capsules are linear, nodding, 20–30 cm long and 5–7 mm thick. The seeds are long ellipsoid, 6–8 mm long and ca. 3 mm wide, with flattened long hairs at both ends.

**Habitat:** It is usually cultivated near villages or trailside.

**Distribution:** It is distributed in the provinces and regions of the Yangtze River Basin, and north of it, as well as in Japan.

**Acquisition and Processing:** The root barks are collected in summer and autumn, and dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cold in property.

**Functions:** Clearing heat and dampness, downbearing counterflow and checking vomiting, killing insects, and relieving itching, and it is often used for treatment of damp heat jaundice, inverse of stomach Qi and vomiting, scabies, eczema, and skin itching.

**Use and Dosage:** 6–15 g per dose for flowers, decocted in water for oral use. For external treatment, fresh products are mashed for application to the affected areas.





## 5.17 Family: Bignoniaceae

### 5.17.1 *Incarvillea mairei*

**Chinese Name(s):** ji rou shen, tu di huang, shan yang shen, dian chuan jiao hao.

**Source:** This medicine is made of the roots of *Incarvillea mairei* (*Incarvillea mairei* (Lévl.) Grierson).

**Morphology:** The herb is perennial, 30–40 cm tall. The leaves are basal, 1-pinnately compound. The lateral leaflets are in 2–3 pairs, ovate; the terminal leaflets are 2–3 times larger than lateral ones, broadly ovate, apically obtuse, basally slightly cordate, 7–11 cm long and 6–9 cm wide, margins being obtuse dentate. The inflorescences are racemes, 2–4-flowered. The inflorescence axes are up to 22 cm in length. The bracteoles are linear, ca. 1 cm long. The calyxes are campanulate, ca. 2.5 cm long, calyx teeth being triangular, apically acuminate. The corollas are purplish red and pink, 7–10 cm long and 5–7 cm in diameter; the tubes are 5–6 cm long, yellowish at lower part; the lobes are orbicular. There are 4 stamens, which are didynamous; each pair of anthers are adherent and surrounding styles; the anthers are extremely divergent. The ovaries are 2-loculed. The styles are 5.5–6.5 cm long. The capsules are conical, 6–8 cm long and ca. 1 cm thick. The seeds are broadly obovoid, ca. 4 mm long and ca. 6 mm wide, pale brown, margins being winged. The flowering period is from May to July. The fruiting period is from September to November.

**Habitat:** It grows on alpine gravels, trailside in sunny slopes at an altitude of 2400 ~ 4500m.

**Distribution:** It is distributed in the provinces of Sichuan, Yunnan, and Tibet.

**Acquisition and Processing:** The roots are dug up in autumn and winter, washed, used when fresh or sliced, and dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and slightly bitter in taste, cool in property.

**Functions:** Cooling blood and producing body fluid, replenishing blood, and regulating menstruation, and it is often used for treatment of fracture, swelling and pain, postpartum lactation, deficiency, weakness after illness, dizziness, anemia, dyspepsia, etc.

**Use and Dosage:** 10–15 g per dose, decocted in water for oral use.





## 5.18 Family: Bignoniaceae

### 5.18.1 *Incarvillea younghusbandii*

**Chinese Name(s):** zang bo luo hua.

**Source:** This medicine is made of the roots of *Incarvillea younghusbandii* (*Incarvillea younghusbandii* Sprague).

**Morphology:** The plant is a herb, small, with perennial roots, 10–20 cm tall, stemless. The roots are fleshy, stout, 6–11 mm thick. The leaves are basal, 1-pinnately compound; the terminal leaflets are ovate to ovate-orbicular, 3–5 cm in length and in width, apically obtuse-orbicular, basally cordate; the lateral leaflets are ovate-elliptic, 1–2 cm long and ca. 1 cm wide. The flowers are solitary, or 3–6 flowers clustered in leaf axils. The calyxes are campanulate, 8–12 mm long; the mouths are ca. 3 mm in diameter; there are 5 calyx teeth, which are 5–7 mm long. The corollas are slender, funnellform, 4–5 cm long, ca. 3 mm in diameter at base, and ca. 8 mm in diameter in middle; the tubes are yellow, lobes being orbicular. There are 4 stamens, which are borne at base of corolla tubes. The pistils are exserted from corollas; the stigmas are flabellate. The capsules are crescent, 3–4.5 cm long, 4-angled. The seeds are ellipsoid, ca. 5 mm long and ca. 2.5 mm wide. The flowering period is from May to August. The fruiting period is from August to October.

**Habitat:** It grows on alpine sandy meadows or cushion thickets of slope gravels between 3600–5400 m.

**Distribution:** It is distributed in the provinces of Qinghai and Tibet, as well as in Nepal.

**Acquisition and Processing:** The roots are dug up in autumn and winter, washed, used when fresh or sliced and dried in the sun.

**Natural Taste and Meridian Tropism:** It is sweet and bland in taste, warm in property.

**Functions:** Nourishing and strengthening the body, it is often used for treatment of postpartum lactation, weakness after illness, dizziness, anemia, and so on.

**Use and Dosage:** 15–25 g per dose, decocted in water for oral use.



## 5.19 Family: Bignoniaceae

### 5.19.1 *Oroxylum indicum*

**Chinese Name(s):** mu hu die, qian ceng zhi, qian zhang zhi.

**Source:** This medicine is made of the seeds of *Oroxylum indicum* (*Oroxylum indicum* (Linn.) Kurz.)

**Morphology:** The plant is a tree, deciduous, 6–12 m tall or taller, with more thick barks. The leaves are large, opposite, 2- or 3-segmented, odd-pinnately compound, 60–120 cm long. The leaflet blades are thin leathery or subpapery, ovate or elliptic, 5–13 cm long, apically mucronate to acuminate, basally orbicular to broadly cuneate, margins being entire. The flowers are large, purple or white and purple striate, forming terminal racemes by numerous flowers; the peduncles are stout, longer than inflorescence axes, ca. 30 cm long. The pedicels are 6–25 mm long. The calyxes are fleshy, campanulate, ca. 25 mm long, apically truncate or denticulate. The corollas are fleshy, with foul smell, subcampanulate, often dilated on one side, ca. 6 cm long; the limbs are slightly bilabiate, 5-lobed, lobes being orbicular, subequal in size, margins being undulate rugose, with serrate notches. There are 5 stamens, which are all fertile, slightly exerted. The disks are fleshy. The capsules are large, linear, extremely flattened, 30–90 cm long and 5–8.5 cm wide, septifragal to 2-valved at maturity. There are numerous seeds, which are discoid, with membranous broadly wings.

**Habitat:** It grows on valleys, streamside, slopes, or sparse forests.

**Distribution:** It is distributed in the provinces of Guangdong, Fujian, Guangxi, Yunnan, Guizhou, Sichuan, as well as in tropical regions through Asia.

**Acquisition and Processing:** The mature fruits are harvested in autumn, exposed to the sun until cracking. Take out the seeds and then dry them in the sun.

**Medicinal Properties:** This product appears as butterfly-shaped sheets, with wings of 3.5–4 cm wide and 5–8 cm long, extending from three sides except the base, yellowish white on surface. The wings are translucent, sericeous, with clear veins of radiation, and often broken on margins. The kernel is in the center. After peeling off the seed coat, there is a layer of membranous endosperm and embryo in it. There are 2 cotyledons, which are butterfly shaped, yellowish green or yellow, 1–1.5 cm long. It is slight in odor and slightly bitter in taste. The products large and complete, white and glossy are better in quality.

**Natural Taste and Meridian Tropism:** It is bitter and sweet in taste, cool in property, belonging to the meridians of lungs, stomach, and liver.

**Functions:** Moistening the lungs, soothing the liver, harmonizing the stomach, and promoting granulation, and it is often used for treatment of coughing due to heat in lungs, acute laryngitis, bronchitis, pertussis, hoarseness, abdominal pain, sores, and carbuncles.

**Use and Dosage:** 5–15 g per dose, decocted in water for oral use.





## 5.20 Family: Bignoniaceae

### 5.20.1 *Radermachera sinica*

**Chinese Name(s):** cai dou shu, she shu, dou jiao shu, jie gu liang san.

**Source:** This medicine is made of the whole plants of *Radermachera sinica* (*Radermachera sinica* (Hance) Hemsl.)

**Morphology:** The plant is a tree, up to 10 m in height. The petioles, leaf rachises, and inflorescences are glabrous. The leaves are 2-pinnately compound, rarely 3-pinnately compound; the petioles are ca. 30 cm long. The leaflet blades are ovate to ovate-lanceolate, 4–7 cm long and 2–3.5 cm wide, apically caudate-acuminate, basally broadly cuneate, margins being entire; the lateral veins are in 5–6 pairs, ascending upward, glabrous on both surfaces; the lateral leaflets have sparse glands at one side near base. The lateral petiolules are no more than 5 mm in length; the terminal ones are 1–2 cm long. The panicles are terminal, erect, 25–35 cm long and 30 cm wide. The bracts are linear-lanceolate, up to 10 cm in length, caducous; the bracteoles are linear, 4–6 cm long. The calyxes are enclosed in bud, conical; there are 5 calyx teeth, which are ovate-lanceolate; midribs being conspicuous, ca. 12 mm long. The corollas are campanulate-funnelform, white to pale yellow, ca. 6–8 cm long, there are 5 lobes, which are orbicular, wrinkled, ca. 2.5 cm long. There are 4 stamens, which are didynamous, smooth, with staminodes, filiform. The ovaries are smooth, 2-loculed, the ovules are 2-rowed per locule; the styles are exerted; the stigmas are 2-lobed. The capsules are slender, nodding, terete, slightly curved, with numerous grooves, acuminate, up to 85 cm in length and ca. 1 cm in diameter; the pericarps are thin leathery, with small extremely inconspicuous lenticels. The seeds are ellipsoid, ca. 2 cm long and ca. 5 mm wide including wings. The flowering period is from May to September. The fruiting period is from October to December.

**Habitat:** It often grows in sparse forests of limestone slope.

**Distribution:** It is distributed in Hong Kong, Guangdong, Taiwan, Guangxi, Guizhou, and Yunnan of China, as well as in Bhutan.

**Acquisition and Processing:** The whole plants are harvested in summer and autumn, sliced, and dried in the sun.

**Natural Taste and Meridian Tropism:** It is bitter in taste, cool in property.

**Functions:** Clearing heat and detoxicating, dispersing blood stasis, and relieving swelling, and it is often used for treatment of heat-stroke, as well as for external treatment of fractures, snakebite, and carbuncle.

**Use and Dosage:** 9–30 g per dose, decocted in water for oral use. For external treatment, the products are mashed and applied to the affected areas.





## 5.21 Family: Bignoniaceae

### 5.21.1 *Tecoma capensis*

**Chinese Name(s):** ying gu ling xiao, zhu lin biao.

**Source:** This medicine is made of the whole plants or flowers of *Tecoma capensis* (*Tecoma capensis* (Thunb.) Lindl. [*Tecomaria capensis* (Thunb.) Spach].)

**Morphology:** The plant is a climbing shrub. The leaves are opposite, odd-pinnately compound, with no more than 7-foliolate. The petioles are 3–6 cm long; the petiolules are short. The leaflets are ovate to broadly elliptic, 1–2.5 cm long, apically mucronate or obtuse, basally broadly cuneate, margins being extremely irregularly serrate, glabrous or woolly along vein axils abaxially. The racemes are terminal. The calyxes are campanulate, 5-dentate. The corollas are funnelform, slightly curved, orange-red to red, with deep red longitudinal stripes, ca. 4 cm long; the upper lips are concave. The stamens are raised. The capsules are linear, 2.5–5 cm long, slightly compressed. The flowering period is from August to November.

**Habitat:** It is cultivated.

**Distribution:** It is cultivated in the provinces of Guangxi and Yunnan; native to Africa.

**Acquisition and Processing:** The whole plants and flowers are harvested in summer and autumn, and dried in the sun.

**Natural Taste and Meridian Tropism:** The stems and leaves are pungent in taste, neutral in property, and the flowers are sour in taste, cold in property.

**Functions:** The stem and leaf functions in dissipating blood stasis and relieving swelling, and are often used for treatment of fractures, and injuries caused by knocks and falls. The flower functions in unblocking meridians and promoting diuresis, and is often used for treatment of tuberculosis, pneumonia, bronchitis, asthma, and sore throat.

**Use and Dosage:** 10–15 g per dose, decocted in water for oral use. Pregnant women should not take it.



