

Common Chinese Materia Medica

Volume 7

Huagu Ye
Chuyuan Li
Wencai Ye
Feiyan Zeng
Editors



Chemical Industry Press Co., Ltd.



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Preface

Traditional Chinese medicine, a generic term for all medicines used by Chinese ethnic groups, including Han and minority races, reflects the Chinese nation's understanding of life, health, and diseases. Also, it is a pharmaceutical system that has a long tradition of unique theories and technical methods. Traditional Chinese medicine is the cream of the crop of the Chinese culture, which has played a very important role in the reproduction and prosperity of the Chinese nation for thousands of years.

With the research and development of traditional Chinese medical resources, many folk drugs are also added into the inventory of traditional Chinese medicine, making it encompass microbes, plants, animals, and minerals used for the prevention and treatment of diseases on the basis of Chinese traditional medical theories as well as other substances processed from them. Either produced in China or foreign lands, medications commonly used in traditional medical therapies and circulated in the market of medicinal materials are collectively called traditional Chinese medicine, but those folk medicines which are not expansively acknowledged are commonly referred to as herbal medicines. In recent years, owing to the changes in health concepts and medical models, the effects of traditional Chinese medicine in the prevention and treatment of common, frequent, chronic, and major diseases have been progressively acknowledged and accepted by the international community. At present, Chinese medicines have spread to 183 countries and regions. The discovery of artemisinin by Professor Youyou Tu, winner of the 2015 Nobel Prize in Physiology or Medicine, is a good indicator of the outstanding contribution made by traditional Chinese medicine to human health.

Traditional Chinese medications are time-honored, widely distributed, tremendously diverse, and complex in origins. These factors, coupled with the uneven quality of medical works in history as well as different conventions in drug use contributed to the common phenomena that several drugs are namesakes and the same drug is given many names. What adds to the complication is that novel drug varieties are emerging, resulting in contentions among professionals and unassured qualities of traditional Chinese medications.

In an effort to fully demonstrate the growing environment and attributes of the original plants and animals contained in this series of books, systematically introduce their origins, and clarify main differences between approximate species and the easily confused species, compilers visited places throughout China, against unimaginable hardships. A large number of unedited color pictures were taken in plant habitats, which vividly reflected the original appearance of the plants in different growing periods. Thousands of high-resolution pictures of commonly used traditional Chinese medications were taken, which remarkably and scientifically presented distinguishing features of medicinal materials.

Experts in the application of Chinese herbal medicines have scoured a colossal number of materials to carefully codify exhaustive information related to the medicines, including the alias, sources, morphology, habitats, distributions, acquisition and processing methods, medicinal properties, tastes, functions, use and dosages, cautions in use, and prescription samples and notes. This series of books is arranged in a systematic way—from algae, fungi, ferns, gymnosperms, angiosperms, resins, and animals to minerals.

For the convenience of readers, the book will be published in 10 volumes. This book series seeks to describe the habitat distributions and historical evolution of traditional Chinese medicine from a global perspective. In combination with contemporary scientific research results, this book series provides reference for the protection and scientific use of traditional Chinese medical resources.

Due to reasons like the large assortment of traditional Chinese medications and the editors' knowledge limitations, errors and incompleteness are inevitable. We welcome critical remarks from readers in the medical arena both at home and abroad.

Editorial committee of Common Chinese Materia Medica (I–X).

Guangzhou, China
August, 2019

Huagu Ye
Chuyuan Li
Wencai Ye
Feiyan Zeng

Abstract

This volume describes 248 species of 9 families of medicinal plants, mainly including *Adina rubella*, *Gardenia jasminoides*, *Hedyotis diffusa*, *Morinda officinalis*, *Rubia cordifolia*, *Uncaria hirsuta*, *Uncaria macrophylla*, *Uncaria rhynchophylla*, *Uncaria sessilifructus*, *Uncaria sinensis* of Rubiaceae; *Lonicera confusa*, *Lonicera hypoglauca*, *Lonicera macranthoides*, *Lonicera japonica* of Caprifoliaceae; *Patrinia scabiosaefolia*, *Patrinia villosa*, *Nardostachys jatamansi* of Valerianaceae; *Dipsacus asperoides* of Dipsacaceae; *Arctium lappa*, *Artemisia annua*, *Artemisia argyi*, *Artemisia capillaris*, *Artemisia scoparia*, *Atractylodes lancea*, *Atractylodes macrocephala*, *Dendranthema indicum*, *Dendranthema morifolium*, *Eupatorium chinense*, *Eupatorium fortunei*, *Inula helenium*, *Saussurea costus*, *Saussurea involucrata*, *Senecio scandens*, *Serratula chinensis*, *Siegesbeckia orientalis*, *Solidago decurrens*, *Taraxacum mongolicum*, *Tussilago farfara*, *Xanthium sibiricum* of Compositae; *Gentiana crassicaulis*, *Gentiana manshurica*, *Gentiana rigescens*, *Gentiana scabra*, *Swertia pseudochinensis* of Valerianaceae; *Lysimachia christinae* of Primulaceae and *Plantago asiatica* of Plantaginaceae.

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, and usage and dosage of these medicinal plants, and attaches unedited color pictures and pictures of part herbal medicines of each species.

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Chapter 1

Medicinal Angiosperms of Rubiaceae



Huagu Ye, Chuyuan Li, Wencai Ye, Feiyan Zeng, Fangfang Liu,
Yuanyuan Liu, Faguo Wang, Yushi Ye, Lin Fu, and Jianrong Li

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This chapter introduces 30 species of medicinal plants in 1 family, mainly including *Adina pilulifera*, *Adina rubella*, *Catunaregam spinosa*, *Cephalanthus tetrandrus*, *Chassalia curviflora*, *Coffea arabica*, *Coptosapelta diffusa*, *Damnacanthus indicus*, *Diplospora dubia*, *Emmenopterys henryi*, *Galium aparine*, *Galium bungei*, *Gardenia jasminoides*, *Gardenia stenophylla*, *Hedyotis acutangula*, *Hedyotis auricularia*, *Hedyotis diffusa*, *Hedyotis hedyotideae*, *Hedyotis mellii*, *Hedyotis tenelliflora*, *Hedyotis verticillata*, *Ixora chinensis*, *Lasianthus chinensis*, *Morinda officinalis*, and *Morinda parvifolia* of Rubiaceae.

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

1.1 Family: Rubiaceae

1.1.1 *Adina pilulifera*

Chinese Name(s): shui tuan hua, da ye shui yang mei.

Source: This medicine is made of the whole plants of *Adina pilulifera* (*Adina pilulifera* (Lam.) Franch. ex Drake).

Morphology: The plant is a small tree, up to 5 m in height. The apical buds are inconspicuous and are loosely included by lax stipules. The leaves are opposite, thick papery, elliptic to elliptic-lanceolate, 4–12 cm in length, 1.5–3 cm in width, apically acute to acuminate with tip usually ultimately blunt, basally obtuse or cuneate, sometimes gradually narrowed, abaxially glabrous, or sparsely puberulent. The lateral veins are in 6–12 pairs, sparsely puberulent in axils of the vein. The petioles are 2–6 mm long, glabrous or pubescent. The stipules are deeply bifid, caducous. The flowering heads are obviously axillary, very rarely terminal, 4–6 mm in diameter across calyces. The inflorescence axis is solitary, unbranched. The bracteoles are linear to linear-clavate, glabrous. The peduncles are 3–4.5 cm long, with five vernal bracteoles below middle. The calyx tubes are basally puberulent, scattered hairs on the upper part. The sepals are linear-oblong or spatulate. The corollas are white, narrow funnelform, corolla tubes being puberulent and corolla lobes being ovate-oblong. There are five stamens. The filaments are short, inserted at the corolla throat. The ovaries are two-celled. The styles are exserted, stigmas being small, globose or ovoid. The fruiting heads is 8–10 mm diameter. The capsules are cuneate in outline, 2–5 mm long. The seeds are oblong, with narrow wings at both ends. The flowering period is from June to July.

Habitat: It grows under a sparse forest in a valley or on a road in the wilderness, beside a stream.

Distribution: It is distributed in provinces of Hainan, Guangdong, Guangxi, Hunan, Jiangxi, Fujian, Zhejiang, Jiangsu, Anhui, Guizhou, and Yunnan, as well as in Japan and Vietnam.

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

Natural Taste and Meridian Tropism: It's bitter and astringent in taste, cool in property.

Functions: Clearing heat, detoxicating, dispersing blood stasis, and relieving pain, the root is used for treatment of cold and fever, mumps, sore throat, and rheumatic pain. The flower and fruit are used for bacterial dysentery, acute gastroenteritis, and trichomonas vaginalis. The leaf and stem barks are used for bruise, fracture, furuncle, and skin eczema.

Use and Dosage: 15–30 g per dose, decocted in water for oral use.





1.2 Family: Rubiaceae

1.2.1 *Adina rubella*

Chinese Name(s): shui yang mei, shui shi liu, xiao ye tuan hua, bai xiao mu, yu chuan sai.

Source: This medicine is made of infructescence with flowers of *Adina rubella* (*Adina rubella* Hance).

Morphology: The plant is a deciduous shrub, 1–3 m high. The branchlets are slender, reddish-brown, and pilose. The leaves are opposite, subsessile, membranous, ovate-lanceolate to ovate-elliptic, 2.5–4 cm in length, 8–12 mm in width, apically often acuminate, basally subrounded or broadly cuneate, entire at margins, abaxially slightly deflexed when dry, sparsely pilose along veins, or abaxially glabrescent. The stipules are small and deciduous. The flowers are blooming in summer, purplish red, subsessile, integrated to globose heads which are terminal or sometimes axillary, with long peduncles, 1.5–2 cm in diameter. The calyx tubes are sparsely pubescent, five-lobed, lobes being spatulate or spatulate-clavate. The corollas are 3–5 mm long, lobes being subtriangular. The fruiting heads are globose, 8–12 mm in diameter. The capsules are ovate-cuneate, 3–4 mm long. The flowering and fruiting period: May to December.

Habitat: It grows in low-elevation sparse forests or open areas.

Distribution: It is distributed in provinces and regions south of the Yangtze River and Taiwan, as well as in North Korea.

Acquisition and Processing: The infructescence are harvested from September to December, and dried in the sun.

Medicinal Properties: This product is spherical, shaped like bayberry, with a diameter of 0.3–1 cm. It is brownish yellow and rough on surfaces. The capsule, which falls off if slightly rubbed, showing a spherical and hard axis of fruit sequence,

is cuneate, 3–4 mm long, light yellow, with brown five-lobed calyx eaves at the top, and the lobes are spiny lobes, with several seeds inside. The flowers are occasionally seen. It is slight in odor and bitter in taste. The products large, complete, and yellowish brown are better in quality.

Natural Taste and Meridian Tropism: It's bitter and astringent in taste, cool in property, belonging to the meridians of the lungs and large intestine.

Functions: Clearing heat, detoxicating, dispersing blood stasis, and relieving pain, it's often used for treatment of fever due to infection, sore throat, mumps, rheumatism and bone pain, bacterial dysentery, hepatitis, acute gastroenteritis, and trichomoniasis.

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

Prescription Example(s):

1. Clinical diagnoses and symptoms: dysentery—(a) *Adina rubella* whole plants 30 g, decocted in water for oral use, three times a day. (b) flower and infructescence 15 g, decocted in water for oral use, three times a day. (c) *Adina rubella* tablet, each tablet containing 0.25 g of dry extract. Take four to six tablets each time, with warm boiled water after meal, three times a day. The dosage should be reduced for children.
2. Clinical diagnoses and symptoms: swelling and pain of gums—*Adina rubella*, Japanese raspberry root, each 12 g, screw tree root, and *Radix zanthoxyli* 9 g each, gypsum 30 g, decocted in water for oral use.
3. Clinical diagnoses and symptoms: *Trichomonas vaginalis*—(a) 20% liquid extract is made from *Adina rubella* flower, and infructescence is applied to the vagina. (b) Use 3 g of *Adina rubella* extract tablet and put it into the vagina.





1.3 Family: Rubiaceae

1.3.1 *Catunaregam spinosa*

Chinese Name(s): shan shi liu, zhu du lei, jia shi liu, ci zi, shan pu tao.

Source: This medicine is made of the roots, leaves, and fruits of *Catunaregam spinosa* (*Catunaregam spinosa* (Thunb.) Tirveng [*Randia spinosa* (Thunb.) Poir.]).

Morphology: The plant is a shrub or a small tree, 1–10 m tall, sometimes climbing-like, multibranched. The branches are stout, puberulent to glabrescent. The thorns are axillary, paired, stout, 1–5 cm long. The leaves are papery or subleathery, opposite or clustered on the lateral short branches that are suppressed, obovate or oblong-obovate, rarely ovate to spatulate, 1.8–11.5 cm long, 1–5.7 cm wide, apically obtuse or mucronate, basally cuneate or decurrent, glabrous to strigillose on both surfaces, or sparsely

hirsute at least along principal veins, often with pilosulous domatia in abaxial axils, and entire or often shortly ciliate at margins. The slender lateral veins are in 4–7 pairs. The petioles are 2–8 mm in length, puberulent to glabrous. The stipules are membranous, ovate, apically acute to aristate, 3–4 mm long, caducous. The inflorescences are terminal on lateral short shoots together with tufted leaves, one- to three-flowered. The pedicels are 2–5 mm in length, brown villous. The calyx tubes are campanulate or ovate, 3.5–7 mm long, 4–5.5 mm wide, brown villous outside, limbs being slightly dilated, five-lobed, lobes being broadly elliptic, acute to rounded at the apex, 5–8 mm in length, 3–6 mm in width, with three veins, brown villous outside, hispidulous inside. The corollas are white at first, then becoming yellowish, campanulate, densely sericeous outside, tubes being broad and about 5 mm long, sparsely villous in the throat, five-lobed, lobes being ovate or ovate-oblong, 6–10 mm long, 5.5 mm wide, apically rounded. The anthers are linear-oblong, exserted, about 3 mm long. The ovaries are two-loculed, each locule being with many ovules. The styles are about 4 mm long, and the stigmas are fusiform, the head being two-cleft, about 2 mm long. The berries are large, globose, 2–4 cm in diameter, glabrous or puberulent, apically with persistent sepals, often with thick pericarps. The seeds are numerous. The flowering period is from March to June. The fruiting period is from May to January of the following year.

Habitat: It grows in the thickets of hilly wilderness, also cultivated as hedges.

Distribution: It is distributed in provinces and regions of Taiwan, Guangdong, Hainan, Macau, Hong Kong, Guangxi, and Yunnan, as well as in Indonesia, Malaysia, Vietnam, Laos, Cambodia, Thailand, Myanmar, Bangladesh, Nepal, India, Pakistan, Sri Lanka, and Eastern Africa.

Acquisition and Processing: The roots are dug up all year-round and used when fresh.

Natural Taste and Meridian Tropism: It's bitter and astringent in taste, cool in property, and poisonous.

Functions: Removing blood stasis and swelling, it's often used for treatment of injury and blood stasis caused by knocks and falls by applying stir-fried fresh roots with wine to the affected areas.

Use and Dosage: For external treatment, the fresh products are mashed and applied to the affected areas.





1.4 Family: Rubiaceae

1.4.1 *Cephalanthus tetrandrus*

Chinese Name(s): feng xiang shu, jia yang mei, zhu hua shu, shui ke mu, ma yan shu.

Source: This medicine is made of the roots, leaves, and inflorescences of *Cephalanthus tetrandrus* (*Cephalanthus tetrandrus* (Roxb.) Ridsd et Bakh. f. [*Nauclea tetrandra* Roxb.]).

Morphology: The plant is a deciduous shrub or a small tree, 1–5 m in height. The shoots are subangled, pubescent, and the old branches are terete, brown, glabrous. The leaves are opposite or whorled, subleathery, ovate to ovate-lanceolate, 10–15 cm long, 3–5 cm wide, apically mucronate, basally rounded to subcordate, adaxially glabrous to sparsely puberulent, abaxially usually glabrous, or densely pilose. The lateral veins are in 8 to 12 pairs, often with pilosulous domatia in axils. The petioles are 5–10 mm long, pilose to subglabrous. The stipules are broadly ovate, 3–5 mm long, apically cuspidate, densely tomentose, often with a black terminal gland. The flowering heads are 8–12 mm in diameter across, terminal or axillary. The peduncles are 2.5–6 cm long, unbranched or 2–3-branched, pilose. The bracteoles are clavate to clavate-spatulate. The calyx tubes are 2–3 mm long, sparsely pubescent, often basally pubescent. There are four sepals, which are apically obtuse, densely pubescent, often with one black gland in sinuses. The corollas are white, tube being 7–12 mm long, glabrous outside, pubescent inside, lobes being oblong, usually with a black gland in sinuses. The stigmas are clavate, exserted. The fruiting heads are 10–20 mm in diameter. The mericarps are 4–6 mm long, with persistent calyx eaves at the apex. The seeds are brown. The flowering period is at late spring and early summer.

Habitat: It grows near a slightly shaded ditch or stream and wetland.

Distribution: It is distributed in provinces and regions of Hainan, Guangdong, Guangxi, Hunan, Fujian, Jiangxi, Zhejiang, and Taiwan, as well as in India, Bangladesh, Myanmar, Thailand, Laos, and northern Vietnam.

Acquisition and Processing: The roots, leaves, and inflorescences are harvested in summer and autumn and dried in the sun.

Natural Taste and Meridian Tropism: It's bitter in taste, cool in property.

Functions: The root functions in clearing heat and detoxicating, removing blood stasis and pain, stopping bleeding and promoting granulation, dispelling phlegm, and relieving coughing. The leaf functions in clearing heat and detoxicating. The inflorescence functions in clearing heat and dampness. The roots are used for the treatment of influenza, upper respiratory tract infection, sore throat, pneumonia, cough, orchitis, mumps, and mastitis, as well as for external treatment of injuries caused by falls (or root barks soaked in wine for 1–2 days, baked and ground to powder for application, which functions in stopping bleeding and relieving pain), boils, and fractures. The inflorescences are often used for enteritis and bacterial dysentery. The leaves are used for external treatment for injury and fracture.

Use and Dosage: 15–30 g per dose for roots, 15–20 for inflorescences, decocted in water for oral use. For external treatment, proper amounts of fresh root barks and leaves are mashed and applied to the affected areas.





1.5 Family: Rubiaceae

1.5.1 *Chassalia curviflora*

Chinese Name(s): wan guan hua, chai sha li, jia jiu jie mu.

Source: This medicine is made of the roots of *Chassalia curviflora* (*Chassalia curviflora* Thwaites).

Morphology: The plant is a small shrub, erect, 1–2 m tall. The leaf blades are membranous, oblong-elliptic or oblanceolate, 10–20 cm long, 2.5–7 cm wide, apically acuminate to long acuminate, basally cuneate, entire at margins, yellow-green when dry. The lateral veins are in 8–10 pairs, slender, adaxially clearly visible. The petioles are 1–4 cm in length, glabrous. The stipules are persistent, broadly ovate or triangular, 4–4.5 mm long, mucronate or obtuse, entire or shortly bifid, basally short-connate. The cymes are multiflowered, terminal, 3–7 cm long, with slightly flattened axis, axis being purplish-red. The bracts are small, lanceolate. The flowers are sessile, trimorphic: with exserted anthers and included stigmas, with included anthers and exserted stigmas, or with exserted both anthers and stigmas. The calyxes are obovate, 1–1.5 mm long, and the lobes are five-lobed, lobes being less than 0.5 mm, mucronate. The corolla tubes are pubescent inside and outside, 4–5-lobed, lobes being ovate-triangle, ca. 2 mm long, apically thickened. The drupes are oblate, 6–7 mm long. The flowering period is in spring and summer.

Habitat: It grows on wetlands in low-altitude forests.

Distribution: It is distributed in provinces of Hainan, Guangdong, Guangxi, Yunnan, and Tibet, as well as in Indochina Peninsula, India, Bhutan, Sri Lanka, Bangladesh, Malaysia, and Kalimantan.

Acquisition and Processing: The roots are dug up in summer and autumn and dried in the sun.

Natural Taste and Meridian Tropism: It's pungent and bitter in taste, cold in property.

Functions: Clearing heat and detoxicating and dispelling wind and dampness, it's often used for treatment of rheumatism, pneumonia, coughing, ear disease, eye disease, and sore throat.

Use and Dosage: 6–15 g per dose, decocted in water for oral use.





1.6 Family: Rubiaceae

1.6.1 *Coffea arabica*

Chinese Name(s): ka fei, xiao li ka fei.

Source: This medicine is made of the seeds of *Coffea arabica* (*Coffea arabica* Linn.).

Morphology: The plant is a small tree or a large shrub, 5–8 m tall. The leaves are thin leathery, ovate-lanceolate or lanceolate, 6–14 cm in length, 3.5–5 cm in width, apically long acuminate, the acuminate parts being 10–15 mm long, basally cuneate or slightly obtuse, rarely rounded, entire or shallowly undulate at margins, glabrous on both surfaces, with or without domatia in the axils of the dorsal veins. The mid-veins are obviously raised on both surfaces, and the lateral veins are in 7–13 pairs. The petioles are 8–15 mm long. The stipules are broadly triangular, apically aristate on youngest branches, often cuspidate on the old branches. The inflorescences are with one to several cymes in each axil, each cyme being two- to five-flowered, sessile, or shortly pedicellate. The flowers are fragrant, with pedicels 0.5–1 mm long. The bracts are more or less connate, dimorphic, two of which are broadly triangles, subequal in length and width, and others are lanceolate, twice as long as wide, leaf-like. The calyx tubes are 2.5–3 mm long, limbs being truncate or five-denticulate. The corollas are white, various in length by different variety, generally 10–18 mm long, often five-lobed at the apex, rarely four-lobed or six-lobed, the lobes often being longer than the corolla tube, obtuse. The anthers exserted, 6–8 mm long. The styles are 12–14 mm, stigmas being two-cleft, 3–4 mm long. When mature, the berries are broadly ellipsoid, red, 12–16 mm long, 10–12 mm in diameter, exocarps being hard and mesocarps being fleshy, sweet. The seeds are abaxially obviously

raised, adaxially flat, and with longitudinal grooves, 8–10 mm in length. The diameter is 5–7 mm. The flowering period is from March to April.

Habitat: It's cultivated.

Distribution: It is cultivated in provinces of Guangdong, Hainan, Taiwan, Fujian, Guangxi, Guizhou, Yunnan, and Sichuan and originated from Ethiopia.

Acquisition and Processing: The seeds are collected in autumn and winter and dried in the sun.

Natural Taste and Meridian Tropism: It's bitter and astringent in taste, neutral in property.

Functions: Helping digestion and promoting diuresis, it's often used for treatment of dyspepsia and dysuria.

Use and Dosage: 1–3 g per dose, decocted in water for oral use.





1.7 Family: Rubiaceae

1.7.1 *Coptosapelta diffusa*

Chinese Name(s): liu su zi, niu lao yao, niu lao yao teng, liang teng, mian bi teng, chou sha teng.

Source: This medicine is made of the roots of *Coptosapelta diffusa* (*Coptosapelta diffusa* (Champ. ex Benth.) Van Steenis).

Morphology: The plant is a climbing shrub, 2–5 m long. The branches are numerous, terete, with obvious nodes, pubescent or glabrous, densely covered with hispids when young, hispids being yellow-brown and appressed. The leaf blades are papery to leathery, ovate, ovate-oblong to lanceolate, 2–9.5 cm long, 0.8–3.5 cm wide, apically mucronate, acuminate to tail-acuminate, basally rounded, yellowish green when dry, adaxially rather shiny and glabrous except strigose to hirsute along costa, abaxially glabrous except strigose to hirsute on principal veins, and the margins being glabrous or sparsely ciliate. The lateral veins are in three to four pairs. The petioles are 2–5 mm long, hirsute to strigose or rarely glabrous. The stipules are lanceolate, 3–7 mm long, deciduous. The flowers are solitary in leaf axils, often opposite. The pedicels are slender, 3–18 mm long, glabrous or pilose, often with a pair of bractlets about 1 mm long at the upper part. The calyxes are 2.5–3.5 mm long, glabrous to strigillose, and the tubes are ovate. The limbs are five-lobed, the lobes being ovate-triangular, 0.8–1 mm in length. The corollas are white or yellow, outside sericeous, 1.2–2 cm in length. The corolla tubes are cylindrical, 0.8–1.5 cm long, 1.5 mm wide, pilose inside; there are five corolla lobes, which are oblong, 4–6 mm long, 1.5 mm wide, pilose on the middle of the inner surface, reflexed when opening. There are five stamens. The filaments are short. The anthers are linear-lanceolate, 3.5–4 mm long, exserted. The styles are about 13 mm long, glabrous, stigmas being spindle-shaped, 2.5–3 mm long, exserted. The capsules are compressed globose, with one shallow groove in the middle, 5–8 mm in diameter, 4–6 mm in length, light yellow, the pericarp being hard, woody, with persistent sepals on the apex, carpophodia being slender stalks, up to 2 cm in length. The seeds are numerous, suborbicular, thin and flattened, brown-black, 1.5–2 mm in diameter, fringed at margins. The flowering period is from May to July. The fruiting period is from May to December.

Habitat: It grows in forests or thickets of mountains or hills at an elevation of 100–1000 m.

Distribution: It is distributed in provinces of Anhui, Zhejiang, Jiangxi, Fujian, Taiwan, Hubei, Hunan, Guangdong, Hong Kong, Guangxi, Sichuan, Guizhou, and Yunnan, as well as in Japan.

Acquisition and Processing: The roots are dug up in summer and autumn and dried in the sun.

Natural Taste and Meridian Tropism: It's pungent and bitter in taste, cool in property.

Functions: Dispelling wind and dampness and stopping itching, it's often used for treatment of eczema, pruritus, dermatitis, urticaria, rheumatoid arthralgia, and scabies.

Use and Dosage: 6–15 g per dose, decocted in water for oral use.



1.8 Family: Rubiaceae

1.8.1 *Damnacanthus indicus* [1]

Chinese Name(s): hu ci, xiu hua zhen, huang jiao ji.

Source: This medicine is made of the whole plants of *Damnacanthus indicus* (*Damnacanthus indicus* Gaertn. f.).

Morphology: The plant is evergreen shrub, armed, up to 1 m in height. The roots are fleshy, usually moniliform. The branchlets are densely hispidulous, with needle-like prickles that up to 2 cm long at nodes. The stipules are triangular, apically two- to four-lobed. The leaves are opposite, and the large and small leaves arranged alternately, ovate, cordiform, or rounded, up to 2.5 cm long, apically mucronate, basally rounded, or cordate, entire at margins. The lateral veins are in three to four pairs, and the petioles are very short or sessile. The flowers are axillary, usually 1–2, with short pedicel. The calyxes are broadly campanulate, four-lobed, lobes being triangular or subulate, persistent. The corollas are white, about 10 mm long, and the corolla tubes are about 6.5 mm long, four-lobed at the limb, lobes being elliptic. There are four stamens, which inserted on the corolla tubes. The ovary is inferior. The drupes are globose and red when mature.

Habitat: It grows in sparse or dense forests on hills or mountains near the water.

Distribution: It's distributed in Tibet, Yunnan, Guizhou, Sichuan, Guangxi, Guangdong, Hunan, Hubei, Jiangsu, Anhui, Zhejiang, Jiangxi, Fujian, Taiwan, and so on of China, as well as in northern India and Japan.

Acquisition and Processing: The whole plants are harvested all year-round, removed the impurities, and washed and dried in the sun.

Medicinal Properties: The root of this product is cylindrical, moniliform often, and dark brown. The stem is cylindrical, 1 cm in diameter at the base, grayish white or blackish brown on surface. It is hard and difficult to break, irregular on cross sections, with thin cortex, grayish white xylem and pith. Most of the branchlets have long prickles of 1–1.5 cm. The leaves are opposite, with short petioles. The leaves are ovate, 1–2 × 0.5–1 cm, leathery. It's slight in odor, slightly bitter and sweet in taste. The products with many and stout roots are better in quality.

Natural Taste and Meridian Tropism: It's sweet and bitter in taste, neutral in property, belonging to the meridians of the liver and lungs.

Functions: Expelling wind and dampness, activating collaterals, and relieving pain, it's often used for treatment of rheumatic arthralgia, asthma and coughing with phlegm, lung carbuncle, edema, blood stasis and menorrhagia, jaundice due to damp heat, infantile malnutrition, icteric infectious hepatitis, periodontitis, conjunctivitis, pharyngitis, low back pain, and injury caused by knocks and falls.

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

