

## **Clear Heat – Quell Fire**

### **CLEAR HEAT QUELL FIRE CATEGORY**

These are usually the coldest herbs in the Chinese Materia Medica. They generally treat high fever, irritability, thirst, and delirium associated with febrile disease. They treat many types and locations of Heat such as Interior, Qi Level, Yangming Stage, Excess Heat, and Zang Fu specific Heat. Some herbs in this category treat both Excess and Deficient Heat.

### **CAUTIONS / CONTRAINDICATIONS**

Make sure the patient has Heat - Careful to distinguish what type of Heat –

Many of these herbs can easily damage the Middle Jiao (Spleen Stomach Yang Qi) and you must be careful with patients who already have a Middle Jiao weakness - Can also damage *Zhen* (True) *Qi* - Some practitioners believe that because you should only need to use these herbs for a short time, you don't have to be so careful.

*Shi Gao* (Gypsum), *Zhi Mu* (Rhizoma Anemarrhenae), and *Lu Gen* (Rhizoma Phragmitis) are considered the major substances to Clear heat from the Lungs, Stomach, and Qi Level.

### **CHARACTERISTICS OF HERBS in this CATEGORY**

Bitter & Cold = tastes & temperature - Clears Heat/Fire –

However, some herbs in this category are Sweet & Cold

## Clear Heat & Quell Fire Herbs

<b>Pharmacological Name</b>	<b>Pinyin</b>	<b>Common Name</b>	<b>Chinese Character</b>
<b>* 1) Gypsum fibrosum</b>	<i>Shi Gao</i>	<b>Gypsum</b>	石膏
<b>* 2) Radix or Rhizoma Anemarrhenae Asphodeloidis</b>	<i>Zhi Mu</i>	<b>Anemarrhana</b>	知母
<b>* 3) Fructus Gardeniae Jasminoidis</b>	<i>Zhi Zi</i>	<b>Gardenia</b>	梔子
<b>* 4) Herba Lophatheri Gracilis</b>	<i>Dan Zhu Ye</i>	<b>Bamboo Leaf</b>	淡竹叶
<b>* 5) Spica Prunellae Vulgaris</b>	<i>Xia Ku Cao</i>	<b>Prunella</b>	夏枯草
<b>6) Plumula Nelumbinis Nuciferae</b>	<i>Lian Zi Xin</i>	<b>Lotus Plumule</b>	英文名
<b>* 7) Rhizoma Phragmatis Communis</b>	<i>Lu Gen</i>	<b>Phragmitis</b>	芦根
<b>* 8) Semen Cassiae Torae</b>	<i>Jue Ming Zi</i>	<b>Cassia Seed</b>	决明子
<b>* 9) Semen Celosiae Argenteae</b>	<i>Qing Xiang Zi</i>	<b>Celosia Seed</b>	青箱子
<b>* 10) Excrementum (Faeces) Vespertilii Murini (Superanus)</b>	<i>Ye Ming Sha</i>	<b>Bat Feces</b>	夜明砂
<b>11) Fel Ursi</b>	<i>Xiong Dan</i>	<b>Bear Gallbladder</b>	熊胆

\* 1) Gypsum fibrosum - *Shi Gao* – Gypsum


## 石膏



<b>Pharmaceutical Name</b>	Gypsum fibrosum
<b>Pinyin</b>	<i>Shi Gao</i>
<b>Literal Translation</b>	Stone Paste
<b>Common Name</b>	Gypsum
<b>Part Used</b>	Mineral (Alabaster), Calcium Sulfate
<b>Properties (Taste – Temperature)</b>	Sweet - Pungent – Very Cold / Cold
<b>Energetic 4 Directions</b>	Descending - Dispersing
<b>Channels Entered</b>	LU – ST / SJ
<b>Dosage</b>	15-60g / Up to 120g
<b>Cooking</b>	RC – Powdered - Break up & cook longer if not powdered

Traditional Functions	Primary	Secondary
	<b>Clears Heat &amp; Drain Fire at the Qi Level or Yangming Stage</b> (The heat here is internal, can be wide-spread and not necessarily limited to a certain area)	
	<b>Mildly Nourish Body Fluids</b> , mainly by clearing heat	
	<b>Clear Heat from the Lung &amp; Stomach &amp; Qi Level</b>	
<b>Common Clinical Uses - Treatment</b>	<b>Clear Heat at the Qi Level &amp; Yangming Stage</b> (high fever, irritability, thirst, profuse sweat, constipation, big flooding excess pulse, red tongue with yellow coat) with <i>Zhi Mu</i> (Rhizoma Anemarrhenae) – Lingering fever or cough with fever in children with <i>Dan Zhu Ye</i> (Herba Lophatheri)	Headache, toothache, swollen painful gums due to Stomach Fire with <i>Xi Xin</i> (Radix Asari) – Due to devastated Yin with <i>Shu Di Huang</i> (Radix Rehmanniae) or <i>Sheng Di Huang</i> – Stomach heat nausea & vomiting with <i>Ban Xia</i> (Rhizoma Pinelliae) & <i>Zhu Ru</i> (Caulis Bambusae)
	<b>Cough &amp; Wheezing due to Heat in the Lung</b> with <i>Ma Huang</i> (Herba Ephedrae) ( <i>Shi Gao</i> counteracts <i>Ma Huang</i> 's Warm Dispersing nature) – Heat Toxin in Lungs with <i>Jin Yin Hua</i> (Flos Lonicerae)	Delirium or Sunstroke due to Heat
	<b>Severe Fever that has not responded to other tx or anything else</b>	Skin Problems due to Heat – Eczema, burns, ulcerated sores – Topically or internally – with <i>Duan Shi Gao</i> & <i>Huang Bai</i> (Cortex Phellodendri)
		Meningitis & Encephalitis with High Fever
		Epidemic Damp Heat Toxin with high fever with <i>Shui Niu Jiao</i> (Cornu Bubali)

<b>Caution - Contraindications</b>	Caution in patients with weak stomachs (Spleen/Stomach Cold). This is hard to digest and very cold. Can aggravate a weak stomach.	
	Caution in extremely weak patients with weak/minute pulse.	
	Caution in Yin Deficiency with Heat and fever	
	Caution for patients who have a Yang Deficiency	
<b>Pharmacological &amp; Clinical Research</b>	Antibiotic - Anti-inflammatory	
	Antipyretic, regulates body temperature but not as diaphoretic	
	Antithirst	
	Hypotensive, lowers blood pressure	
	Antiphlogistic, relieve inflammation, decrease permeability of blood vessels	
	Tranquilizing, sedative	
	Stimulates uterus	
	Decrease blood coagulation time	
	Diuretic	
	Decrease bile secretion	
	Increase calcium concentration	
	Inhibit sweat glands	
	Anticonvulsive	
	May interfere with Anti-Diabetic drugs	
	Gypsum is a stone of the sulfate of plaster stone group, containing mainly hydrated calcium sulfate	
	Shi Gao is a widespread, colorless, white, or yellowish crystal like mineral, $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ , which is commonly used in the manufacture of plaster of Paris, various plaster products, and fertilizers	
	Chemical components - $\text{CaSO}_4 + 2\text{H}_2\text{O}$ , $\text{CaO}$ , $\text{SO}_3$ , Al, Mg, Fe, Mn, Zn, Cu	
<b>Notes</b>	<b>* Strongest &amp; coldest substances to Clear Heat</b>	
	Best Quality - Big size, white with fibrous texture, translucent and silky cross section	
	<i>Sheng Shi Gao</i> : fresh/raw you take internally - <i>Duan Shi Gao</i> : calcinated/cooked version you use externally; dispersing property removed, less Cold; also used internally	
	Commonly combined with <i>Ma Huang</i> to counteract its Dispersing & Warm nature to Clear Lung Heat & Disperse Lung Qi to tx asthma	
	This herb is at the extreme end of the temperature spectrum of herbs/substances	
	Soft Gypsum (Monoclinic) – Hard Gypsum (Rhombic)	
	<b>Comparison</b> - Both <i>Shi Gao</i> and <i>Rz. Anemarrhenae Zhi Mu</i> cool the Lungs and Stomach and clear Heat from the <i>Yang Ming Qi</i> Level. <i>Zhi Mu</i> primarily drains Heat and Dampness, cools the Lungs and Kidneys, nourishes <i>Yin</i> and benefits <i>Yin</i> by generating fluids while <i>Shi Gao</i> protects the fluids by draining Fire	
	<b>Comparison</b> - Both <i>Shi Gao</i> and <i>Talcum Hua Shi</i> clear Heat and alleviate thirst. <i>Hua Shi</i> is appropriate thirst due to Summerheat with Dampness and dark urine that is difficult to pass. It is inappropriate for Dry Heat. <i>Shi Gao</i> is best used for when pathogenic Heat has entered the <i>Yang Ming</i> Stage with dried out fluids.	
	Minerals are generally prescribed at a higher dosage - They are cooked prior to other ingredients because it takes longer to release their actions if not powdered. If not powdered, crush <i>Shi Gao</i> , cook longer than other ingredients	
	1953, Russian dignitaries were in China & contracted encephalitis; Russian doctors were flown in, but could not bring down the 104-106 degree fever that lasted 2 weeks; 3 days of TCM tx & fever was gone	
	Memorizeherbs.com – <i>Shi Gao</i> Gypsum	

												
	<p><b>Shi Gao is Gypsum Fibrosum - the wandering gypsy</b></p> <p>Shi Gao the wandering gypsy loved to <u>smoke tobacco</u> in the <u>summer by the fire</u> and <u>eat peppers</u> which gave her <u>sores</u> and <u>4 greats</u> (great thirst, great pulse, great fever, and great sweating).</p> <p><b>Explanation of Key Words in this story...</b></p> <table><tr><td>smoke tobacco</td><td>Clears LU heat</td></tr><tr><td>summer by the fire</td><td>Clears heat; drains fire</td></tr><tr><td>eat peppers appetite)</td><td>ST heat (toothache, red gums, acid reflux, excessive vomit /</td></tr><tr><td>4 greats</td><td>4 greats = early qi stage = yangming stage</td></tr><tr><td>sores</td><td>heals sores; generates flesh</td></tr></table>	smoke tobacco	Clears LU heat	summer by the fire	Clears heat; drains fire	eat peppers appetite)	ST heat (toothache, red gums, acid reflux, excessive vomit /	4 greats	4 greats = early qi stage = yangming stage	sores	heals sores; generates flesh	
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	Western Herbology – Not used											

\* 2) Radix or Rhizoma Anemarrhenae Asphodeloidis – *Zhi Mu* – Anemarrhena –

知母



Pharmaceutical Name	Radix Anemarrhenae Asphodeloidis
Pinyin	<i>Zhi Mu</i>
Literal Translation	Know About Mother
Common Name	Anemarrhena
Part Used	Root or Rhizome
Properties (Taste – Temperature)	Bitter – Sweet - Cold
Energetic 4 Directions	Descending - Dispersing
Channels Entered	LU – ST - KID
Dosage	6-12g / up to 25g
Cooking	RC

Traditional Functions	Primary	Secondary
	<b>Clears Heat at the <i>Qi</i> Level, both Excess &amp; Deficient Heat – Clear Heat in all 3 Burners</b>	
	<b>Clear Heat in the Lung &amp; Stomach</b>	
	<b>Nourish Kidney Yin – Clear Deficient Heat</b>	
Common Clinical Uses - Treatment	<b>Excess <i>Qi</i> Level Heat</b> with high fever, irritability, thirst, rapid big flooding pulse with <i>Huang Bai</i> (Cortex Phellodendri) – <b>Stomach Fire</b> with intense hunger, thirst, dry stool, dry yellow tongue coat, slippery rapid pulse with <i>Huang Lian</i> (Rhizome Coptidis)	Kidney Heat with spermatorrhea, night emission, abnormal increased sex drive, night sweats, steaming bone syndrome, irritability, afternoon or low grade fever, 5 hots, bleeding gums with <i>Bie Jia</i> (Carapax Trionycis)
	<b>Excess Lung Heat</b> with cough, thick yellow mucous with <i>Zhe Bei Mu</i> (Bulbus Fritillariae)	Heat in the Lower Jiao with urination problems & infection
	<b>False Heat due to Yin Deficiency</b> with night sweats, irritable, 5 hots, low grade or afternoon/night fever, thready rapid pulse, red tongue with scanty coat with <i>Huang Bai</i> (Cortex Phellodendri)	Oral Ulcers & Inflammation with <i>Xuan Shen</i> (Radix Scrophulariae), <i>Sheng Di Huang</i> (Radix Rehmanniae) – Yin Deficiency with <i>Tian Hua Fen</i> (Radix Trichosanthis), <i>Mai Men Dong</i> (Radix Ophiopogonis)
	<b>(Waste &amp; Thirst) Diabetes</b> with Heat with thirst, irritable, low blood sugar, with <i>Shan Yao</i> (Radix Dioscoreae), <i>Huang Qi</i> (Radix Astragali), <i>Wu Wei Zi</i> (Fructus Schisandrae)	Acute Infectious Diseases with High Fever
	<b>Steaming Bone Syndrome</b> with night sweats, dizziness, vertigo, with <i>Huang Bai</i>	Constipation due to Yin Deficiency or Heat

	(Cortex Phellodendri)	
		Thirst not quenched by water
		Damp Heat smoldering in Lower Burner causing obstruction & dysfunction of Bladder Qi with urinary retention, afternoon fever with <i>Rou Gui</i> (Cortex Cinnamomi)
		Ameliorate dryness of Tonifying or Warming substances
<b>Caution - Contraindications</b>	Caution with Spleen or Stomach cold symptoms due to deficiency (Spleen or Stomach Yang Deficiency); weak digestion, diarrhea	
	Some say may interfere with Anti-Diabetic drugs	
	Extremely high dosages can cause respiratory depression & decreased blood pressure (most common when injected)	
	<b>Herb-Drug Interaction</b> - Use this herb with caution in conjunction with insulin, sulfonylureas and other antidiabetic drugs such as tolbutamide (Orinase), glipizide (Glucotrol) and glyburide (DiaBeta/Micronase) as there may be a synergistic effect leading to hypoglycemia.	
<b>Pharmacological &amp; Clinical Research</b>	Antibiotic - Anti-bacterial - Anti-fungal	
	Anti-TB	
	Antipyretic, regulate body temperature	
	Lowers blood sugar	
	Expectorant	
	Diuretic	
	Hemolytic	
	Lower blood pressure	
	Can depress respiration	
	<p>Effects on the endocrine system</p> <p>Research shows that the plasma cAMP concentration in mice of thyroid hormone-induced elevated isoprenaline is significantly above the normal level, and timosaponin, an active component of Zhi Mu, is known to counteract this. Furthermore, a radioligand combination assay indicates that timosaponin can counteract thyroid hormone-induced increase in the Rt value of b-receptors in rats.(2)</p> <p>Effects of removing free radicals</p> <p>Research shows that Zhi Mu can significantly inhibit radiation-induced increase in LPO content (but does not affect SOD), and helps eliminate free radicals.(3, 4)</p> <p>Anti-inflammatory effects</p> <p>Experiments show that total polysaccharides of Zhi Mu (TPA) have a significant inhibitory effect on various inflammation models (but cannot curb carrageenin-induced foot swelling in rats with both adrenal glands removed). They can also significantly raise the plasma corticosterone level in rats, and lower the adrenocorticotrophic hormone level, suggesting the total polysaccharides of Zhi Mu can significantly inhibit both acute and chronic inflammation.(5)</p> <p>Anti-aging effect</p> <p>The early stage of senescence in rats is mainly characterized by a reduction in M receptors, and Zhi Mu, a <i>yin</i>-nourishing herb, has the effect of increasing M receptors, without affecting the density of b-receptors.(6)</p> <p>Preventing asthma</p> <p>Studies show that Zhi Mu has a preventive effect on asthma similar to that of suprarenal glycocorticoid hormone, an effect that might have been achieved by reducing the production of No and ET-1.(7)</p>	
	A group of Chinese scientists has finished pre-clinical research for its new anti-dementia drug, dubbed NJS, which is derived from traditional Chinese medicine substances. NJS has just become the first TCM drug that its patent license is being sold to a UK pharmaceutical firm.	

	According to Xinhua, NJS was a result of 10 years of rigorous research and trials by a group led by <i>Ma Baiping</i> of the Academy of Military Medical Sciences (AMMS) of the People's Liberation Army. <i>Ma's</i> research has been around Anemarrhena Rhizome ( <i>zhi mu</i> , 知母), which is known for its effects of lowering blood sugar levels, as well as its antipyretic, sedative and antibiotic functions. <i>Ma's</i> team has been able to purify a substance called timosaponin B II in <i>zhi mu</i> and the process of its preparation has been patented with a number of countries, including one with Health Canada. The patented process is said to be "simple and applicable and suitable for industrial production."
	Chemical Composition - Zhimusaponin A; Anemarsaponin A <sub>1</sub> ; Prototimosaponin A-III; Anemarsaponin A <sub>2</sub> ; Desgalactotigonin; F-gitonin; Smilageninoside; Timosaponin B-I; Anemaran A, B, C and D; Hinokiresinol; Oxy-cis-hinokiresinol; - sitosierol; Mangiferin; Nicotinic acid; Nicotinamide; Pantothenic acid; P-hydroxyphenyl crotonic acid; Monomethyl-cis-hinokiresinol; Pseudoprototimosaponin A-III; 2,4,6-trihydroxy-4-methoxy benzophenone; Timosaponin A-I, A-II, A-III, A-IV, B-I and B-II; Markogenin-3-O- $\beta$ -D-glucopyranosyl(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranoside B.(1)
	Toxicity - Measured by changes to the heart rate, blood pressure, electrocardiogram, and self-reported signs, oral administration of timosaponin at 2mg/kg to healthy persons does not produce effects significantly different than the placebo effect
<b>Notes</b>	<b>* Important herb for Clearing both Excess &amp; Deficient Heat – Clears Heat in all 3 Burners – Somewhat moistening</b>
	Best Quality - The large, compact soft texture, yellowish white with slightly green cross section
	<b>Dry-fried</b> <i>Chao Zhi Mu</i> reduces cooling nature & moderates fire-draining effect
	<b>Stir-baked</b> to reduce its Cold nature
	<b>Prepared with honey</b> <i>Mi Zhi Zhi Mu</i> moderates bitter, draining, cooling nature to protect Spleen Stomach
	<b>Fried with vinegar</b> <i>Cu Chao Zhi Mu</i> to focus on the Lungs
	<b>Prepared with wine</b> <i>Jiu Chao Zhi Mu</i> to increase its ascending nature & lessens cold draining nature
	<b>Fried with salt</b> <i>Yan Chao Zhi Mu</i> to increase its moistening nature; ability to benefit Kidneys; directs actions downward
	<b>Comparison –</b> Both Cool Lungs & Stomach; Clear heat from Yangming Stage & Qi Level; often combined <b>Zhi Mu</b> – Primarily Clears Heat & Moistens; Cools Lungs & Kidneys; Nourishes Yin <b>Shi Gao</b> - Primarily Clears Heat & Disperses (effect goes to exterior, but also interior); protects fluids by draining Fire, not generating fluids
	<i>Li Shi-Zhen</i> says that Rx. Astragali <i>Huang Qi</i> acts at the Blood level of the Kidneys and therefore the two herbs should be used together.
	Some sources say it has a deep, systemic tonification via gentle stimulation of the pituitary-adrenal cortex axis (related to the <i>Du Mai</i> ); clears Excess energy in the <i>Du Mai</i>
	Evergreen Perennial - Chinese medicinal herb that looks and grows like a tall grass but isn't. It spreads by underground rhizome like grasses, but unlike grasses it has fragrant yellow-white or light purple flowers that open in the evening in late summer and autumn.
	Native to China and Japan. Flowers night-scented, very fragrant. Plant prefers moist soils and dappled shade. Sow in fall for germination in the spring. Flowers to 18 inches. Grows in mountain woodlands. Exposed slopes and hills. Scrub, grassy slopes, steppes, sunny and sandy hillsides from near sea level to 1500 meters.
	The root contains about 6% saponins. Saponins make an excellent soap, having a gentle cleansing effect on the skin and clothes without removing the natural body oils from the skin. To extract the saponins it is usually sufficient to cut the root into thin slices and then gently simmer in water
	Memorizeherbs.com – <i>Zhi Mu</i> / Anemarrhena

	<div data-bbox="505 195 753 478" data-label="Image"> </div> <p><b>Zhi sounds like bird -The bird and the Cow...</b></p> <p>When the Cow's barn was destroyed by a <u>summer time fire</u>, the poor cow inhaled too much <u>tobacco smoke</u> and went looking for an <u>oasis</u> where he could <u>generate fluids and moisten dryness</u> caused by exposure to the fire.</p> <p>But the cow wasn't careful and ate too many super sweet coconuts at the oasis, which led to (cc: diarrhea with SP deficiency)</p> <p><b>Explanation of Key Words in this story...</b></p> <table border="0"> <tr> <td>summer... fire</td><td>Clears heat; Drains fire</td></tr> <tr> <td>tobacco smoke</td><td>clears LU heat</td></tr> <tr> <td>oasis</td><td>clear deficient heat; nourish KID yin</td></tr> <tr> <td>generate fluids and moisten dryness</td><td>generates fluid; moistens dryness (constipation)</td></tr> </table> <p>Western Herbology – Not used</p>	summer... fire	Clears heat; Drains fire	tobacco smoke	clears LU heat	oasis	clear deficient heat; nourish KID yin	generate fluids and moisten dryness	generates fluid; moistens dryness (constipation)
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tobacco smoke	clears LU heat								
oasis	clear deficient heat; nourish KID yin								
generate fluids and moisten dryness	generates fluid; moistens dryness (constipation)								

\* 3) Fructus Gardeniae Jasminoidis - *Zhi Zi* - Gardenia

## 梔子




<b>Pharmaceutical Name</b>	Fructus Gardeniae Jasminoidis
<b>Pinyin</b>	<i>Zhi Zi</i> or <i>Shan Zhi Zi</i>
<b>Literal Translation</b>	Gardeniae Fruit or Cape Jasmine
<b>Common Name</b>	Gardenia Fruit
<b>Part Used</b>	Fruit
<b>Properties (Taste – Temperature)</b>	Bitter - Cold / <i>Sour</i>
<b>Energetic 4 Directions</b>	Descending - Contracting & Dispersing
<b>Channels Entered</b>	LU – ST – HE – LIV – SJ / <i>GB</i>
<b>Dosage</b>	3-10g (6-9g) / <i>up to 12g</i>
<b>Cooking</b>	RC - Crush before decocting (Note: after cooking liquid can stain)

Traditional Functions	Primary	Secondary
	<b>Clears Heat in all 3 Burners</b>	Reduce Swelling & Move Blood
	<b>Clears Heat &amp; Drains Damp in all 3 Burners</b>	
	<b>Clears Heat &amp; Toxins at the Blood Level</b>	
<b>Common Clinical Uses - Treatment</b>	<b>Excess Heat</b> with fever, irritable, restlessness, insomnia, delirium, stifling sensation in chest – Lingering Heat in Chest with <i>Dan Dou Chi</i> (Semen Sojae)	Damp heat & Constrained Liver & Gall Bladder with Jaundice with <i>Yin Chen</i> (Herba Artemisiae), <i>Da Huang</i> (Rhizoma Rhei)
	<b>Restlessness due to Heat</b>	Vaginal Infections with smelly yellow discharge
	<b>Red Eyes &amp; Eye Inflammation</b>	Heat induced Bleeding with nose bleed, vomiting blood, blood in stool or urine with charred <i>Zhi Zi</i> , <i>Ce Bai Ye</i> (Cacumen Platycladi), <i>Sheng Di Huang</i> (Radix Rehmanniae) – Or with <i>Bai Mao Gen</i> (Rhizoma Imperatae)
	<b>Skin Problems due to Heat &amp; Damp</b>	Damp Heat Gallbladder & Triple Burner Channels of the face affecting the nose & eyes or with mouth or facial sores
	<b>Lower Burner Damp Heat Urinary Problems</b> with dribbling, pain, burning, yellow urine with <i>Hua Shi</i> (Talcum)	Liver Qi Stagnation Heat, Menstrual problems, headache, red eyes, thirst, with <i>Mu Dan Pi</i> (Cortex Moutan) – Or, with <i>Chai Hu</i> (Radix Bupleuri), <i>Chuan Xiong</i> (Rhizoma Chuanxiong)
		Accumulation of Heat Toxin with irritability, restlessness, high fever with <i>Huang Lian</i> (Rhizoma Coptidis), <i>Da Huang</i> (Radix Rhei),

		<i>Lian Qiao</i> (Fructus Forsythiae)
		Epigastric pain due to Heat with <i>Jiang Zi</i> (Succus Zingiberis)
		Swelling & Blood Stasis due to trauma topically as a powder mixed with egg white or vinegar
		Mouth Sores
		Vomit with Blood - Nose bleeds - Blood in urine - All due to Heat
<b>Caution - Contraindications</b>	Caution with Middle Jiao Deficiency (SP/ST), loose stool, loss of appetite – Caution with Blood Deficiency	
	Drying - Caution with Yin Deficiency	
	Overdose can cause diarrhea	
	2 reports of allergic skin reactions	
	<b>Herb-Drug Interactions</b> - <i>Zhi Zi</i> can have a sedative effect and may increase drug-induced sleep time when used concurrently with sedatives such as antihistamines, narcotic analgesics, barbiturates, benzodiazepenes and others.	
<b>Pharmacological &amp; Clinical Research</b>	Promotes secretion of bile	
	Lowers blood pressure	
	Antibiotic - Anti-bacterial - Antifungal	
	Tranquilizing - Sedative	
	Antipyretic	
	Antiparasitic	
	Promote healing of soft tissue	
	Inhibit secretion of gastric juices	
	Laxative	
	Relax ANS	
	Paste made of <i>Zhi Zi</i> , water, & alcohol to tx trauma swelling	
	Decrease concentration of bilirubin in blood	
	CNS suppressant & can increase sleeping time induced by barbiturates	
	Protects Liver	
	Analgesic	
	<p>Effects on the gallbladder and the liver</p> <p>Fed to mice at 7g/kg per day for five days, water-based extract of <i>Zhi Zi</i> can significantly reduce bilirubin in the serum, and inhibit tetrachloromethane- and thioacetamide-induced increase in glutamate-pyruvate transaminase (GPT) in the serum. Administered to rats at 1.5g/kg per day for four days, water-based extract of <i>Zhi Zi</i> can significantly increase biliary and the excretion of bilirubin. Unprocessed <i>Zhi Zi</i> is shown to effectively counteract tetrachloromethane-induced acute liver poisoning. Administered to rats at duodenum at 50mg/kg or 100mg/kg, geniposide, an active component of <i>Zhi Zi</i>, can significantly increase the flow of bile, and decrease the level of cholesterol in the bile, suggesting that geniposide has the potential of changing the composition of bile and preventing the formation of cholesterol calculus.</p> <p>Effects on experimental acute pancreatitis</p> <p>Administered to rats with experimental acute pancreatitis, <i>Zhi Zi</i> can significantly improve blood flow in the pancreas, liver, stomach and small intestine. In particular, it can maintain the normal blood flow in the pancreas, and thereby minimizing injuries to the pancreas, improving the prognosis, and lowering the death rate. <i>Zhi Zi</i> can normalize the lower-than-normal activity of Na<sup>+</sup>-K<sup>+</sup>-ATP enzyme and Ca<sup>2+</sup>-Mg<sup>2+</sup>-ATP enzyme found in the modeled subjects. Furthermore, although <i>Zhi Zi</i> does not significantly alter the level of cAMP, it does significantly lower cGMP, and thereby significantly increasing the cAMP/cGMP ratio (P&lt;0.001).</p> <p>Anti-inflammatory effects</p> <p>Administered to mice, <i>Zhi Zi</i> can significantly inhibit croton oil-induced auricular</p>	

	<p>inflammation and acetic acid-induced increase in peritoneal capillary permeability. <i>Zhi Zi</i> has a rather pronounced inhibitory effect on <i>Staphylococcus aureus</i>. Moreover, <i>Zhi Zi</i> has a dosage-dependent inhibitory effect on allergic contact dermatitis (ACD).</p> <p>Effects on resistant arteries</p> <p><i>Zhi Zi</i> extract can relax small arteries isolated from the brain, kidney, heart and mesentery of Wistar rats, an effect that appears to be dosage-dependent and selective. <i>Zhi Zi</i> also has a hypotensor effect, possibly achieved by dilating peripheral blood vessels and reducing resistance.</p> <p>Effects on counteracting active oxides</p> <p>Water-based extract of <i>Zhi Zi</i> has a dosage-dependent effect of eliminating H<sub>2</sub>O<sub>2</sub></p>
	<p>Chemical Composition - Gardenoside; Ursolic acid; Gardenia jasminoides; Geniposide; Mannitol; D-mannitol; b-sitosterol; Gardenic acid; Shanzhiside; Gardoside; Geniposidic acid; Crocetin; Chlorogenic acid; Crocin glucoside; Gardenolic acid A, B; Crocin; Cerbinal; Limonene; Oleanolic acid; Stigmasterol; Scandoside methyl ester; Methyl deacetylaspelurositate - Inorganic Chemicals: trace amounts of Ca and Fe</p>
	<p>Toxicity - LD50 (mice/genipin): 153mg/kg (IV), 190mg/kg (abdominal injection), 237mg/kg (oral)</p>
<b>Notes</b>	<p><b>* Especially good to Tx Heat in all 3 Burners &amp; Clear Damp Heat in all 3 Burners</b></p>
	<p>Best Quality - Tiny, full, thin skin, plump, reddish yellow color</p>
	<p>Especially useful for pelvic area</p>
	<p>Stronger effect than <i>Zhi Mu</i> on all 3 Burners</p>
	<p>Name comes from a wine vessel that looks similar to the fruit</p>
	<p><i>Zhi Zi</i> clears the 4 types of internal excess heat: fire, blood heat, damp heat and toxicity. Other herbs that are said to have 4 functions are <i>Fang Feng</i> which has 4 functions for Wind and <i>Cang Zhu</i> which has 4 functions for Damp</p>
	<p>Raw (<i>Sheng Zhi Zi</i>) stronger to Dispel Heat/Fire</p>
	<p><b>Dry-fried</b> <i>Chao Shan Zhi Zi</i> reduces cold nature &amp; tendency to cause nausea &amp; vomiting; allows herb to enter Blood</p>
	<p><b>Stir-baked</b> to Clear Blood Heat; avoid nausea and vomiting</p>
	<p><b>Charred/Carbonized</b> <i>Shan Zhi Zi Tan</i> to enter Blood Level, Cool Blood, stop bleeding (Modern research shows opposite effect)</p>
	<p>Flowers <i>Zhi Zi Hua</i> are valued for their fragrance and are used medicinally to regulate the flow of Blood, stop bleeding and as a contraceptive by increasing menstrual flow.</p>
	<p>Seeds treat jaundice, rheumatism and twisted muscles.</p>
	<p>Gardenia Kernels <i>Shan Zhi Ren</i> is used for Internal Heat.</p>
	<p>Gardenia Peels <i>Shan Zhi Pi</i> is used for External Heat (muscles and flesh).</p>
	<p>Remove shell to Tx Lower Jiao Heat</p>
	<p>Some say inner red kernels are used for interior heat &amp; skin/peel is used for exterior heat; retaining peel expels heat from muscles &amp; flesh, removing peel clears heat from the Heart &amp; chest</p>
	<p>Can be used externally for skin problems - Apply topically to relieve toxicity at the skin level by mixing with egg white or vinegar</p>
	<p>Food uses - <i>Zhi Zi</i> is utilized to flavor beverages, frozen dairy desserts, candy, baked goods, gelatins, and puddings.</p> <p>Manufacturing – <i>Zhi Zi</i> is used to add fragrance to creams, lotions, and perfumes.</p>
	<p>A common garden plant, the gardenia is native to central and southern China, and grows along wild along streams in Hong Kong, flowering in early summer with a lovely fragrance. Hong Kong was originally a small fishing village where a profusion of gardenias prompted the name, translated as Hong "fragrant" and Kong "harbor". The plant is now cultivated around the world for its flowers, as both an indoor plant, and in warmer climates, an outdoor plant. In Guangzhou, China an orange dye obtained from the gardenia fruit is used to color soy bean curd (tofu) a yellow color.</p> <p>Gardenia jasminoides is the main species used in Chinese medicine, but Gardenia rotundifolia is also an acceptable species. The herb was first mentioned in the <i>Shen Nong Ben Cao Jing</i>, the oldest Chinese herbal text, where it is designated in the second of three classes of herbs.</p>


	<p><b>Growing and Propagation</b></p> <p>The plant is a bushy hardy evergreen shrub with glossy green leaves and single or double creamy white flowers that bloom throughout the summer. It grows up to 6 feet in height, but in cooler regions may only reach 2-3 feet high. As the flowers die, the five-pronged calyx eventually grows a small orange fruit. Gardenias grow best in warm weather in full sun and most varieties will not survive temperatures below 20 degrees F. A recent cultivar of <i>Gardenia jasminoides</i>, called "Frostfree", was developed to withstand cold to 5 degrees F.</p> <p>Flowering can be encouraged by side dressing the plants with manure or blood meal, and by keeping the soil pH around 5 to 6, slightly acid to neutral. The plants do well if fertilized with a fish emulsion every 3-4 weeks during the bloom season</p> <p>Propagation can be achieved by either seed or cuttings, though both can be difficult. Cuttings can be taken any time of year, but best in March or April. They should be cut from the soft, sappy current years growth as opposed to the hard woody branches. Taking a piece 3-8 inches long, the bottom of the cutting should be cut just below a node, or joint. After removing the lower leaves, it can be planted obliquely in rooting medium and watered well. It will generally root in 6-8 weeks if kept in a warm, humid environment. The rooting medium should be kept at 68-77 degrees F, heated from below, and misted frequently. Plants from cuttings should be protected for the first year until they can be planted in a permanent place in the garden the following spring, planted with the crowns relatively high.</p> <p>Seed can be planted in the spring in pots in a greenhouse where temperatures are maintained at 70-75 degrees F. They should be sown about 1 1/4 inch deep in a lime free sowing mix. Germination takes 3-8 weeks. When seedlings are about a foot high, they can be transplanted to a permanent location in the garden.</p> <p><b>Harvesting and Preparation</b></p> <p>Gardenia fruits are harvested when they begin to turn yellow, usually after a frost in October. It can be difficult to dry the fruits without losing their natural color so they are first briefly scalded in boiling water (with or without 8% alum added for every kilogram of herb) or steamed for 30 minutes. The fruit is then dried in the sun for several days, and then dried completely in shade with good air circulation. The best quality <i>Zhi Zi</i> for medicinal use consists of small, unbroken fruits with a thin pericarp, having a reddish yellow in color inside and out.</p> <p>Main growing regions are <i>Jiangxi &amp; Hunan</i> Provinces; best quality from <i>Zhejiang</i></p>								
	<p>Ancient Times – Used gardenia pods to make an orange-yellow dye</p>								
	<p>Memorizeherbs.com – <i>Zhi Zi</i> / <i>Gardenia</i></p>  <p>Hobbits plant <u>jungle</u> gardens to <u>eliminate irritability</u> and <u>drain fire</u> from the local hobbit residents. Without gardens there would be lots more <u>bleeding hot blooded</u> hobbits causing <u>black eyes from toxic</u> fist fights.</p> <p>If the hobbits weren't careful to work in the garden each year they would develop (cc: loose stool or loss of appetite due to deficient cold)</p> <p><b>Explanation of Key Words in this story...</b></p> <table> <tr> <td>jungle</td><td>drains damp heat</td></tr> <tr> <td>eliminate irritability... drain fire</td><td>eliminates irritability, drains fire</td></tr> <tr> <td>bleeding hot blooded</td><td>stops bleeding, cools blood</td></tr> <tr> <td>black eyes... toxic</td><td>reduces swelling, relieves toxic</td></tr> </table>	jungle	drains damp heat	eliminate irritability... drain fire	eliminates irritability, drains fire	bleeding hot blooded	stops bleeding, cools blood	black eyes... toxic	reduces swelling, relieves toxic
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	Western Herbology – Not used								

\* 4) Herba Lophatheri Gracilis – *Dan Zhu Ye* – Bamboo Leaf

淡竹叶



<b>Pharmaceutical Name</b>	Herba Lophatheri Gracilis	
<b>Pinyin</b>	<i>Dan Zhu Ye</i>	
<b>Literal Translation</b>	Bland Bamboo Leaves	
<b>Common Name</b>	Bamboo Leaf	
<b>Part Used</b>	Young tender leaves	
<b>Properties (Taste – Temperature)</b>	Sweet - Bland - Cold / <i>Pungent</i>	
<b>Energetic 4 Directions</b>	Descending - Neutral	
<b>Channels Entered</b>	HE – ST - SI / <i>BL</i>	
<b>Dosage</b>	10-15g / <i>up to 18g</i>	
<b>Cooking</b>	RC	
<b>Traditional Functions</b>	<b>Primary</b>	<b>Secondary</b>
	<b>Mildly Clears General Heat, especially Heart Heat &amp; Relieves Irritability</b>	Diuretic – Promote Urination
	<b>Clears Summer Heat &amp; Damp</b>	Relieve Exterior Wind Heat
<b>Common Clinical Uses - Treatment</b>	<b>Summer Heat &amp; Damp Attacking the Heart</b> with Restlessness	Heart or Stomach Channel Heat with mouth sores, swollen painful gums
	<b>Late stage febrile disease</b> , not quite resolved with restlessness, thirst, desire for cold drinks, & especially Heat in the upper body with <i>Shi Gao</i> (Gypsum), especially chest with red tongue with scanty coat	Urinary Problems with scanty, painful, yellow, burning urine
	<b>Heat with Irritability &amp; Thirst</b> with <i>Mai Men Dong</i> (Radix Ophiopogonis), <i>Lu Gen</i> (Rhizoma Phragmitis), <i>Tian Hua Fen</i> (Radix Trichosanthis)	
	<b>Heart Heat transferred to Small Intestine Channel with Heat</b> urination symptoms, irritability, & very red tip tongue with <i>Mu Tong</i> (Caulis Akebiae), <i>Sheng Di Huang</i> (Radix Rehmanniae)	
	<b>Wind Heat Common Cold</b>	
<b>Caution - Contraindications</b>	Caution with Middle Jiao Deficiency	
	Use with caution during pregnancy. Some sources say the leaf is not good for the fetus	
	Caution with Yin Deficiency Fire	
	<b>Herb-Drug Interactions</b> - Concurrent use with diuretics such as chlorothiazide, hydrochlorothiazide furosemide (Lasix) bumetanide (Bumex) and torsemide (Demadex) may	

	lead to increased elimination of water and electrolytes.
<b>Pharmacological &amp; Clinical Research</b>	Antipyretic, regulate body temperature
	Diuretic
	Anticarcinogenic
	Anti-bacterial
	Can increase blood sugar
	<p>Anti-pyretic effect Fed to rats, <i>Dan Zhu Ye</i> extract has an anti-pyretic effect.</p> <p>Diuretic effect Administering the water decoction of 10 grams of <i>Dan Zhu Ye</i> to a healthy person has only a slight diuretic effect, but it does increase the chloride content in urine output.</p> <p>Anti-bacterial effect <i>Dan Zhu Ye</i> has an inhibitory effect on Staphylococcus aureus and hemolytic streptococcus.</p> <p>Other effects <i>Dan Zhu Ye</i> can raise the blood sugar level.</p>
	Chemical Composition - Arundoin; Cylindrin; Taraxerol; Friedelin -本品含三帖類化合物 (Triterpenoids) 之蘆行素 (Arundoin), 印白芳素 (Cylindrin), 蒲公英賽醇 (Taraxerol), 無羈(Friendlin)
	Toxicity - LD50: 64.5g/kg (mice/oral feeding/herb decoction)
<b>Notes</b>	<b>* Especially good for Deficient constitutions</b>
	Best Quality - Big leaves with little stem, without roots and spikes, in greenish, light, in pliable texture
	<p><b>Comparison –</b> Both cool heat, eliminate irritability, facilitate urination</p> <p><b>Dan Zhu Ye</b> - Milder properties; Enters only Qi Level; Pungent to disseminate &amp; vent heat; mainly affects Heart &amp; Lungs, but also Stomach; can tx cough associated with wind heat</p> <p><b>Zhi Zi</b> – Bitter; Cold; Enters both Qi &amp; Blood Levels; Drains constrained heat from Triple Burner; Cool Blood, Resolves Toxicity; Clears Liver &amp; Gallbladder; eliminates irritable constraint</p>
	<i>Zhu Ye</i> is mentioned in texts before the Ming Dynasty and is more for Heart heat and irritability; did refer to common bamboo. <i>Dan Zhu Ye</i> is in texts after this time and is more for promoting urination. At this point and from a clinical standpoint, there is not considered to be much difference between them and they are used interchangeably.
	<b>Dan Dou Chi</b> also eliminates irritability, but refers to left-over fire in the chest after a febrile disease. <b>Dan Zhu Ye</b> treats irritability caused by Heart fire even though febrile disease is mentioned.
	"Dan" in the name in this case means "bland." (This is not true for ' <i>dan dou chi</i> ') and the taste is also bland. This taste is important to remember
	Pay attention to the Heart and Small Intestine in the Channels and note that all actions/indications refer mostly to these 2 channels
	The root of this herb is used to stimulate abortion and hasten difficult labor.
	Broad-leaved perennial grass, 1-3', prefers shade; commonly found in Zhejiang, Jiangsu, Hunan, Hubei, Guangdong, Guanxi, Anhui, Fujian, and most part of Asia
	<p>Memorizeherbs.com – <i>Dan Zhu Ye</i> Bamboo Leaf</p>  <p>Last <u>summer</u> when Danzoo the Orangutan had HT fire transferring to SI he was always</p>

	<p><u>grouchy</u> when <u>pissing</u>.  All that trouble pissing caused some <u>sleepless nights</u> (cc: <u>yin deficient fire</u>)</p> <p><b>Explanation of Key Words in this story...</b></p> <table> <tr> <td>summer</td><td>clears heat</td></tr> <tr> <td>grouchy</td><td>eliminates irritability</td></tr> <tr> <td>pissing</td><td>promotes urination</td></tr> <tr> <td>sleepless nights</td><td>yin deficient fire</td></tr> </table>	summer	clears heat	grouchy	eliminates irritability	pissing	promotes urination	sleepless nights	yin deficient fire
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## \* 5) Spica Prunellae Vulgaris – Xia Ku Cao – Prunella


## 夏枯草





<b>Pharmaceutical Name</b>	Spica Prunellae Vulgaris
<b>Pinyin</b>	<i>Xia Ku Cao</i>
<b>Literal Translation</b>	Summer Withered Herb – Summer Dry Herb – Plant withered after summer
<b>Common Name</b>	Prunella
<b>Part Used</b>	Spike
<b>Properties (Taste – Temperature)</b>	Bitter - Pungent – Cold / <i>Slightly Bitter - Sweet</i>
<b>Energetic 4 Directions</b>	Descending - Dispersing
<b>Channels Entered</b>	LIV – GB / <i>LU</i>
<b>Dosage</b>	(9-15g) 6-10g / <i>up to 30g</i>
<b>Cooking</b>	RC – SC depending on use


Traditional Functions	Primary	Secondary
	<b>Clears Heat/Fire, especially in the Liver Channel &amp; due to constraint</b>	
	<b>Softens Hard Masses &amp; Nodules, especially in the Neck</b>	
	<b>Brightens the Eyes - Tx Eye &amp; Ear Inflammation</b>	
	<b>Anti-hypertensive</b>	
<b>Common Clinical Uses - Treatment</b>	<b>Ascending Liver Fire</b> with red, painful, swollen eyes, headache, dizziness, vertigo with <i>Ju Hua</i> (Flos Chrysanthemi), <i>Shi Jue Ming</i> (Concha Haliotidis)	Deficient Liver Eye Pain that increases in the Evening (especially if no redness or swelling) with <i>Dang Gui</i> (Radix Angelicae)
	<b>Eye &amp; Ear Inflammation</b>	Eye Pain - Eyes that Tear easily & Sensitive to Light with <i>Xiang Fu</i> (Rhizoma Cyperi)
	<b>Neck Lumps – Nodules – Scrofula - Lipomas - Swollen Glands - Goiter - Inguinal Swollen Nodes – Mumps - Thyroid Swelling</b> – All due to Phlegm Fire with <i>Xuan Shen</i> (Radix Scrophulariae), <i>Kun Bu</i> (Thallus Eckloniae) – Neck nodules due to constrained Liver Qi with <i>Chai Hu</i> (Radix Bupleuri)	Mastitis – Breast abscess
	<b>Hypertension, especially associated with Liver Fire or Liver Yang Ascending</b>	Clear or blood-tinged Leukorrhea
<b>Caution - Contraindications</b>	Caution with Spleen or Stomach Deficiency	
	Rare cases of allergic reaction have been reported with symptoms of maculopapular rashes,	


	pruritis, allergic reactions of the mucosa of the throat, swollen lips & tongue, rhinitis, discomfort of epigastrium, nausea, vomiting, abdominal pain, diarrhea
<b>Pharmacological &amp; Clinical Research</b>	Lowers blood pressure
	Antibiotic - Anti-bacterial
	Stimulate smooth muscle - Contracts uterus
	Diuretic
	Can increase peristalsis
	Anti-inflammatory
	<p>Prunella vulgaris widely used as herb medicine to treat and prevent many disease, also used widely in recent years for it's good taste and rich nutrition, scientific data proved that the fresh leaves and stem of Prunella vulgaris is rich in protein, plant fat, carbohydrate, Carotene, Vitamin B, and nicotinic acid (niacin, Vitamin B3)</p>  <p>1.1. Sugar: Prunella vagaris contains free monosaccharide, disaccharides and polysaccharides. Scientists ever isolated and identified chemicals from Big flower Prunella (<i>Prunella grandiflora</i> Jacq.) free glucose, galactose, fructose, sucrose, combinative mannitose, glucose, Arabinose, xylose and Rhamnose. Tabba and other scientist isolated a kind of polysaccharide from prunella vulgaris water extract and identified it as prunellin, molecular weight about 10000, sulfur shares the composition of its molecular.</p> <p>1.2. Sterol content: Scientists isolated 8 sterols from the fruit spike, stem and leave of prunella herb, 4 of them are free sterols, another 4 of them are combinative Glucoside. They are beta-sitosterol, Stigmasterol, Spinasterol, Glucoside and Beta-Amyrin, etc. Another kind of new glucopyranoside chemical isolated recently and named as vulgarsaponin B.</p> <p>1.3. Organic acids: Organic acids isolated from prunella vulgaris mainly composed of Caffeicacid, oleic acid, linoleic acid, Lauric acid, Palmitic acid, myristic acid, Stearic acid and lignoceric acid. GC-MS method applied by scientists of China isolated palmitic acid (PA), Ethyl hexadecanoate; 6,9-Octadecadienoic Acid ; Stearic acid; 3,6,7-Eicosatrienoic Acid; Oleic acid; Arachidonic acid and behenic acid. Scientists Wan Ju Zhu and others isolated and identified a new kind of organic acid: 2alpha,3alpha-dihydroxyurs-12-en-28-oic acid.</p> <p>1.4. Flavones: Flavones from prunella herb identified till present mainly flavone, flavonol, anthocyanin and anthocyanidin. They are Quercetin, anthocyanin, delphinidin, hyperin, Luteolin-7-O-glucoside, etc.</p> <p>1.5. Steroids: White flower Prunella (<i>Prunella vulgaris</i> L. var. <i>leucantha</i> Schur Sec. Bailey) contains cyasterone, it shows anti tumor activity.</p> <p>1.6. Coumarins: Russian scientists isolated 3 kind of coumarins from prunella herb, identified as Umbelliferone, Scopoletin and Aesculin.</p>
	<p>Effects on acute cardiac infarction and the blood pressure</p> <p>Administered by abdominal injection to anesthetic rats, prunellin (PVS), an extract of Xia Ku Cao can significantly decrease Ig pvc, Ig (VT+VF) and arrhythmia. Four hours after the ligation of the coronary artery, administering PVS to anesthetic rats at 20mg/kg reduced the affected area of cardiac infarction and scope of the area of cardiac infarction to shrink compared to the contrast group. Administered by IV injection at 2.5mg/kg, PVS can significantly decrease both the diastolic and the systolic pressures in anesthetic rats.</p> <p>Reducing blood sugar</p> <p>Alcohol-based extracts of <i>Xia Ku Cao</i> can reduce the level of blood sugar in normal mice</p>

	<p>(0.5g/kg, ig) as well as in mice of alloxan-induced diabetes (0.5, 0.25g/kg/d, ig). They can also counteract adrenalin-induced blood sugar increase, improve glucose tolerance, and increase the synthesis of hepatic glycogen (0.5, 0.25g/kg, ig).</p> <p>Effects on bone marrow normoblast</p> <p>Research has found that <i>Xia Ku Cao</i> with white flowers has some effect on the bone marrow normoblast in animals of low-oxygen environments; it can stabilize the fluctuation of normoblast blood islands.</p> <p>Effects on blood rheology</p> <p>Experiments show that <i>Xia Ku Cao</i> has the effect of improving some indexes of blood rheology.</p> <p>Effects on the thymus, the spleen and the adrenal glands</p> <p>Subcutaneous injection of <i>Xia Ku Cao</i> can significantly shrink animals thymus and spleen glands, and enlarge their adrenal glands. Furthermore, administered by abdominal injection, it can significantly raise the level of plasma cortisol.</p>
	<p>Contains Vitamins B1, C, K</p>  <p>图 921 夏枯草</p>
	<p>Constituents: Luteolin, C<sub>15</sub>H<sub>10</sub>O<sub>6</sub>; Esculetin, C<sub>9</sub>H<sub>6</sub>O<sub>4</sub>.</p> <p>Ursolic acid and caryophyllin (they are the saponin). Contains prunellin, a kind of saponin, it's aglycon just Ursolic acid, other kinds of content such as Ursolic acid, Oleanolic Acid, Rutin, hyperin, alpha-anisylacetone, delphinidin, cyanidin. Seed contain coating oil and lipase. Herb contains naphtha, composed by D-Camphor and fenchone, Vitamine B1, etc.</p> <p>Whole herb contains triterpenoid saponins, Sapogenol is Oleanolic Acid, free Oleanolic Acid, Ursolic Acid, Rutoside, Hyperin, Caffeic acid, Vitamin B1, Vitamin C, Vitamin K, Beta-Carotene, Resins, Bitterness, Tannins, Volatile oil, Alkaloid, water soluble salt (3%, and potassium chloride shares about 63%)</p> <p>Fruit Spike contains Delphinidin, Cyanidin, d-Camphor, d-fenchone, Ursolic Acid.</p> <p>Chemical Composition: Oleanolic acid (I); b-amyrin (II); Stigmasterol-7; 22-diene-3-ketone (III); a-Spinasterol (IV); b-sitosterol (V); Daucosterol (VI); 1.8-cineole; b-pinene; Myrcene; Linalool acetate; a-phellandrene; Linalool; Ursolic acid (II); Quercetin (VI); Quercetin-3-o-b-D-galactoside (V); Oleanane-12-alkene-3b; Oleanane-12-alkene-28-aldehyde-3b-hydroxy (VII); Vulgarsaponin B (VI, III, V); Ursaane-12-alkene-28-aldehyde-3a-hydroxy (VIII); 28-dihydroxy (IX) and ursaane-12-alkene-3b; 28-dihydroxy (X), IV, VII, VIII, IX and X; 2a, 3a-hydroxyuvaol-12-alkene-28-acid (III); 3b, 16a, 24-trihydroxyoleanane-12-alkene-28-acid-3-o-(6-butyryl)-b-D-glucopyraoside (I).</p> <p>Other Phytochemicals: Ursolic acid, betulinic acid; 2alpha,3alpha-dihydroxyurs-12-en-28-oic acid; 2alpha,3alpha,24-trihydroxyurs-12,zo(30)-dien-28-oic acid; 2alpha,3alpha,24-trihydroxyolean-12-en-28-oic acid; 2alpha,3alpha,24-trihydroxyolean-11,13(18)-dien-28-oic acid; (12R,13S)-2alpha,3alpha,24-trihydroxy-12,13-cycle-taraxer-14-er-28-oic acid; (13S,14R)-2alpha,3alpha,24-trihydroxy-13,14-cycle-olean-11-en-28-oic acid; delphinidin; cyanidin; rosmarinic acid; isoorientin; cinaroside; beta-sitosterol-beta-D-glucoside; sigmast-7-3beta-ol-beta-D-glucoside; dpinasterol-beta-D-glucoside; umbelliferone; scopoletin; vulgarsaponin B; quercetin; quercetin-3-O-beta-D-galactoside; ethyl caffeate; vulgarsaponin A; stigmasterol; caffeic acid; alpha-Spinasterol; volatile oil.</p> <p>Volatile oil: contains 6,10-dimethyl-2-undecanone, 2.828%; hexadecanoic acid, 17.155%; 9-Octadecenoic acid, 0.361%; isochiapin, 2.061%; d-camphor; d-fenchone, etc.</p>
	<p>Toxicity - Experiments show that at 10g/kg, Xia Ku Cao does not cause death to mice. Subacute toxicity tests on rats and dogs indicate that the herb does not affect their hemogram, nor does it harm the functions of the liver the kidney, or other vital internal organs. Ames test</p>

	shows that the herb does not cause mutation
<b>Notes</b>	<b>* Especially good to Clear Heat/Fire in Liver Channel &amp; Tx eye, ear, and neck area problems</b>
	Best Quality - Reddish brown, long spikes with short stalks, without leaves or foreign matter, not easy to be broken
	Some sources say <i>Xia Ku Cao</i> Nourishes Blood & Moves Qi
	Whole plant can be used, but fruit spikes more effective
	Used both internally & externally
	Fresh herb <i>Xian Xia Ku Cao</i> stronger heat-clearing & fire-draining properties
	Prunella Dew ( <i>Xia Ku Cao Lu</i> ) is the aromatic distillate of the fresh spikes & has same properties
	Good quality is reddish brown, long spikes with short stalks, without leaves or foreign matter; spikes should exceed 5cm in length – Best quality said to be from Nanjing area of Jiangsu Province
	Tx scrofula – cook <i>Xia Ku Cao</i> down until it thickens & apply to lymph glands
	Tx Liver Fire eye problems – powder <i>Xia Ku Cao</i> & take with decoction
	Some sources say this herb is good at removing neurological symptoms in the head due to heavy metal poisoning
	<p>Perennial growing to 0.15m by 0.3m. Prunella is a genus of seven species of herbaceous plants in the family Lamiaceae, also known as self-heals or "allheal" or Heart of the Earth for their use in herbal medicine. Most are native to Europe, Asia, and North Africa, but <i>Prunella vulgaris</i> (the Common Self-heal) is Holarctic in distribution, occurring in North America as well, and is a common lawn weed.</p> <p>Clavate, somewhat flattened, 1.5~8 cm long, 0.8~1.5 cm in diameter. Pale brown to brownish-red. The whole spike composed of up to ten or more whorls of persistent calyx and bracts, each whorl with two opposite bracts, fan-shaped, apex acuminate, striations of vein distinct, the outer surface with white hairs. Each bract with three flowers, the corolla often fallen off, persistent calyx bilabiate, with four small brown ovoid nutlets, with white convex at the acute end. Texture light. Odor, slight; taste, weak.</p> <p>Fibrous-rooted perennial from a root crown or short rhizome. Stems solitary or clustered, erect to creeping and ascending, 4-sided, 1-5 dm long, loosely softly long-hairy in lines or nearly throughout, or practically hairless. It is hardy to zone 3 and is not frost tender. It is in flower from July to September, and the seeds ripen from August to September. The flowers are hermaphrodite (have both male and female organs) and are pollinated by Bees.</p> <p>The plant prefers light (sandy), medium (loamy) and heavy (clay) soils. The plant prefers acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It requires moist soil.</p> <p>Self-heals are low-growing plants, and thrive in moist wasteland and grass, spreading rapidly to cover the ground. They are members of the mint family and have the square stem common to mints.</p> <p>Field Marks: Distinguishing features of this species are the crowded spikes consisting of many flowers subtended by many overlapping bracts.</p> <p>Habitat: Low woods, along streams, around ponds and lakes, in roadside ditches, wet prairies, as well as in drier habitats.</p> <p>Stems: Spreading to erect, 4-sided, hairy, up to 2 feet tall. Height 4-12 inches</p>
	
	Leaves: Few, stalked, softly long-hairy beneath, basal and opposite on stem or basal lacking, entire or obscurely toothed, with lanceolate or elliptic to broadly ovate blade, 2-9 cm long and

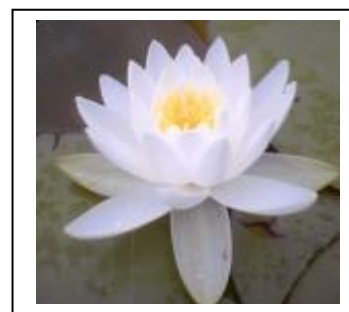
	<p>0.7-4 cm wide, the lower ones usually broader and with a more rounded base than the upper. Leaves: Opposite, simple, lanceolate to elliptic to narrowly ovate, rounded or pointed at the tip, rounded or tapering to the base, with or without teeth, usually hairy, up to 3 1/2 inches long, up to 1 1/2 inches broad; leaf stalks present.</p> <p>Flowers: Several crowded into cylindrical spikes; each flower 1/2 to 1 inch long, subtended by a ciliate bract. Tubular, blue-violet or occasionally pink or white, 1-2 cm long, with a hooded upper lip and a 3-lobed lower lip. Several flowers in short, dense spikes, 2-5 cm long, about 1.5-2 cm thick, the short-pointed bracts about 1 cm long, hairy on edges. Calyx 7-10 mm long, green or purple, with 3 shallow lobes on upper lip and 2 deeper lobes on lower lip, all lobes bristle-tipped.</p> <p>Flowering: May-September. Flower size: 1/2 inch long, in clusters 1-2 inches high. Flower color: purple.</p> <p>Sepals: 2-lipped, green or purple, hairy; the upper lip 3-toothed; the lower lip 2-lobed.</p> <p>Petals: 2-lipped, purple or white, up to 1 inch long; the upper lip unlobed; the lower lip 2-lobed.</p> <p>Stamens: 4, curved under the upper lip of the corolla.</p> <p>Pistils: Ovary superior, 4-parted; stigmas 2-cleft.</p> <p>Fruits: Nutlets 4, dark brown, ribbed, shiny, about 1/10 inch long.</p> <p>Notes: This plant is also known as heal-all.</p> 
	<p><i>Prunella Vulgaris</i> thrives in any damp soil in full sun or in light shade. It will grow thicker in a part shade environment. <i>Prunella vulgaris</i> is a good plant for growing in the spring meadow. Sow seed in very early spring in a flat outdoors, or give a short cold and moist conditioning treatment before sowing in a warm place. As <i>Prunella Vulgaris</i> is related to the mint family, it transplants and spreads easily. Some not so enlightened people might consider it a weed. This perennial is hard to temperatures as low as -20 F (-29 degrees C) and occurs naturally throughout Europe and adjacent Eurasia. It has quickly become naturalized to North America and Australia as well. It is an attractive, low-growing plant that spreads out well and will colonize an area with its creeping root stocks and by seed as well. It will grow as high as 12 inches tall when it flowers with violet blossoms in the summer. Self-heal flowers form in dense clusters at stem ends, each with a two lipped arrangement with its upper petal resembling a hood.</p> <p>Grows well in average to good soil where plants will get full sun to partial shade. Routine watering will result in best growth, but when somewhat neglected, it grows good as well. New sprouted plants can be transplanted in early spring. Will allow propagating from cuttings, but using root segments removed from established clumps is the easiest method.</p>
	<p>Habitat: Spread widely from Europe to Asia, Siberia, North Africa, West Asia, India, Pakistan, Nepal, Bhutan, Australia and North America. Wide spread at provinces of China, <i>ShananXi</i>, <i>Gan Su</i>, <i>Xin Jiang</i>, <i>He Nan</i>, <i>Hu Bei</i>, <i>Hu Nan</i>, <i>JiangXi</i>, <i>Zhe Jiang</i>, <i>Fu Jian</i>, <i>Tai Wan</i>, <i>GuangDong</i>, <i>Guang Xi</i>, <i>Gui Zhou</i>, <i>SiChuan</i>, <i>YunNan</i> and other provinces. Growing at hill side, grassland, brooke side, and wet terra.</p>
	<p>Lore: The name carpenters herb stems from belief that "the decoction of <i>Prunella</i> made with wine or water both joined together and make whole and sound all wounds, both inward and outward." (Gerard, 1633)</p> <p><i>Prunella</i>: from a German word for "quinsy," a malady that this plant was used to treat (ref. genus <i>Prunella</i>) <i>vulgare/vulgaris</i>: common (ref. <i>Cerastium fontanum</i> ssp. <i>vulgare</i>, <i>Cirsium vulgare</i>, <i>Foeniculum vulgare</i>, <i>Leucanthemum vulgare</i>, <i>Marrubium vulgare</i>, <i>Beta vulgaris</i>, <i>Hippuris vulgaris</i>, <i>Linaria vulgaris</i>, <i>Prunella vulgaris</i> var. <i>lanceolata</i>, <i>Senecio vulgaris</i>,</p>

	Utricularia vulgaris).
	<p><b>Prunella Vulgaris Folklore and History:</b>  The common name "self-heal" derives from the use of some species to treat a range of minor disorders. It is reported to have an antiseptic and antibacterial effect, and to be particularly good in cases of food poisoning. In the Pacific Northwest, its juice was used by the Quinault and the Quileute on boils. They also used the whole plant to treat cuts and inflammations. Some people even fixed it with grease to form an ointment. It is also used as an herbal drink in China to treat minor bodily disorders.</p> <p>Prunella Vulgaris was once proclaimed to be a Holy herb and thought to be sent by God to cure all ailments of man or beast, and said to drive away the devil, which lead to the belief that Heal-All was grown in the Witches garden as a disguise.</p> <p>The root was used to make a tea to drink in ceremonies before going hunting by one Native American tribe to sharpened the powers of observation.</p>  <p><b>Prunella Vulgaris Edible Uses:</b>  <b>Edible Parts:</b> Leaves.  Leaves - raw or cooked. They can be used in salads, soups, stews etc. Somewhat bitter due to the presence of tannin in the leaves, though this can be removed by washing the leaves. A cold water infusion of the freshly chopped or dried and powdered leaves is used as a refreshing beverage. Very tasty.</p> <p>Self-heal is a mint relation, and as with all the other mints, if you plant it once, you never have to plant it again. Incredibly vigorous, the plant spreads by underground stems that shoot out in every direction once the first root is stuck in the ground. If there is anything to the doctrine of signatures, prunella should make anyone who takes it into his or her body stronger than an ox.</p>
	<p>In the southern United States, ground-hog plantain, or square weed as it is called, is collected in the spring as a tonic plant. It is also eaten as a spinach substitute, prepared in a big pot with a piece of hog meat by cooks who follow the traditional southern style or with a little vegetable oil by more modern cooks concerned with the bad publicity animal fats have received in recent years.</p>
	<p>Prunella Vulgaris is an edible and medicinal herb, and can be used in salads, soups, stews, or boiled as a pot herb. Used as an alternative medicine for centuries on just about every continent in the world, and for just about every ailment known to man, Heal-All is something of a panacea, it does seem to have some medicinal uses that are constant.</p> <p>An olive-green dye is obtained from the flowers and stems. The plant is a good ground-cover in sunny positions or light shade. The mildly bitter leaves are also good as salad greens.</p>
	<p>Originally native to part of Europe, Africa and Asia, though the plant has now naturalized throughout the world in moist areas below 7500'</p>
	<p>Perennial growing to 0.15m by 0.3m. It is hardy to zone 3 and is not frost tender. It is in flower from July to September, and the seeds ripen from August to September. The flowers are hermaphrodite (have both male and female organs) and are pollinated by Bees. The plant prefers light (sandy), medium (loamy) and heavy (clay) soils. The plant prefers acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It requires moist soil.</p>
	<p><b>Other Uses</b>  Dye; Ground cover. An olive-green dye is obtained from the flowers and stems.</p>
	<p>Memorizeherbs.com – Xia Ku Cao / Prunella</p>

		<p>Did somebody say spike?! This is the story of the lady's volleyball game of a lifetime - Xia vs. Cao! These <u>ladies are on fire</u>, lets <u>brighten our eyes</u> and see what happens! Wow it is scorching <u>summer</u> day, and Xia's <u>nodules</u> have never looked better!</p> <p><b>Explanation of Key Words in this story...</b></p> <table><tr><td>ladies are on fire...</td><td>brighten our eyes</td><td>Clears LV fire... brightens the eyes</td></tr><tr><td>summer...</td><td>nodules</td><td>clears heat and dissipates nodules</td></tr></table>	ladies are on fire...	brighten our eyes	Clears LV fire... brightens the eyes	summer...	nodules	clears heat and dissipates nodules
ladies are on fire...	brighten our eyes	Clears LV fire... brightens the eyes						
summer...	nodules	clears heat and dissipates nodules						
	Western Herbology – Woundwort, Self Heal, All Heal – Use entire top of plant as astringent, blood purifier, & for internal wounds - In the western tradition this herb has also been used to treat sore throats and mouth inflammation.							

6) Plumula Nelumbinis Nuciferae – *Lian Zi Xin* – Lotus Plumule

连子心



<b>Pharmaceutical Name</b>	Plumula Nelumbinis Nuciferae
<b>Pinyin</b>	<i>Lian (Zi) Xin</i>
<b>Literal Translation</b>	Lotus Seed Heart - Lotus Plumule
<b>Common Name</b>	Lotus Plumule
<b>Part Used</b>	Plumule (dried green embryo of seed / <i>young plant shoots</i> )
<b>Properties (Taste – Temperature)</b>	Bitter – Cold / Sweet - Neutral
<b>Energetic 4 Directions</b>	Descending - Contracting
<b>Channels Entered</b>	HE – P / SP – KID - LU - ST
<b>Dosage</b>	(1.5-3g) 1.5-6g
<b>Cooking</b>	RC

<b>Traditional Functions</b>	<b>Primary</b>	<b>Secondary</b>
	<b>Clear Heart Fire</b>	Stop Bleeding
		Consolidate Essence
<b>Common Clinical Uses - Treatment</b>	<b>Warm Febrile Disease where Heat attacks Pericardium &amp; Heart</b> (mental confusion, delirium, fever) with <i>Xuan Shen</i> (Radix Scrophulariae), <i>Mai Men Dong</i> (Radix Ophiopogonis)	Hypertension
	<b>Heart Fire with Insomnia, Irritability, Thirst</b>	Heat causing Vomit or Cough with Blood
		Meningitis
		Spermatorrhea
<b>Caution - Contraindications</b>	Caution with Middle Jiao Deficiency	
	Should not be used on patients with abdominal masses or constipation	
<b>Pharmacological &amp; Clinical Research</b>	Lowers blood pressure by vasodilation	
	Relax uterus smooth muscle	
	Contains Calcium & Iron	
	Chemical Composition - Linoleum acid; Oleic acid; Palmitic acid; Linolenic acid; Myristic acid; Liensinine; Isoliensinine; Lotusine; Nuciferine; Pronuciferine; Neferine; Rutin; Hyperin; Galugeolin; b-sitosterol; b-sitosterol -n-octane acid ester; b-sitosterol palmitic acid ester; b-sitosterol-3-O-b-glucoside (V)	
	Inorganic Chemicals - trace elements such as Ca, Mg, Cu, Zn, Mn, Fe, Ni, and Cd.	
	Toxicity - Nuciferine, when administered to mice intravenously, the LD50 was $26\bar{\Delta}\pm2.3\text{mg/kg}$	
	Anti-aging effects	

	<p><i>Lian Zi</i>, at the dosage of 1%, can prolong the life of fruit flies by an average of 34.9%. The longest lifespan of male fruit flies was lengthened by 56.8 %. Furthermore, it caused a 53% decrease in lipofuscin levels in male fruit flies 40 days after administration.</p> <p>Increasing immunological effects</p> <p>Wister rats were fed with fodder containing different dosages of <i>Lian Zi</i>. After one month, the quantity of T-lymphocytes in thymic cortex in the experimental group was higher than that of the control group, which suggested that <i>Lian Zi</i> had certain effects in enhancing immunity.</p> <p>Inhibiting contraction of smooth muscle</p> <p>Neferine (a chemical component of <i>Lian Zi</i>) can inhibit the contraction of isolated normal and inflamed gallbladders caused by K<sup>+</sup>, with the inhibitory concentration of 50% of 120 mmol/L and 5 mmol/L respectively, which showed that the substance had strong inhibiting effects on inflammation in the gallbladder.(11) <i>Lian Zi Xin</i> (Plumaula Nelumbinis) can inhibit rabbit aorta ring contraction that was caused by PE, 5-HT, Histamine, and high K<sup>+</sup>. It can also inhibit the smooth muscle of the urethra in rabbits induced by PE.(12)</p> <p>Effects on platelet aggregation and thrombus formation</p> <p>Neferine, given via the stomach, can inhibit rat thrombus formation and the inhibiting rate on ADP, collagen and thrombase induced platelet aggregation and the rates were 55.8, 43.45, and 65.33, respectively. The substance can effectively inhibit platelet TXA2 release induced by ADP.</p> <p>Antiarrhythmic effect</p> <p>Neferine, when given intravenously at 5mg/kg, can antagonize rabbit arrhythmia caused by adrenalin and increase the rabbit's ventricular fibrillation threshold value by electricity. It has antagonizing effects on arrhythmia in rats induced by aconitine, arrhythmia in guinea pigs caused by ouabain, and rat arrhythmia induced by the binding of the coronary artery. It can prevent the arrhythmia induced by electrical stimulation on thalamus.</p> <p>Effects on hemodynamics and the cardiac atrium characteristics</p> <p>Liensinine (a chemical component of <i>Lian Zi</i>) at 3mg can transiently inhibit the hemodynamic indexes in rats and also can dose dependently inhibit the contractility of left atrium and frequency of right atrium.</p> <p>Others</p> <p>Liensinine, in the dose range of 3 to 30mmol/L, can decrease the arterial pressure of single guinea pig cardiac muscle cells, prolonging the time-course of AP. Liensinine, in 10 and 30 mmol/L can decrease I<sub>Na</sub> and I<sub>Ca-L</sub> showing that it has blocking effects on sodium and L-type calcium channels, which could explain the mechanism of its antiarrhythmic effects partly.</p>
<b>Notes</b>	<p><b>* Not used much – Mostly used to Tx Heat Affecting Heart</b></p> <p>Best Quality - Large and bluish green color</p> <p>Green plumule within ripened lotus seed, which is separated from the seed &amp; dried</p> <p>Ancient Times – coated with Cinnabar powder <i>Zhu Lian Zi Xin</i> to increase cooling &amp; calm spirit</p>
	<p>The lotus is rich with symbolism in Chinese culture, thanks largely to the influence of Buddhism. It is one of the eight Buddhist precious things and in that tradition, the fruit, flower and stalk represents the past, present and future. The symbolism of the lotus includes purity, as the lotus grows out of the muddy mire, yet the flower is beautiful and perfect.</p> <p>Nelumbo nucifera is native to western Asia from Iran eastwards to China, Japan and Australia. It is an aquatic perennial, found in large lakes, now widely cultivated around the world as both an ornamental in water gardens and a food and medicinal plant.</p> <p>Researchers report that the lotus has the remarkable ability to regulate the temperature of its flowers within a narrow range, just as humans and other warm blooded animals do.</p> <p>Physiologists at the University of Adelaide in Australia found that lotus flowers blooming in the Adelaide Botanic Gardens maintained a temperature of 86 to 95 degrees F, even when the air temperature dropped to 50 degrees. They suspect the flowers may be staying warm for the benefit of their insect pollinators. The study was published in the journal "Nature" and it notes that there are very few other species with this temperature regulation function.</p> <p><b>Growing and Propagation</b></p> <p>The roots of Nelumbo nucifera grow from the mud of lakes, ponds and river bottoms, while</p>

	<p>the leaves float on top of the water surface. The flowers bloom on thick stems rising from several inches above the water to 5 feet, but have been found to grow as high as 16 feet. The plant is quite breathtaking, with leaves as large as 2 feet in diameter, and showy, fragrant flowers up to 7 inches in diameter. There are several different cultivars with flower colors ranging from white to yellow to light pink, blooming in late spring to mid summer.</p> <p>The lotus requires rich loamy soil and grows in water up to 8 feet deep. In cooler climates, it should be grown in shallower water, though not less than 1 foot deep. This allows the water to warm up more quickly and allow for a good growing season and development of flowers. The plant requires a minimum of a 5-month growing season each year, and during this time does best with temperatures between 73 to 80 degrees F. The plant is hardy to -15 degrees F, to USDA zone 5, and does best in full sun.</p> <p>The plants are easy to grow when in the proper conditions, and in warm water can grow very quickly. Once plants are established they will not transplant well, so should be planted in a permanent location as soon as possible. Once established though, they can become invasive and take over a large expanse of water.</p> <p>The plant can be propagated by seed or rhizome. Seeds can be collected from plants where pods are allowed to dry on the plant. If seeds are well preserved, they may be viable for many years. One of the oldest seeds to germinate into a viable plant was an approximately 1,300-year-old lotus fruit, recovered from a dry lakebed in northeastern China. Before planting seeds, they should be filed across the middle, then soaked in warm water. The water should be changed twice a day for about 3-4 weeks until it germinates. They can then be planted in pots submerged in water, increasing the depth of the water as the plant grows. Plants can also be divided in the spring, though they often resent this disturbance. They will propagate themselves by rhizome.</p> <p><b>Harvesting and Preparation</b></p> <p>The leaves of the lotus (<i>He Ye</i>), lotus seed (<i>Lian Zi</i>), lotus flower stamens (<i>Lian Xin</i>, and newly sprouted shoots (<i>Lian Zi Xin</i>) are all used in Chinese medicine. <i>Lian Zi Xin</i> is the small green shoot that sprouts from within the ripened lotus seed. For medicinal use, it should be collected before leaves emerge. Good quality shoots are large and bluish-green in color.</p>
	Memorizeherbs.com – <i>Lian Zi Xin</i> Lotus Plumule NA
	Western Herbology – Not used


\* 7) Rhizoma Phragmitis Communis – *Lu Gen* - Phragmitis

芦根



<b>Pharmaceutical Name</b>	Rhizoma Phragmitis Communis	
<b>Pinyin</b>	<i>Lú Gēn</i>	
<b>Literal Translation</b>	Reed Rhizome	
<b>Common Name</b>	Phragmitis	
<b>Part Used</b>	Rhizome	
<b>Properties (Taste – Temperature)</b>	Sweet - Cold	
<b>Energetic 4 Directions</b>	Descending - Contracting	
<b>Channels Entered</b>	LU - ST	
<b>Dosage</b>	15-30g / up to 60g	
<b>Cooking</b>	RC	
<b>Traditional Functions</b>	<b>Primary</b>	<b>Secondary</b>
	<b>Clear Heat in Lung &amp; Stomach, especially with Rebellious Qi</b>	Diuretic
	<b>Nourish Body Fluids, especially when Yin has been damaged by Heat</b>	Encourages Rashes to Surface
		Stop Vomit
<b>Common Clinical Uses - Treatment</b>	<b>Heat</b> with fever, dry mouth, thirst, irritability, scanty dark painful frequent urine, or blood in urine, irritable - <b>Heat which has damaged Fluids</b> with irritability & thirst with <i>Tian Hua Fen</i> (Radix Trichosanthis), <i>Mai Men Dong</i> (Radix Ophiopogonis)	Acute Urinary tract infections (UTI) accompanied by irritability & thirst
	<b>Lung Heat with Cough</b> with sticky yellow mucus – <b>Wind Heat attacking Lungs with cough &amp; thirst</b> with <i>Ju Hua</i> (Flos Chrysanthemi), <i>Jin Yin Hua</i> (Flos Lonicerae), <i>Bo He</i> (Herba Menthae) – <b>Lung Abscess</b> with purulent sputum striped with blood with <i>Yi Yi Ren</i> (Semen Coicis)	Febrile Diseases with Rashes not fully expressed
	<b>Stomach Heat</b> with vomiting, belching, hiccup, bad breath, toothache with <i>Zhu Ru</i> (Caulis Bambusae), <i>Pi Pa Ye</i> (Folium Eriobotryae) – Stomach Fire with dry mouth, severe bad breath, toothache with <i>Shi Gao</i> (Gypsum)	Increase Saliva
		Seafood poisoning, especially Puffy Fish

<b>Caution - Contraindications</b>	Caution in cases of Deficient Spleen/Stomach Cold
<b>Pharmacological &amp; Clinical Research</b>	Antibiotic - Anti-bacterial;
	Tx pulmonary abscesses with other herbs
	Dissolve gallstones
	Contains Vitamins B1, B2, C
	CNS suppressant (mild)
	Counters affects of caffeine
	Chemical Composition - Asparamide; Tocopherol; Caffeic acid; Gentisic acid; 2, 5-dimethoxy-p-benzoquinone; P-hydroxybenzaldehyde; Syringaldehyde; Coniferaldehyde; Vanillic acid; Ferulic acid; P-coumaric acid; Dioxanellignin; Phenylpropane; Guaiacyl; Syringyl; 4-hydroxylphenyl; Coixol; Tricin; □-amyrin; Taraxerol; Taraxerone; Arabinose; Xylose; Glucose; Proline; Betaines
	Experiments show that a polysaccharide extracted from <i>Lu Gen</i> can enhance immunity
<b>Notes</b>	<b>* Good because it is effective, yet mild acting - Clear Heat in Lung &amp; Stomach - Nourish Body Fluids</b>
	Best Quality - Thick uniform yellowish and glossy, without fibrous root, light with tenacious texture, not easy to be snapped
	Fresh herb ( <i>Xian Lu Gen</i> ) thought to be more cooling & generating fluids
	Fresh Fried Rhizome Juice ( <i>Xian Lu Gen Zhi</i> ) has strong yin-nourishing & fluid restoring properties
	Reed Stalk ( <i>Wei Jing</i> ), because hollow, thought to enter Heart & Lungs to tx Upper Burner Deficient Heat – Properties of stalk & root are similar, in modern times usually only use <i>Lu Gen</i>
	<b>Comparison –</b> Ancient times thought to be similar - Both clear heat, generate fluids, promote urination <b><i>Lu Gen</i></b> – Better at clearing Qi Level Heat; Cool Lungs; Drains Stomach; Guide-out Phlegm Heat, Dissipate pathogens from Exterior; focuses on Lungs & Stomach; Tx Lung Heat Cough; Tx externally contracted disorders, or failure of measles to express <b><i>Bai Mao Gen</i></b> (Stop Bleeding) – Better for Clearing Blood Level Heat & Cooling Blood to Stop Bleeding; Guide Heart Fire Down & out through urine; focuses on Heart, Lungs, Stomach, Bladder; Tx nosebleeds, spitting-up blood, blood in urine; Tx jaundice due to Damp heat
	Can be used alone as a fresh juice; fresh juice is more effective
	Rhizoma Phragmitis(fresh) Long-cylindrical, some slightly compressed, varying in length, 1~2 cm diameter. Externally yellowish-white, lustrous, the peel loose and exfoliated. Nodes annular, bearing remains of roots and bud scars. Texture light and tough, flexible, fracture yellowish-white, hollowed, walls 1~2 mm thick, showing small pores arranged in a ring. Odorless; taste, sweetish. Rhizoma Phragmitis(dried) Compressed-cylindrical. Nodes relatively hard, internodes longitudinally wrinkled.
	The roots and stalk of a perennial herb grows as tall as 4 meters It is usually processed by removing the plant, stripping it of its stems and leaves and drying the stalk (which is then cut into pieces as pictured) The root itself is yellow-white or brown in color and “shiny” with vertical sections carved into the flesh of the root
	Can give up to 60 grams in fresh form for a stronger effect to generate fluids and promote urination. <i>Wei Jing</i> is the reed stem of the same plant. <i>Lu Gen</i> is commonly used in place of <i>Wei Jing</i> in ancient and traditional formulas even though it's technically a different herb.
	For bad breath in general, use fresh reed rhizome (鲜芦根; <i>Xian Lu Gen</i> ). Use large amount of fresh reed rhizome and boil it in 3 liters of water. Consume it as replacement of daily intake of

	water.								
	Ancient Times – One of the most useful plants in China after bamboo; used for food, roofs, fences, mats, screens, burn for fuel – Common along Yangtse River – Plant said to bring sexual harmony to married couples								
	<p>Memorizeherbs.com – <i>Lu Gen</i> / Phragmitis</p>  <p><b>Lu Gen - Hock a Yellow Loogie to clear LU &amp; ST heat</b>  Welcome to the Loogie Hocking contest, where who wharfs the most loogies wins! So go on <u>smoke a cigarette</u> and eat some <u>peppers till you vomit</u>... whatever helps you <u>generate some fluids</u> folks! If you can't take the <u>heat</u> then please step out back, visit the <u>restroom</u>, and <u>scratch your weasel</u>, cuz for everyone else its loogie hawking time!!!  But be careful, hawking too many loogies and vomiting for too long can cause some (cc: SP/ST cold from deficiency)</p> <p><b>Explanation of Key Words in this story...</b></p> <table border="0"> <tr> <td>smoke a cigarette... peppers till you vomit</td><td>clears LU heat; clears ST heat, stops vomiting</td></tr> <tr> <td>generate some fluids... heat</td><td>generates fluids; clears heat</td></tr> <tr> <td>restroom... scratch your weasel</td><td>promotes urination... vents rashes like</td></tr> <tr> <td>measles</td><td></td></tr> </table>	smoke a cigarette... peppers till you vomit	clears LU heat; clears ST heat, stops vomiting	generate some fluids... heat	generates fluids; clears heat	restroom... scratch your weasel	promotes urination... vents rashes like	measles	
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generate some fluids... heat	generates fluids; clears heat								
restroom... scratch your weasel	promotes urination... vents rashes like								
measles									
	Western Herbology – Not used								

\* 8) Semen Cassiae Torae – *Jue Ming Zi* – Cassia Seed


## 决明子



<b>Pharmaceutical Name</b>	Semen Cassiae Torae - Cassia obtusifolia
<b>Pinyin</b>	<i>Jue Ming Zi</i> or <i>Cao Jue Ming</i>
<b>Literal Translation</b>	Seeds of Realized Brightness / Clarify Vision Seed / Unhindered Clarity Seeds
<b>Common Name</b>	Cassia Seed / <i>Sicklepod</i> , / <i>Foetid Cassia Seed</i>
<b>Part Used</b>	Seed
<b>Properties (Taste – Temperature)</b>	Bitter – Sweet - Salty – Slightly Cold / Cold
<b>Energetic 4 Directions</b>	Ascending & Descending - Contracting
<b>Channels Entered</b>	LIV – LI - KID / GB
<b>Dosage</b>	9-15g / up to 30g
<b>Cooking</b>	RC – Some say Crush before decocting

Traditional Functions	Primary	Secondary
	<b>Clear Heat in the Liver</b>	Reduce Blood Pressure & Cholesterol
	<b>Calm Liver Yang</b>	Benefit Kidneys & <i>Jing</i>
	<b>Moisten the Intestines</b>	
	<b>Clear &amp; Brighten the Eyes – Dispel Wind Heat</b>	
<b>Common Clinical Uses - Treatment</b>	<b>Heat or Wind Heat with Itchy, Red, Painful Eyes, Sensitive to Light</b> – Liver Fire with <i>Shi Jue Ming</i> (Concha Haliotidis) – Upward Blazing Liver Fire with <i>Long Dan Cao</i> (Radix Gentianae), <i>Huang Qin</i> (Radix Scutellariae), <i>Xia Ku Cao</i> (Spica Prunellae) – Wind Heat with <i>Ju Hua</i> (Flos Chrysanthemi), <i>Man Jing Zi</i> (Fructus Viticis), <i>Mu Zei</i> (Herba Equiseti)	Improve Vision
	<b>Ascending Liver Yang &amp; Liver Heat with Headache, Red &amp; Painful Eyes, Excessive Tearing, Dizziness</b> – Pain in eyes worse at night with <i>Xia Ku Cao</i> (Spica Prunellae)	Liver Yang Ascending headaches & dizziness, with <i>Gou Teng</i> (Ramulus Uncariae), <i>Ju Hua</i> (Flos Chrysanthemi) – Hypertension with <i>Ju Hua</i> (Flos Chrysanthemi)
	<b>Constipation with Dry Stool</b> , especially with Liver Yin Deficiency or remnants of heat in intestines with <i>Dang Gui</i> (Radix Angelicae), <i>Sheng Di Huang</i> (Radix Rehmanniae), <i>Huo Ma Ren</i> (Semen Cannabis) – Constipation, severe bad breath, red eyes, dark scanty urine with <i>Dan Zhu Ye</i> (Herba Lophatheri)	Temporal headache associated with Wind Heat with <i>Chuan Xiong</i> (Rhizoma Chuanxiong)
	<b>Eye Problems</b> where there is Spots & Blurry	Prevent atherosclerosis by lowering blood

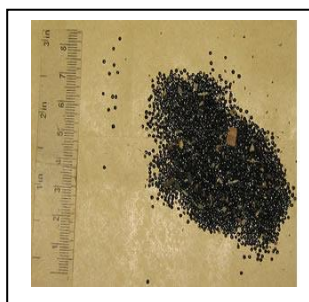
	Vision - Glaucoma - Cataracts - Night blindness – Insidious loss of vision	pressure & serum cholesterol
	<b>Liver &amp; Kidney Deficiency with dry eyes, Sensitive to Light (Photosensitivity), blurred vision, tearing, visual problems</b> with <i>Ju Hua</i> (Flos Chrysanthemi), <i>Sheng Di Huang</i> (Radix Rehmanniae), <i>Xuan Shen</i> (Radix Scrophulariae) – Or with <i>Shi Hu</i> (Herba Dendrobi), <i>Tain Men Dong</i> (Radix Asparagi), <i>Qing Xiang Zi</i> (Semen Celosiae)	
<b>Caution - Contraindications</b>	Use with caution in cases of Spleen Deficiency, diarrhea or hypotension	
	In large doses may cause loose stool or diarrhea	
	Do not use with <i>Huo Ma Ren</i> (Semen Cannabis)	
	Allergic reactions reported are numbing of lips & tongue, pruritis, nausea, vomiting, abdominal pain, diarrhea	
	<b>Herb-Drug Interaction</b> - Concurrent use with diuretics such as chlorothiazide, hydrochlorothiazide, furosemide (Lasix), bumetanide (Bumex) and torsemide (Demadex) may lead to increased elimination of water and/or electrolytes.	
<b>Pharmacological &amp; Clinical Research</b>	Antibiotic - Anti-bacterial - Anti-fungal	
	Lower blood pressure, alcohol extract effects last longer than water extract	
	Improves vision	
	Antispasm	
	Diuretic	
	Anticancer	
	Contains Vitamin A	
	Lower cholesterol	
	Purgative	
	Uterine stimulant	
	Chemical components - Phytochemicals and constituents: Emodin, chrysophanol, physcion, obtusin, obtusifolin, etc.	
<b>Notes</b>	<b>* Not used much – Used mostly for Liver Heat with eye problems &amp; constipation</b>	
	Best Quality - Dry, full, brown, glossy seeds, consistent size	
	<b>Dry-fried</b> ( <i>Chao Jue Ming Zi</i> ) reduces Liver Cooling & Wind Dispelling; enhances ability to Nourish Liver & Kidney	
	<b>Comparison –</b> Both Cool Liver, improve vision <b>Jue Ming Zi</b> – Sweet & Salty broaden therapeutic scope to Nourish Liver & Kidney Yin; moisten intestines to tx constipation; Disperse Wind Heat; Tx Excess or Deficiency eye problems or headache <b>Qing Xiang Zi</b> – Tx eye disorders or headache due to Excess Heat; Clear Liver Channel Fire; Disperse Wind Heat from Blood; Not as strong to Clear Liver Fire, but can clear superficial visual obstruction; dilates pupils Compared to: Both Clear Liver Heat & Brighten Eyes; often combined for eye problems and headaches involving eyes <b>Shi Jue Ming</b> – Sedates Ascending Liver Yang; enters Liver Blood level to Nourish Yin	
	Cassia Seed ( <i>Jue Ming Zi</i> ) is more effective at Clearing Liver Fire & benefiting Kidneys than Chrysanthemum Flower ( <i>Ju Hua</i> ) - <i>Ju Hua</i> is better to Calm Liver & Dispel Wind Heat	
	Also called Chinese Senna	
	Can be used externally as a compress to tx eye problems	

	Can use up to 30 grams of <i>Jue Ming Zi</i> for reducing cholesterol. Can be used by itself, steeped into a tea, use 10-20 seeds per cup. If patient develops diarrhea or loose stool, reduce dose.				
	Some say this herb is very effective at treating Excess tearing				
	This herb "oils" the intestines to moisten. Historically, this was used for 3rd world diets low in fats, high in vegetable fiber, which dries the intestines.				
	<p>There has been some confusion over identification of the original source plant for <i>Jue Ming Zi</i>. For a long time it was thought to be <i>Cassia tora</i>, but in 1977 when the Chinese Pharmacopeia was revised, researchers discovered that it was actually <i>Cassia obtusifolia</i>. <i>Cassia obtusifolia</i> has larger seeds and is known as big <i>Jue Ming Zi</i> (<i>Da Jue Ming Zi</i>). It is a close relative to <i>Cassia tora</i>, which has small seeds and is known as small <i>Jue Ming Zi</i> (<i>Xiao Jue Ming Zi</i>). Both are acceptable species for medicinal use. <i>Cassia</i> is ancient Greek term indicating an aromatic plant. The Latin word <i>obtusifolia</i> means "obtuse leaved" and refers to the leaf shape.</p> <p><b>Growing and Propagation</b></p> <p><i>Jue Ming Zi</i> is grown as an annual and is found in the China countryside along roadsides, on mountains, and aside riverbanks. It is considered a weed in many places and grows easily in almost any soil with good drainage. Though it prefers full sun it will also do well in part shade. It flowers in May to June and forms seeds in late summer.</p> <p>The plant is easily propagated by seed and will spread by self-sowing if left unattended in the garden. For cultivation, seed can be planted directly in the garden in early spring. Germination is helped by scarifying the seed then pre-soaking for 2-3 hours in warm water. Seeds germinate in 1-12 weeks and in colder regions it is best to start them in a greenhouse and transplant seedlings after the last frost.</p> <p><b>Harvesting and Preparation</b></p> <p>Seed are harvested in September to November after they have ripened. The whole plant is cut and dried in the sun. The seed is easily separated once the pods have dried thoroughly. For medicinal use, good quality <i>Jue Ming Zi</i> consists of seeds that are dry, brown and glossy.</p>				
	The herb is indigenous to dry areas of India. Employed in Ayurvedic medicine and Chinese medicine				
	<p>Leaves and seeds are especially beneficial for leprosy, and skin conditions. Leaf decoction (one part of leaves to ten parts of liquid) is used for fevers associated with teeth eruption in infants. The herb is additionally employed for skin eruptions and itching, if combined with lime juice.</p> <p>Leaves contain bulk of nutritional substances and have a pleasant taste.</p> <p>If employed in form of poultice the leaves treat joint pain, sciatica, and gout. Seeds can be drunk as a coffee and tea alternative.</p>				
	Ancient Times – In China & India, a liquor was made from seeds & a leaven				
	<p>Memorizeherbs.com – <i>Jue Ming Zi</i> / Cassia Seed</p>  <p><b>Jue Ming Zi</b></p> <p>Jway Mingzer was a tree crusher: a fire elemental who believed that eating wood helps benefit the eyes. His favorite trees were peach trees, but before long he had eaten all the trees on the sunny side of the hill, and his hungry Yang was subdued for a while.</p> <p>When he ate only peach trees he developed (cc: diarrhea) and (cc: hypotension).</p> <p><b>Explanation of Key Words in this story...</b></p> <table border="0"> <tr> <td>crusher</td> <td>crush before decocting</td> </tr> <tr> <td>fire...wood... benefit the eyes</td> <td>clears LV fire; benefits eyes</td> </tr> </table>	crusher	crush before decocting	fire...wood... benefit the eyes	clears LV fire; benefits eyes
crusher	crush before decocting				
fire...wood... benefit the eyes	clears LV fire; benefits eyes				


	peach trees	moistens intestines, unblocks bowels
	Yang was subdued	subdues Yang
	Western Herbology – Different species used differently – Red Eyebright (Euphrasia) used for similar problems	

\* 9) Semen Celosiae Argenteae – *Qing Xiang Zi* – Celosia Seed

青箱子



<b>Pharmaceutical Name</b>	Semen Celosiae Argenteae	
<b>Pinyin</b>	<i>Qing Xiang Zi</i>	
<b>Literal Translation</b>	Green Box Seed	
<b>Common Name</b>	Celosia seed	
<b>Part Used</b>	Seed	
<b>Properties (Taste – Temperature)</b>	Sweet – Slight Cold / Bitter	
<b>Energetic 4 Directions</b>	Descending - Contracting	
<b>Channels Entered</b>	LIV	
<b>Dosage</b>	3-15g	
<b>Cooking</b>	RC	
<b>Traditional Functions</b>	<b>Primary</b>	<b>Secondary</b>
	<b>Clear Heat in the Liver Channel &amp; Calms Liver Fire</b>	Dispel Wind Heat
	<b>Brighten Eyes</b>	Antihypertension, especially associated with Liver Yang (Direct Qi Downward)
<b>Common Clinical Uses - Treatment</b>	<b>Wind Heat or Liver Fire with Red Painful Swollen Eyes, Blurry or Impaired Vision</b> with <i>Ju Hua</i> (Flos Chrysanthemi), <i>Long Dan Cao</i> (Radix Gentianae)	Hypertension associated with Liver Yang Ascending
	<b>Eye Problems - Cataracts - Corneal Opacity</b> (Superficial visual obstruction) with <i>Jue Ming Zi</i> (Semen Cassiae)	Wind Heat headache
<b>Caution - Contraindications</b>	Not for patients with dilated pupils – Caution with Liver & Kidney Deficiency	
	Not for use with glaucoma - Glaucoma can manifest with symptoms that look a lot like red painful swollen eyes with superficial visual obstruction	
<b>Pharmacological &amp; Clinical Research</b>	Lowers blood pressure	
	Dilates pupils & can affect eye pressure	
	Anti-bacterial	
	Celosiaol has a mydriatic effect on the eye; in other words, it causes the pupil of the eye to dilate excessively. As a result, it should not be taken by anyone diagnosed with glaucoma, or any patients taking medications to treat glaucoma.	
	Dilates blood vessels	
	Modern use - Tx hypertension - Anti-inflammation	
	Chemical components - $\beta$ -sitosterol $\beta$ -穀甾醇, cholesterylpalmitate 棕櫚酸膽甾烯酯, 3,4-dihydroxybenzaldehyde 3,4-二羥基苯甲醛, p-hydroxybenzoic acid 對羥基苯甲酸, 3,4-	

	dihydroxybenzoic acid 3,4-二羟基苯甲酸, n-butyl-β-D-fructose glycoside 正丁基-β-D-果糖苷, cane sugar 蔗糖, celosiaol 青箱子油脂, niacin 烟酸, potassium nitrate 硝酸钾
<b>Notes</b>	<b>* Good for eye problems – Similar to <i>Jue Ming Zi</i>, but not as moistening to intestines</b>
	Best Quality - Full, black, glossy seeds, very little foreign matter
	<b>Comparison –</b> Both Cool Liver, improve vision <b>Jue Ming Zi</b> – Sweet & Salty broaden therapeutic scope to Nourish Liver & Kidney Yin; moisten intestines to tx constipation; Disperse Wind Heat; Tx Excess or Deficiency eye problems or headache <b>Qing Xiang Zi</b> – Tx eye disorders or headache due to Excess Heat; Clear Liver Channel Fire; Disperse Wind Heat from Blood; Not as strong to Clear Liver Fire, but can clear superficial visual obstruction; dilate pupils
	Celosia seeds are small (between 1-5 millimeters) and round, with a black or reddish-black exterior and a thin, brittle outer skin. They come from <i>Celosia argentea L.</i> , an annual flowering herb also known as the feather cockscomb. The seeds are odorless & tasteless. Traditionally harvested in the autumn when ripe, then dried in the sun.
	Annual, native to southeast Asia, Woolflower softly shimmers silvery-white in late summer with spikes up to 3 ft. - Grow specs: 3ft. 1 ft. spacing - Full sun - Average to rich, well-drained soil.
	<i>Ji Guan Hua</i> (celosia critata L. ) and <i>Qing Xiang</i> (Celosia argentea L.) are of the same family but of different species. The flowers with the shape of the comb of male chicken are called <i>Ji Guan Hua</i> , literally means chicken comb flower. The flowers with the shape of wheat sprays are called <i>Qing Xiang Zi</i> . (zi means seed). They can be used interchangeably
	Memorizeherbs.com – <i>Qing Xiang Zi</i> / Celosia Seed  <b>Qing Xiang Zi - King Jonesy</b> It is said that King Jonesy had <u>sand in his eyes</u> because he <u>burned every single tree down</u> to rebuild his armada! The loss of their forests caused some pretty bad (cc: LV and KD yin deficiency) throughout the kingdom and the people later learned that King Jonesy was made careless by his (cc: glaucoma). <b>Explanation of Key Words in this story...</b> sand in his eyes                      superficial visual obstruction burned every single tree down      illegal to trade qing xiang zi in united states
	Western Herbology – Not used

**\* 10) Excrementum (Faeces) Vespertilii Murini (Superanus) –*Ye Ming Sha* –  
Bat Feces 夜明砂**



<b>Pharmaceutical Name</b>	Excrementum Vespertilionis Murini – Excrementum (Faeces) Vespertilii Murini (Superanus)	
<b>Pinyin</b>	<i>Ye Ming Sha</i>	
<b>Literal Translation</b>	Night Brightness Sand	
<b>Common Name</b>	Bat Feces	
<b>Part Used</b>	Feces	
<b>Properties (Taste – Temperature)</b>	Pungent - Cold	
<b>Energetic 4 Directions</b>	Descending - Contracting	
<b>Channels Entered</b>	LIV	
<b>Dosage</b>	3-9g	
<b>Cooking</b>	RC	
<b>Traditional Functions</b>	<b>Primary</b>	<b>Secondary</b>
	<b>Clear Heat in the Liver</b>	Cleanse Liver
	<b>Clear Vision - Improve Vision - Brighten Eyes</b>	Mildly Move Blood
<b>Common Clinical Uses - Treatment</b>	<b>Night Blindness</b> combined with animal liver	Childhood Nutritional Impairment with malnutrition, sallow complexion, weakness, poor growth & development, abdominal distension, poor hair, emotional problems, craving substances that are not food, digestive problems with <i>Bai Zhu</i> (Rhizoma atractylodis), <i>Chen Pi</i> (Pericarpium Citri) – With roundworms with <i>Wu Yi</i> (Fructus Ulmi), <i>Shi Jun Zi</i> (Fructus Quisqualis)
	<b>Superficial Visual Obstruction - Blurry Vision</b> with <i>Shi Jue Ming</i> (Concha Haliotidis)	Convulsions in infants due to Heat
	<b>Cataracts</b>	Trauma injury with Blood Stasis
	<b>Red eyes or bleeding into whites of eyes associated with Liver Heat</b>	
<b>Caution - Contraindications</b>	Use with caution during pregnancy	
	Should not be used for eye problems not involving stasis	
	Traditional sources say this substance is not to be used with <i>Radix Cynanchi Baiwei</i> ( <i>Bai Wei</i> ).	
<b>Pharmacological &amp; Clinical Research</b>	Tx ulcer of cornea	

	Contains Vitamin A
	Chemical components - 尿素 (urea) , 尿酸 (uric acid) , 膽甾醇 (cholesterol) 及少量維生素 (vitamin) A等。 尿素 (urea) , 尿酸 (uric acid) , 膽甾醇 (cholesterol) 及少量維生素 (vitamin) A等。
<b>Notes</b>	<b>* Not used much – When used, used mostly for eye problems</b>
	Best Quality - Dry, without sand or soil, brownish red color
	Bat feces is collected in caves & cleaned - Good quality - dry without sand or soil, lightweight, and brownish red in color
	The name implies that because bats eat mosquitoes & gnats, their feces are full of eyes of those insects which shine at night
	Eye herbs – Wind Heat – <i>Man Jing Zi, Bo He, Ju Hua, Chan Tui, Sang Ye, Ye Ju Hua</i> Cleat Heat Quell Fire – <i>Xia Ku Cao, Zhi Zi, Jue Ming Zi, Qing Xiang Zi, Ye Ming Sha, Xiong Dan</i>
	Memorizeherbs.com – <i>Ye Ming Sha</i> / Bat Feces NA
	Western Herbology – Not used

11) Fel Ursi – *Xiong Dan* – Bear Gallbladder

## 熊胆



<b>Pharmaceutical Name</b>	Fel Ursi - Vesica Fellae Ursi
<b>Pinyin</b>	<i>Xiong Dan</i>
<b>Literal Translation</b>	Bear Gallbladder
<b>Common Name</b>	Bear Gall Bladder
<b>Part Used</b>	Gall Bladder of Bear – Most commonly, it's the bile which is powdered
<b>Properties (Taste – Temperature)</b>	Bitter - Cold
<b>Energetic 4 Directions</b>	Descending - Contracting
<b>Channels Entered</b>	LIV – GB – SP – ST - HE
<b>Dosage</b>	1-1.5g or 0.6-2.5g if powder - Give in pill or powder form
<b>Cooking</b>	Usually used only in patents or pills

Traditional Functions	Primary	Secondary
	<b>Clear Heat &amp; Toxins</b>	
	<b>Clear Eyes – Brighten Eyes</b>	
	<b>Calm Liver</b>	
	<b>Kill Intestinal Parasites</b>	
	<b>Stops Spasms</b>	
	<b>Reduce Swelling</b>	
<b>Common Clinical Uses - Treatment</b>	<b>High Fever, Convulsions, Epilepsy, Eclampsia with <i>Zhu Sha</i> (Cinnabaris), <i>Yu Jin</i> (Radix Curcumae), <i>Bai Fan</i> (Alumen)</b>	Delirium from extensive burns
	<b>Topically for Severe Skin Problems, Burns, Toxic Lesions, Sores, Carbuncles with Pain</b>	Liver Fire with severe red, painful, swollen eyes with <i>Bing Pian</i> (Borneolum) - External or internal
		Superficial Visual Obstruction with <i>Bing Pian</i> (Borneolum) - External or Internal
		Trauma-Sprains-Fractures
		Burning Hemorrhoids with swelling & pain
		Sore throat
		Acute Conjunctivitis
		Jaundice – Hepatitis with <i>Yin Chen</i> (Herba Artemisiae)
		Childhood nutritional impairment with heat with <i>She Xiang</i> (Moschus) – With wasting with <i>Shi Jun Zi</i> (Fructus Quisqualis)
		Epilepsy due to Heat
<b>Caution -</b>	Traditional sources - Do not use with <i>Sheng Di Huang</i> (Radix Rehmanniae) or <i>Fang Ji</i> (Radix	

<b>Contraindications</b>	Stephaniae)
	Use only for Excess Heat - Not to be used with Deficiency
<b>Pharmacological &amp; Clinical Research</b>	Relax muscles – Antispasmodic
	Antitoxin – Antipoison – Tx strychnine poisoning
	Lower high blood pressure due to acute childhood nephritis
	Stop cough
	Analgesic - Tranquilizing
	Stimulates production & excretion of bile
	Stimulates absorption of Vitamin D & Calcium
	Can dissolve gall stones
	Anti-bacterial - Anti-inflammatory
	<p>Chemical analysis of bear bile:</p> <p>Over the years, extensive research has been done in establishing methods to analyze and quantify the total and individual bile acids and their glycine and taurine conjugates in serum, pharmaceuticals, and bile, including bear gall drainage. These methods mainly consisted of thin layer chromatography and high-performance liquid chromatography.</p> <p>Modern chemical research indicated that bear bile was mainly composed of bile acids, amino acids, bile pigments, fat and a few phospholipids and trace metals. Bile acids were regarded as the principle components of bear bile in medical applications. It contained ursodeoxycholic acid (UDCA), chenodeoxycholic acid (CDCA), and cholic acid (CA). They usually occurred in form of conjugates solely with taurine in N-acyl linkage. UDCA (3 alpha, 7 beta-dihydroxy-5 beta-cholan-24-oic acid) was found to be the primary bile acid produced in the liver of bears and the relative high content of UDCA (1–39%) in bear (Ursidae) bile made it different from the ones originated from pandas, related carnivores (&lt; 0.5%) and other vertebrates.</p> <p>It is important to note that variation of bile acid composition in bear bile was present. Espinoza EO <i>et al.</i> (1993) reported that the bile originated from farmed bears (bears with chronic biliary fistulae) was characterized by a decrease in the percent composition of tauro-cholic acid (TCA) and a dramatic increase in that of tauro-ursodeoxycholic acid (TUDCA) and tauro-chenodeoxycholic acid (TCDCA). However, results of later investigation indicated that the low content of TCA was common among wild and farmed Asian bears, while the samples from Polar and North American black bears showed a relative high content of TCA.</p> <p>Pharmacological study of bear bile:</p> <p>Modern pharmacological research showed that bear bile has the following pharmacological actions: (1) antimicrobial and anti-inflammatory effect, (2) anti-hepatotoxic effect, (3) choleretic lithagogic effect, (4) anti-liver fibrosis, anti-tumor, anti-pyretic and sedative effect, (5) anti-convulsant and analgesic effect, (6) lowering lipid and hypotensive effect, (7) anti-tussive and anti-asthmatic effect, (8) improving eyesight, (9) anti-stress and relaxing effect.</p> <p>As an anti-inflammatory drug in its clinical utilization, the suppressive effect of bear bile on inflammation was also investigated in extensive non-clinical studies. Using the model of rat granulation and feet swelling, it was reported that bear bile can significantly suppress inflammation in animal models. Moreover, it was also observed that bear bile can reduce the permeability of capillary vessel.</p> <p>Recently, an investigation has been conducted to investigate the inhibitory effect of bear bile powder on rat liver fibrosis induced by dimethylnitrosamine (DMN). The results suggested that the bear bile powder could prevent the formation of liver fibrosis induced by DMN. The mechanism might relate to its inhibitory effect on the activation of Kupffer cell (KC) and hepatic stellate cell (HSC). Another study investigated the effect of tauroursodeoxycholic acid (TUDCA), the characteristic compound of bear bile, on activity of glutamic pyruvic transaminase (GPT), and observed that TUDCA could significantly reduce GPT activities in mice serum and the inhibitory effect is independent to the concentration of substrate. No toxicity of TUDCA could be observed in this study. This research demonstrated bear bile's clinical function as a hepato-protective agent.</p>
	The active therapeutic substance in bear bile—and in the bile of all mammals—is

	<p>ursodeoxycholic acid (UDCA). Before the manufacture of UDCA by pharmaceutical companies, bear bile was prescribed by practitioners of traditional Chinese medicine because it contained a higher percentage of UDCA than the bile of other mammals. However, modern chemistry has made this fact irrelevant. Today, pharmaceutical-grade UDCA is now collected from slaughterhouses, then purified and packaged under trade names such as Ursosan, Ursofalk, Actigall, and UrsoForte. These products are approved by the Federal Drug Administration (FDA). Chinese doctors have also endorsed several herbal substitutes, which provide a cheap, effective and readily available alternative.</p> <p>Substances in mammalian bile other than UDCA, such as cholesterol, have never been demonstrated to have any healing effect in humans. Despite this observation and the availability of affordable pharmaceutical-grade UDCA, some practitioners of traditional Chinese medicine continue to prescribe whole bear bile for their patients and reject any sort of modern substitute. These individuals drive the market demand for bear bile and pressure the Chinese government to continue the practice of bear farming.</p>
<b>Notes</b>	<p><b>* Not used in U.S. - Only used in Chinese patent medicine (probably not any longer)</b></p> <p>Best Quality - Large bright golden color, thin brittle skin and many kernels, bitter sweet taste</p> <p><b>Bensky's Materia Medica lists <i>Xiong Dan</i> in the Obsolete Substances/Endangered Species category - Page 1065</b></p> <p>Extremely expensive (US \$400-500 per kilogram in China) – Cow gallbladder (<i>Niu Dan</i>) often substituted at a higher dosage</p> <p>Alaskan bear gallbladder not used because of its high fish intake</p> <p>Some sources say <i>Xiong Dan</i> mixed in warm water as a drink is used for eclampsia - Because its acids are good at dissolving gallstones, it is used as a preventative for gallstone attacks.</p> <p>For the study of CHM, you need to know what <i>Xiong Dan</i> is and what it does, even though it is on the endangered species list. Because a lot of historic formulas, still in use, call for it and you need to know how what herbs to substitute to get those same actions.</p> <p>Traditionally bears were hunted and killed in the winter, and the gallbladder excised; surrounding fat removed; organ was pressed and bound between 2 boards to flatten it; hung in a well-ventilated spot to dry – <i>Yunan</i> province gallbladder was often specified in prescriptions</p> <p><i>Xiong Dan</i> refers to Asiatic black bears kept in captivity in China and Vietnam to harvest bile, a digestive juice produced by the liver and stored in the gall bladder. When extracted, the bears' bile is a valuable commodity for sale as an ingredient in traditional Chinese medicine (TCM). The bears are also known as <i>moon bears</i> because of the cream-colored crescent moon shape on their chest. The Asiatic black bear, the one most commonly used on bear farms, is listed as vulnerable on the World Conservation Union's (IUCN's) Red List of Threatened Animals.</p> <p>To facilitate the bile milking process, the bears are commonly kept in extraction cages, also known as crush cages, that measure around 2.6 feet x 4.4 feet x 6.5 feet (79 cm x 130 cm x 200 cm) for an animal that weighs between 110 to 260 pounds (50 to 120 kg). While this allows for easier access to the abdomen, it also prevents the bears from being able to stand upright, or in some cases move at all. Living for 10–12 years under such circumstances results in severe mental stress and muscle atrophy. In two model Chinese bile farms, the Humane Society of the United States (HSUS) reports that the bears are moved to the crush cages for milking, but the rest of the time live in a cage large enough to stand and turn around. The World Society for the Protection of Animals sent researchers to 11 bile farms. They reported seeing bears moaning, banging their heads against their cages, and chewing their own paws. The mortality rate is high. Bile bears suffer from a variety of physical problems which include loss of hair, malnutrition, stunted growth, muscle mass loss, and often have their teeth and claws extracted. When the bears stop producing bile after a few years, they are usually killed for their meat, fur, paws and gall bladders. Bear paws are considered a delicacy, and have been seen priced at \$250</p> <p>Population figures for the Moon bears in China are causing concern, with estimates ranging from 50,000 to as low as 16,000. Some estimates put the total Asia-wide population as low as 25,000.</p>

	<p>There are estimated to be 4,000 bile bears in Vietnam, where their bile can sell for 100,000 dong (~ US\$6.25) a milliliter (with 37,500 dong a week regarded as the poverty line for an urban resident), and around 9,000 bile bears in China. The World Society for the Protection of Animals (WSPA) conducted a study in 1999 and 2000, and estimates that there are 247 bile-bear farms in China, holding 7,002 bears, though the Chinese government has called the figures "pure speculation."</p> <p>In July 2000, Animals Asia Foundation, a Hong-Kong based charity, signed an agreement with the Chinese government to remove 500 endangered Moon Bears from the worst bile farms in Sichuan province, and work towards ending the practice. Today, the China Bear Rescue has placed 219 previously farmed Moon Bears at a Sanctuary in Chengdu, and is helping to advance the concept of animal welfare in China.</p> <p>The Chinese consider bear farms a way to reduce the demand on the wild bear population. Officially 7,600 captive bears are farmed in China. According to Chinese officials, 10,000 wild bears would need to be killed each year to produce as much bile. The government sees farming as a reasonable answer to the loss of wild bears from poaching, and at the same time are indifferent to the cruelty issues that concern Western animal rights activists. However, the government's agreement to allow the rescue of 500 bears may represent a softening of this stance.</p>
	<p>There is increasing evidence that the Asian demand for bear gall bladder is impacting bears in nearly all of their diverse habitats around the world. This report examines the markets for bear gall bladder in East Asia, which is the centre of world demand. The markets for bear gall bladder in the People's Republic of China, Hong Kong, Japan, Macau, the Republic of South Korea and Taiwan are examined, comparing their current situation with that documented by TRAFFIC USA in the 1991 report</p> <p>The Asian Trade in Bears and Bear Parts.</p> <p>Discussions in the full report address bear farming in China, Hong Kong's gall bladder registration scheme, biological implications of the legal trade in bear gall bladders in Japan and Taiwan's efforts to monitor its domestic market for bear gall bladder. Finally, recommendations are given for actions necessary to better understand, monitor and control the trade in bear gall bladders and bile to ensure that it does not decimate wild bear populations, if not entire species.</p> <p>Bears as medicine</p> <p>Contrary to popular references of bear gall bladders being used to stimulate sexual potency, bear bile is not prescribed as an aphrodisiac in the classic tenets of TCM. Medical applications include treatment of life-threatening cancers, burns, pain and redness of the eyes, asthma, sinusitis and pain in general. Bear gall bladder is also used to treat serious liver ailments and as a tonic to prevent liver damage from over-consumption of alcohol.</p> <p>Bears are the only mammals to produce significant amounts of the bile acid tauro ursodeoxycholic or UDCA. The Giant Panda is the only exception to this rule in that it produces no UDCA, and anecdotal evidence suggests this is the only bear species not hunted specifically for its gall bladder. Today, UDCA made synthetically from cow bile is used in Western medicine to dissolve gallstones and has shown promise in treating a fatal form of cirrhosis.</p> <p>China, Japan and South Korea together consume nearly 100 tons of synthesized UDCA every year - well over half the world's annual consumption. However, no documentation attests as strongly to the continuing popularity of bear gall bladder in East Asia as does China's bear bile farms, where nearly 10,000 bears are kept and bile is routinely drained from live bears through devices implanted surgically in their gall bladders.</p> <p>Chinese medical texts recommend the Asiatic Black Bear or the Brown Bear of Asia as sources of medicinal bile. Due to this preference and perhaps simple proximity, East Asia's bears have been the hardest hit by the demand for gall bladder. The combined pressures of commercial demand, excessive hunting, habitat destruction and nuisance animal control have depleted most of Asia's bear species.</p> <p>Four of Asia's five bear species - the Sun Bear, Sloth Bear, Asiatic Black Bear and Giant Panda - along with the Brown Bear populations of Bhutan, China and Mongolia are banned from international commercial trade under the Convention on International Trade in</p>

	Endangered Species of Wild Fauna and Flora (CITES). However, domestic trade remains legal in some cases and there continues to be an international black market for both legally and illegally obtained bear gall bladders.
	<p><b>Detailed Discussion of the Plight of Bears Used in Traditional Chinese Medicine</b>  <b>Laura E. Tsai</b></p> <p><b>Animal Legal and Historical Center</b>  <b>Publish Date:</b> 2008  <b>Place of Publication:</b> Michigan State University College of Law</p> <p><b>Detailed Discussion of the Plight of Bears Used in Traditional Chinese Medicine</b></p> <p><b>I. INTRODUCTION</b>  Over 12,000 bears live in captivity on bear farms throughout China, South Korea, and Vietnam. These animals are subjected to intense pain for many years as they are exploited for their bile, which is a prized ingredient in traditional Chinese medicine. The demand for bear bile has also led to the hunting of wild bears and an illegal international trade of their parts. Foreign laws do nothing to protect the bears on bile farms, and both United States and international laws fail to accurately address the problem of illegal hunting and trade. As bears are exploited on bile farms and the population of wild bears is dwindling, there is a growing need for additional legislation, cohesive state law, and international cooperation.</p> <p><b>II. BEAR BILE AND TRADITIONAL CHINESE MEDICINE</b>  Bear bile has been a popular ingredient in traditional Chinese medicine for 3,000 years. It has been used to cure various ailments, such as fever, gall stones, liver problems, heart disease, and eye irritation. The active ingredient in bear bile is ursodeoxycholic acid (UDCA), which is more abundant in the bile of bears than in any other mammal. Bile is excreted by the liver and stored in the gallbladder, where it is released into the stomach to aid in digestion. The average bear produces 2 kilograms of dry bile powder per year. The price of bear bile varies by location, but investigators have found that bile sells for about US\$410 per kilogram in China, an average wild bear gall bladder sells for US\$33 per gram in Japan, and a whole bear gallbladder sells for about US\$10,000 in South Korea. Because there is now a surplus of bear bile, bear farmers have begun producing shampoo, wine, tea, and throat lozenges containing bile.</p> <p>UDCA has proven to be effective, although medical practitioners now often claim that its effectiveness has been overrated. Veterinarians examining bile from farmed bears have also discovered that it is often contaminated with pus as a result of the conditions on bear farms. Further, both synthetic and herbal alternatives exist that are cheaper and more readily available. Synthetic UDCA is sometimes used in the West as an alternative to surgery for the treatment of gallstones, primary cirrhosis, autoimmune hepatitis, and colon cancer. Many practitioners of traditional Chinese medicine prefer to use one of the fifty-four herbal alternatives, such as sage, rhubarb or dandelion, to cure various ailments.</p> <p><b>III. BEAR FARMING</b>  By as early as 1942, the Asiatic black bear was nearly extinct in South Korea as a result of over-hunting. Numbers were also rapidly declining in China. As a result, North Korean scientists developed a procedure to extract bile from living bears. This technique caught on in China by the early 1980's. The Chinese government believed that this would satisfy the demand for medicinal uses of bear bile without impacting China's wildlife. They also encouraged bear farming (along with other types of animal farming) in poor areas to drive economic development. By the early 1990's, there were over 10,000 Asiatic black bears in confinement on over 400 bear farms in China alone.</p> <p>Bears on bile farms are subjected to painful procedures and are denied everything that is natural to them. On most farms, bears are kept in cages that are about 2.5 feet x 4.2 feet x 6.5 feet, which is so small that these 110 to 260 pound bears cannot turn around or sit up completely. Many bears have been found with scars from cages pressing into their bodies, and some have head wounds and broken teeth from banging and biting at the bars in a feeble attempt to free themselves.</p>

<p>Extraction of a bear's bile is done in a process called "milking," which is performed twice daily. A catheter, usually a steel or rubber tube, is surgically implanted into the bear's abdomen. Veterinarians rarely perform this surgery, which results in roughly half of the bears dying from infections or other complications. Bile is then drained from the catheter and collected by the farmer. Milking begins at age three, and continues for a minimum of five to ten years. Some bears who have been rescued were found in cages producing bile for twenty years or more.</p> <p>In 1996 the Chinese government banned the use of the catheter method of bile collection in favor of the "free drip" method, although many farmers were financially unable to implement the changes, and thus catheters are still widely used. The "free drip" method involves surgery to create an open hole in the bear's abdomen through which bile freely drips out. This method was touted as more humane, yet has proven to be at least as inhumane, if not more so, than the catheter method. Bile often leaks back into the bear's abdomen, which increases rates of infection and mortality. Further, farmers often have trouble keeping the hole open, as the bear's body naturally tries to heal itself. This results in more painful surgery, and often the implantation of a small catheter to keep the hole permanently open.</p> <p>The filthy conditions on most farms lead the bears to suffer from further infections, worms, and other parasites. The bears' muscles atrophy from confinement in such small cages for the duration of their lives. They are also extremely malnourished from a diet of grain mash or porridge, and their teeth and claws are often removed to prevent injuries to the farmers. Some bears even commit suicide to escape the endless suffering they experience on the farms. The few bears who have been rescued are not able to stand or walk without extensive therapy as a result of these conditions.</p> <p>Plans were in place in China to increase the numbers of bears on farms from 10,000 to 40,000 by the year 2000. However, following pressure from animal welfare groups and public outcry, the Chinese government agreed to reduce the number of bears on farms instead of increasing them. China has also agreed to stop issuing licenses to new farms. Today there are still about 7,000 bears suffering on farms in China. Bear bile farming also exists to a lesser degree in South Korea and Vietnam. Although bear farming was declared illegal in 1992 in South Korea, over 1,300 bears still remain on 108 farms where farmers are holding them in the hope that legal farming will resume. There is also thought to be a black market in bile between South Korea and China. Further, wild bears over the age of ten can legally be killed for their gallbladders in South Korea. The situation in Vietnam is improving, as the Vietnamese government made a commitment in 2005 to slowly phase out bear farming. However, the methods used in Vietnam are even more inhumane than those used elsewhere. Bears in Vietnamese farms may undergo multiple surgeries to extract bile from their gallbladders, from which they usually die after three or four surgeries. Other bears have their bile extracted by having their gallbladders punctured with long needles. Today there are still 3,410 bears on farms in Vietnam.</p> <p>Although bear farming was originally intended to protect wild populations from over-hunting, it has since become clear that it is having the opposite effect by stimulating the demand for bear bile as a result of lowered prices. Before the existence of bear farms the demand in China was about 500 kilos annually. Today the demand has risen dramatically, to about 4,000 kilos annually. Further, those who can afford it still often prefer bile from wild bears because they believe it to be more potent than farmed bile. Finally, wild bears still serve as an illegal source of bears to stock existing farms. This is evidenced by a rescue group which found twenty percent of their bears missing limbs from traps. Bear farms pay the equivalent of US\$280 to US\$400 for a wild cub, which is about ten times the monthly wage of a restaurant worker in China. It has been estimated that there are as few as 12,000 to 18,000 wild Asiatic black bears left in China; however, this number is difficult to verify, as no reliable estimates exist. The Chinese government maintains that bile farming does not threaten wild bear populations, and that wild bears are plentiful.</p> <p><b>IV. THE INTERNATIONAL TRADE IN BEAR BILE</b></p> <p>The demand for bear bile is fueled by a thriving international illegal trade. Bear bile and gallbladders have been smuggled across borders packed in coffee to hide their smell, and dipped in chocolate to pass as chocolate figs. Bear gallbladders and bear paws (considered a</p>
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delicacy) have been found in places ranging from the freezer of an apartment building to a downed airplane on an international flight. Evidence of increased poaching of American black bears has also been found. These bears, which are still plentiful in North America, are now being targeted to fill the demand for bear bile as the number of Asiatic black bears declines. American black bears are also being targeted as a result of the increasing Asian population in the United States and Canada, which has created a demand for bear bile domestically. In the late 1980's and early 1990's, park rangers in the United States began finding bear carcasses missing only gallbladders and paws. It was first believed that occasional hunters were at fault, but investigations have since uncovered evidence of large commercial organizations dealing in poaching and smuggling of bear parts. During a three-year sting titled Operation SOUP, 52 people were arrested and 300 gallbladders were seized in Virginia. Another investigation in Oregon led the police to bring racketeering charges against a ring that poached an estimated 50 to 100 bears per year for a decade.

It has been estimated that 40,000 American black bears are legally killed in North America each year, and it is likely that an equivalent number are illegally poached for their gallbladders and paws. Although the population of American black bears is currently stable, increased killing coupled with habitat loss could threaten the species within the next several years. Further, because the size of a bear's gallbladder does not depend on the age of the bear, poachers are killing cubs as well as adult bears. Killing cubs that have not yet reproduced may rush the species into a threatened state.

American black bears are being poached both for international smuggling of their parts, as well as for sale in traditional Chinese medicine shops in the United States. Asiatic black bear parts are also smuggled into the United States, as consumers apparently value Asian bear bile over American bear bile. An undercover investigation conducted in 2006 and 2007 by the World Society for the Protection of Animals (WSPA) uncovered bear bile and gallbladders for sale in traditional Chinese medicine shops in cities across the United States, as well as in all of the countries investigated: Japan, Taiwan, Korea, Singapore, Canada, New Zealand, and Australia.


WSPA's United States investigation revealed bear bile and gallbladders in six of the eight cities investigated: Boston, New York City, San Francisco, Chicago, Los Angeles, and Seattle. No bear products were found in Washington, D.C. or Portland, Oregon. Out of 130 traditional Chinese medicine shops in these cities, illegal bear products were found in 20 shops (15%). Of the stores selling these products, 75% offered gallbladders, 22% offered bile powder or crystals, and 35% offered other products containing bear bile. The investigators suspected shopkeepers of passing farmed gallbladders for wild gallbladders (which demand a higher price). They also noted that it was difficult to determine the origin of the bear products, as some shopkeepers claimed the origin was American bears, with others claiming Chinese or Russian bears. Some shopkeepers knew the laws on selling bear parts in their state, while others were either unaware of the law or operated in flagrant disregard of the law. Some shopkeepers mentioned that bear farming was cruel and suggested herbal alternatives.

#### **V. LEGAL PROTECTIONS OF BEARS EXPLOITED FOR THEIR BILE**

While bear farming is legal and encouraged in China, killing wild bears and trading bear parts internationally is illegal. China's Wildlife Protection Law, enacted in 1989, forbids the trade of many of China's endangered species. It first divides each species into Class I and Class II protection lists. Asiatic black bears are under Class II protection, meaning that a limited number of permits are issued to kill wild "nuisance" animals each year. Protection of wildlife in China apparently includes utilizing and breeding wildlife for human purposes, as evidenced by the bear farming industry. This policy is stated in Article 4 of the Wildlife Protection Law: "the state shall pursue a policy of strengthening the protection of wildlife resources, actively domesticating and breeding the species of wildlife, and rationally developing and utilizing wildlife resources." Article 16 prohibits the hunting, catching, or killing of wildlife under state protection, but provides an exemption for research, domestication and breeding, exhibition, or other special purposes. Articles 22-24 address wildlife trade by prohibiting the sale, purchase, export, import, or transport of wildlife or their products. China law imposes heavy criminal penalties for violation of these articles, including the death penalty. However, few violators are

	<p>caught or prosecuted because these laws are rarely enforced.</p> <p>The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international treaty which establishes guidelines for international trade of wildlife. CITES categorizes various species into Appendix I and Appendix II tables. Appendix I encompasses species threatened with extinction. Trade in these species or their parts is permitted only in exceptional circumstances. The Asiatic black bear has been listed on Appendix I since 1979. Appendix II encompasses species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid the species from becoming threatened. The American black bear is listed on Appendix II, which means that international trade in American black bear parts is legal, although it is regulated by a permit requirement. Not only does this distinction threaten the American black bear, but it also further threatens the Asiatic black bear. As bear gallbladders and bile from different species are virtually indistinguishable, traders are able to illegally trade Asiatic black bear parts by falsely stating to Customs officials or other authorities that they derive from American black bears, or other Appendix II bears.</p> <p>International cooperation is necessary for CITES to be effective in combating the illegal trade in bear parts. China, Korea, Vietnam, and the United States are among the many countries that have signed CITES. As signatories, these countries acknowledge that trade in Appendix I species is illegal. However, many CITES parties have failed to implement the trade controls which are necessary to enforce the agreement. China is even looking for ways around the treaty, as the CITES Management Authority in China has created a list of standards for bear farms with the goal of permitting registered farms to trade Asiatic black bear parts internationally. Those countries that have committed to enforcing the treaty have found it difficult to obtain the resources and personnel necessary to monitor all trade crossing their borders. For example, customs agents in airports often do not inspect the luggage or clothing of passengers, despite the fact that seizures suggest this may be the most common method of smuggling bear parts. Furthermore, CITES is limited as it only addresses international trade; trade occurring within a country's borders is regulated solely by the individual country.</p> <p>Under the Pelly Amendment, the President of the United States may impose trade sanctions against a country that violates or diminishes the effectiveness of an international environmental agreement such as CITES. The President may do so even if the conduct is legal in the offending country. A Pelly action begins when the Secretary of Commerce or the Secretary of the Interior certifies to the President that a country is violating an international environmental treaty. The President may then limit or ban imports from that country. Pelly actions usually only amount to threats to ban trade, as threats have proven effective in the past. Actual sanctions are rare, despite pressure from environmental groups for the President to get tougher on offending nations. This is in part due to fear of violating the World Trade Organization (WTO), an international organization with significant enforcement powers. The WTO's goal is to reduce barriers to international trade. There is debate over whether a Pelly Amendment sanction could withstand a challenge brought under the WTO's Dispute Settlement System. In the past, the United States has had similar embargoes successfully challenged due to its obligations under the General Agreement on Trade and Tariffs (GATT), the predecessor of the WTO. Due to these issues, the United States is not likely to impose sanctions on China, or other bear-farming or bear-trading nations. Threats of sanctions are a bit more likely to occur, but are still unlikely, as the United States itself has failed to control the bear-parts trade.</p> <p>In the United States, trade in bear parts is regulated by the federal Lacey Act and a patchwork of state laws. These laws leave much to be desired, and problems with enforcement further hamper their effectiveness. The federal Lacey Act, first enacted in 1900, makes it a federal offense to buy, sell, or transport in interstate commerce any wildlife parts which were taken in violation of a federal, state, or foreign law. As such, it provides a legal remedy for violation of CITES. A conviction under the Lacey Act requires the prosecutor to prove that the defendant knew or should have known of the offense which violated the federal, state, or foreign law. If this knowledge exists, the defendant may be found guilty of a Lacey Act violation without personally violating the underlying law. Therefore, the Lacey Act can be used to target traffickers as well as poachers.</p>
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	<p>Although the Lacey Act appears to be a strong tool in thwarting the bear-parts trade, it rarely leads to convictions, as smugglers and poachers are rarely caught. Further, violators that are caught benefit from the inconsistencies in state and foreign laws regarding trade in wildlife. As it is nearly impossible to determine the origin of smuggled bear parts, prosecutors run into difficulty proving that a specific state or foreign law has been violated.</p> <p>The Lacey Act relies heavily on state law to combat the bear-parts trade within the United States. Laws regulating bear hunting and trading of bear parts differ drastically state-to-state, creating a patchwork of laws that make convictions very difficult. Twenty-nine states allow for hunting of American black bears, five states allow for in-state trade of bear parts, and sixteen states allow for out-of-state trade of bear parts. As such, hunters caught with gallbladders from bears in a no-hunting state can claim they are from bears in a state where hunting is permitted. Similarly, smugglers are able to acquire gallbladders illegally in one state, and then transport them to another where trade is legal. Four states – Hawaii, Illinois, Indiana, and Iowa have no laws regarding bear-parts trading, and no bears either. Traders are taking advantage of these unregulated states by smuggling in bear parts from states that prohibit hunting or trading. Penalties for violating hunting or trading laws also vary widely state-to-state. A trafficker in Colorado may face up to three years in prison and a \$100,000 fine, while a first-offense trafficker in Kentucky may receive only a \$100 fine. Federal sentencing guidelines dictate that the market value of the item must be at least \$350 for a prosecution under the Lacey Act. If a smuggler is caught with only one gallbladder he may avoid a Lacey violation because judges often attribute the value of a gallbladder to be \$280, which is an estimate of what one could sell it for domestically. Judges often fail to take into account the fact that many of these gallbladders are shipped overseas where they are worth thousands of dollars. In Operation SOUP, which resulted in fifty-two arrests, only nine people were convicted under the Lacey Act. Most of these violations resulted in two years of probation and a \$1,000 to \$2,000 fine, which is not much of a deterrent in such a lucrative business.</p> <p>Due to the current failure of federal and state laws to combat the bear-parts trade, Congress is currently considering the Bear Protection Act of 2008 (H.R. 5534). If passed, this bill would amend the Lacey Act to further protect bears from becoming victims of the illegal trade in their gallbladders and bile. Specifically, it would assist with enforcement of the Lacey Act by making state laws more consistent. The bill would do so by inserting the words “or bear viscera” at various places in the text of the Lacey Act, which extends protections to bears affected by the gallbladder trade in the same manner that other wildlife species are currently protected. It would make it illegal for any person to “import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce bear viscera.” Bear viscera is defined as “the bodily fluids or internal organs of a bear, including its gallbladder and excluding its blood or brains.” The Act has much support, and hearings are currently being held in the Subcommittee on Fisheries, Wildlife, and Oceans.</p> <p>However, the Bear Protection Act still leaves much to be desired. Similar bills have been introduced in the past, but all have died in the committee to which they were referred. If passed, the Act would not affect state regulation of legal hunting of bears. By continuing to allow hunting with few resources to ensure it is done legally, American bears are still at risk. Trade of their parts is also likely to continue with the current inadequate numbers of wildlife inspectors and customs officials employed. Further, as long as the demand exists for bear gallbladders and bile, the trade is lucrative and will continue despite the best enforcement efforts.</p> <p><b>VI. RESCUE EFFORTS</b></p> <p>Beginning in 1993, Animals Asia Foundation (AAF) has been at the forefront of the fight to rescue bears in bear-farming nations. Due to their negotiations and public awareness campaigns, over forty bear farms have been shut down. As the bears can no longer survive in the wild due to injuries and a lack of survival skills, the bears are turned over to sanctuaries. Often these bears have to be euthanized as a result of serious injury or disease from their long periods in captivity on these terrible farms. Others are able to be rehabilitated after months of care and, in many cases, intensive surgery.</p> <p>In 2000, an agreement was signed between Chinese officials and the AAF to rescue 500 bears, with the long-term goal of ending bear farming in China. The Chinese government has also</p>
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	<p>agreed not to issue new bear farming licenses. The AAF was able to accomplish this feat by agreeing to compensate bear farmers for each bear rescued, and by helping farmers move into alternative areas of employment. The AAF has now saved 247 of these 500 bears. Rescue efforts are slow due to funding constraints and limited space on existing sanctuaries. It is estimated that it will cost over \$3 million to build a sanctuary and care for 500 bears for their first year of release. The AAF is also showing signs of success in Vietnam. In 2005, the Vietnamese government committed to slowly phase out bear farming. In 2008, Vietnam's first rescue center opened, with its first four bears rescued from the luggage compartment of a bus traveling within Vietnam. The facility is still under construction, but should have space for 200 bears by 2009.</p> <p>Although these rescue efforts are a great step in saving bears from being exploited for their gallbladders and bile, thousands more suffer on farms, and wild bears are being killed in increasing numbers around the world. The AAF and other organizations are working to raise public awareness in Asia about the horrors of bear farming and the trade in bear bile through the use of billboards and media attention. They are also working with governments and practitioners of traditional Chinese medicine to reduce demand by promoting herbal alternatives to bear bile. There is some indication that the popularity of bear bile is beginning to decline as these alternatives become more available. Recent polls conducted in China by the International Fund for Animal Welfare and AAF revealed that farming of bear bile was condemned by 62.8 percent of the people polled, and 70.5 percent of the people polled refused to buy bear bile. Further, 85 percent preferred plant-based alternatives to bear bile.</p> <p>In the United States, public awareness campaigns may be even more effective. Few people know about the plight of bears in Asian bear farms, or the threat to our nation's bear population from hunting and trade. Education and awareness could result in fewer stores carrying bear gallbladders and bile products, with stores offering alternatives to their customers instead. In a 2007 poll conducted by WSPA, 75 percent of American adults stated that bear farming should not continue if the treatment of bears on farms is proven to be inhumane. If Americans were more aware of the threat to American bears, public outcry may lead to more consistent state laws or to the passage of the Bear Protection Act, which would make prosecution easier. However, with limited resources to ensure compliance with the law, the government needs to take more drastic measures to best protect bears, such as banning all bear hunting and trade in bear parts, and increasing punishments for those that violate the law.</p> <p><b>VII. CONCLUSION</b></p> <p>Bear farming and the trade in bear bile is causing thousands of wild bears to be killed and captive bears to suffer intensely on bile farms. If governments upheld their international obligations under CITES these bears would be better protected. The United States should take the lead in shutting down this cruel trade, and encourage other bear-farming or bear-trading nations to follow suit. This could be accomplished through additional legislation and tougher penalties for poachers and smugglers, which would be more likely to deter them from participating in this practice. More resources need to be dedicated to enforcing these laws and prosecuting those that violate them, as well as informing the public of the issues. As American bears are the new target of this growing trade, the United States should consider the risk of failing to act effectively before the species enters a threatened state.</p>
	<p>Memorizeherbs.com – <i>Xiong Dan</i> - Bear Gall Bladder</p>  <p>Young Dan was always <u>angry in the summer</u>, they said he had red hot <u>fire</u> coming out of both ends - his <u>eyes were always red</u> and puffy, and his <u>hemorrhoids</u> were always flared up too. Eventually he got so angry that he experienced <u>inner wind and tremors</u>!</p>

	<b>Explanation of Key Words in this story...</b> angry... summer... fire eyes were red hemorrhoids inner wind and tremors	Clears LV fire; clears heat benefits the eyes toxic fire extinguish wind; stops tremors
	Western Herbology – Not used	

## **Clear Heat Quell Fire Herbs Summary**

### **\* 1) Gypsum fibrosum - *Shi Gao* – Gypsum**

Strongest substance to Clear Heat from the Lungs, Stomach, and Qi Level - Mildly Nourish Body Fluids, mainly by clearing heat

### **\* 2) Radix or Rhizoma Anemarrhena Asphodeloidis – *Zhi Mu* – Anemarrhena**

Clears Heat at the Qi Level, both Excess & Deficient Heat – Clear Heat in all 3 Burners - Clear Heat in the Lung & Stomach - Nourish Kidney Yin – Clear Deficient Heat - Important herb for Clearing both Excess & Deficient Heat – Clears Heat in all 3 Burners – Somewhat moistening

### **\* 3) Fructus Gardeniae Jasminoidis - *Zhi Zi* – Gardenia**

Mild Clear & Drain Fire – Tx Heat disorders with irritability – Dispel Damp Heat - Clears Heat in all 3 Burners - Clears Heat & Drains Damp in all 3 Burners - Clears Heat & Toxins at the Blood Level - Especially good to Tx Heat in all 3 Burners & Clear Damp Heat in all 3 Burners

### **\* 4) Herba Lophatheri Gracilis - *Dan Zhu Ye* – Bamboo Leaf**

Clear Fire from the Heart & Stomach – Tx stubborn but relatively superficial warm pathogen diseases, especially with concurrent painful urinary dribbling - Mildly Clears General Heat, especially Heart Heat & Relieves Irritability - Clears Summer Heat & Damp - Especially good for Deficient constitutions

### **\* 5) Spica Prunellae Vulgaris - *Xia Ku Cao* – Prunella**

Tx eye problems - Tx Liver constraint associated with heat with headache, vertigo, scrofula - Clears Heat/Fire, especially in the Liver Channel & due to constraint - Softens Hard Masses & Nodules, especially in the Neck - Brightens the Eyes - Tx Eye & Ear Inflammation - Anti-hypertensive - Especially good to Clear Heat/Fire in Liver Channel & Tx eye, ear, neck area problems

### **6) Plumula Nelumbinis Nuciferae - *Lian Zi Xin* – Lotus Plumule**

Drain Fire, especially Heat Collapsing into Pericardium leading to disturbances of consciousness, plus insomnia, bleeding, oral sores - Clears Heart Fire

### **\* 7) Rhizoma Phragmatis Communis - *Lu Gen* - Phragmitis**

Tx disorders where the Yin has been injured, especially Lungs - Clear Heat in Lung & Stomach, especially with Rebellious Qi - Nourish Body Fluids, especially when Yin has been damaged by Heat - Good because it is effective, yet mild acting

### **\* 8) Semen Cassiae Torae - *Jue Ming Zi* – Cassia Seed**

Clear Liver Heat & Brighten Eyes – Calm Liver Yang – Moisten intestines - Tx eye pain, redness, swelling - Dispel Wind Heat - Used mostly for Liver Heat with eye problems & constipation

### **\* 9) Semen Celosiae Argenteae - *Qing Xiang Zi* – Celosia Seed**

Clear Liver Heat & Brighten Eyes - Tx eye pain, redness, swelling, especially associated with Liver Fire Blazing - Good for eye problems – Similar to *Jue Ming Zi*, but not as moistening to intestines

### **\* 10) Excrementum (Faeces) Vespertili Murini (Superanus) – *Ye Ming Sha* – Bat Feces**

Clear Liver Heat & Brighten Eyes – Improve Vision - Focuses on Blood aspects & can be used for both external & internal visual obstruction

**11) Fel Ursi - *Xiong Dan* – Bear Gallbladder**

Clear Heat & Toxins - Clear Eyes – Brighten Eyes - Calm Liver - Kill Intestinal Parasites - Stop Spasms - Reduce Swelling - Only used in patent medicine

**Bensky's Materia Medica also includes the following in this category:**

***Ya Zhi Cao*** – Herba Commelinae – Sweet, Bland, Cold – LU, ST, SI – Cool Heat; Resolve Toxicity; Facilitate Urination

***Xi Gua*** – CSTCM see Clear Summer Heat

***Tian Hua Fen*** – CSTCM see Cool & Transform Hot Phlegm

***Mi Meng Hua*** – Flos Buddlejae – Sweet, Slightly Cool – LIV – Benefit eyes by Tonifying Liver Yin & Cooling Heat

***Gu Jing Cao*** – Flos Eriocauli – Sweet, Neutral – LIV, ST – Disperse Wind Heat in eyes & head



## Clear Heat Quell Fire Herbs Comparison

Pharmaceutical Name	Pinyin	Part Used	Properties	Energetic Directions	Channels	Dosage	Cooking	Caution	Primary Functions	Important
* <b>Gypsum fibrosum</b>	<i>Shi Gao</i>	Mineral (Alabaster), Calcium Sulfate	Sweet - Pungent – Very Cold	Descending - Dispersing	LU – ST	15-60g	RC – Powdered - Break up & cook longer if not powdered	Caution in patients with weak stomachs (Spleen/Stomach Cold). This is hard to digest and very cold. Can aggravate a weak stomach. - Caution in extremely weak patients with weak/minute pulse.- Caution in Yin Deficiency with Heat and fever - Caution for patients who have a Yang Deficiency	Clears Heat & Drain Fire at the Qi Level or Yangming Stage - Mildly Nourish Body Fluids, mainly by clearing heat - Clear Lung & Stomach Heat	* Strongest & coldest substances to Clear Heat
* <b>Radix Anemarrhenae Asphodeloidis</b>	<i>Zhi Mu</i>	Root or Rhizome	Bitter – Sweet - Cold	Descending - Dispersing	LU – ST - KID	6-12g	RC	Caution with Spleen or Stomach cold symptoms due to deficiency (Spleen or Stomach Yang Deficiency); weak digestion, diarrhea	Clears Heat at the Qi Level, both Excess & Deficient Heat – Clear Heat in all 3 Burners- Clear Heat in the Lung & Stomach - Nourish Kidney Yin – Clear Deficient Heat	* Important herb for Clearing both Excess & Deficient Heat – Clears Heat in all 3 Burners – Somewhat moistening
* <b>Fructus Gardeniae Jasminoidis</b>	<i>Zhi Zi</i>	Fruit	Bitter - Cold	Descending - Contracting & Dispersing	LU – ST – HE – LIV – SJ	3-10g	RC - Crush before decocting	Caution with Middle Jiao Deficiency (SP/ST), loose stool, loss of appetite – Caution with Blood Deficiency - Drying - Caution with Yin Deficiency - Overdose can cause diarrhea	Clears Heat in all 3 Burners - Clears Heat & Drains Damp in all 3 Burners - Clears Heat & Toxins at the Blood Level	* Especially good to Tx Heat in all 3 Burners & Clear Damp Heat in all 3 Burners
* <b>Herba Loophatheri Gracilis</b>	<i>Dan Zhu Ye</i>	Young tender leaves	Sweet - Bland - Cold	Descending - Neutral	HE – ST - SI	10-15g	RC	Caution with Middle Jiao Deficiency - Use with caution during pregnancy -	Mildly Clears General Heat, especially Heart Heat & Relieves Irritability - Clears Summer Heat & Damp - Caution with yin deficiency fire	* Especially good for Deficient constitutions
* <b>Spica Prunellae</b>	<i>Xia Ku Cao</i>	Spike	Bitter - Pungent – Cold	Descending - Dispersing	LIV – GB	(9-15g) 6-10g	RC – SC depending on	Caution with Spleen or Stomach	Clears Heat/Fire, especially in the Liver	* Especially good to Clear Heat/Fire

Vulgaris							use	Deficiency	Channel & due to constraint - Softens Hard Masses & Nodules, especially in the Neck - Brightens the Eyes - Tx Eye & Ear Inflammation - Anti-hypertensive	in Liver Channel & Tx eye, ear, neck area problems
<b>Plumula Nelumbinis Nuciferae</b>	<i>Lian (Zi) Xin</i>	Plumule (dried green embryo of seed / young plant shoots)	Bitter – Cold	Descending - Contracting	HE – P	(1.5-3g) 1.5-6g	RC	Caution with Middle Jiao Deficiency - Should not be used on patients with abdominal masses or constipation	Clears Heart Fire	* Mostly used to Tx Heat Affecting Heart
<b>* Rhizoma Phragmitis Communis</b>	<i>Lú Gēn</i>	Rhizome	Sweet - Cold	Descending - Contracting	LU - ST	15-30g	RC	Caution in cases of Deficient Spleen/Stomach Cold	Clear Heat in Lung & Stomach, especially with Rebellious Qi - Nourish Body Fluids, especially when Yin has been damaged by Heat	* Good because it is effective, yet mild acting - Clear Heat in Lung & Stomach - Nourish Body Fluids
<b>* Semen Cassiae Torae - Cassia obtusifolia</b>	<i>Jue Ming Zi</i> or <i>Cao Jue Ming</i>	Seed	Bitter – Sweet - Salty – Slight Cold	Ascending & Descending - Contracting	LIV – LI - KID	9-15g	RC	Use with caution in cases of Spleen Deficiency, diarrhea or hypotension - In large doses may cause loose stool or diarrhea - Do not use with <i>Huo Ma Ren</i> (Semen Cannabis)	Clear Heat in the Liver - Calm Liver Yang - Moisten the Intestines - Clear & Brighten the Eyes – Dispel Wind Heat	* Used mostly for Liver Heat with eye problems & constipation
<b>* Semen Celosiae Argenteae</b>	<i>Qing Xiang Zi</i>	Seed	Sweet – Slight Cold	Descending - Contracting	LIV	3-15g	RC	Not for patients with dilated pupils – Caution with Liver & Kidney Deficiency - Not for use with glaucoma - Glaucoma can manifest with symptoms that look a lot like red painful swollen eyes with superficial visual obstruction	Clear Heat in the Liver Channel & Liver Fire - Brighten Eyes	* Good for eye problems – Similar to <i>Jue Ming Zi</i> , but not as moistening to intestines
<b>*Excrementum Vespertilionis Murini – Excrementum (Faeces) Vespertillii Murini</b>	<i>Ye Ming Sha</i>	Feces	Pungent - Cold	Descending - Contracting	LIV	3-9g	RC	Use with caution during pregnancy -	Clear Heat in the Liver - Clear Vision - Improve Vision - Brighten Eyes - Should not be used for eye problems not involving stasis -	* Not used much – When used, used mostly for eye problems

(Superanus)									Traditional sources say this substance is not to be used with Radix Cynanchi Baiwei ( <i>Bai Wei</i> ).	
<b>Fel Ursi - Vesica Fellae Ursi</b>	<i>Xiong Dan</i>	Gall Bladder of Bear – Most commonly, it's the bile which is powdered	Bitter - Cold	Descending - Contracting	LIV – GB – SP – ST - HE	1-1.5g or 0.6-2.5g if powder - Give in pill or powder form	Usually used only in patents or pills	Traditional sources - Do not use with <i>Sheng Di Huang</i> (Radix Rehmanniae) or <i>Fang Ji</i> (Radix Stephaniae) - Use only for Excess Heat - Not to be used with Deficiency	Clear Heat & Toxins - Clear Eyes – Brighten Eyes - Calm Liver - Kill Intestinal Parasites - Stop Spasms - Reduce Swelling	* Not used in U.S. - Only used in patent medicine

**Clear Heat Quell Fire Herbs Primary General Grouping:**

<b>Calm Liver Yang</b>	<i>Jue Ming Zi</i>
<b>Clear Heat all 3 Burners</b>	<i>Zhi Zi</i> <i>Zhi Mu</i>
<b>Clear Heat both Excess &amp; Deficient</b>	<i>Zhi Mu</i>
<b>Clear Heat &amp; Damp in all 3 Burners</b>	<i>Zhi Zi</i>
<b>Clear Heat in Lung &amp; Stomach</b>	<i>Zhi Mu</i> <i>Shi Gao</i> <i>Zhi Zi</i> <i>Lu Gen</i>
<b>Clear Heat/Fire in Heart &amp; Stomach</b>	<i>Dan Zhu Ye</i>
<b>Clear Heart Heat/Fire</b>	<i>Dan Zhu Ye</i> <i>Lian Zi Xin</i>
<b>Clear Liver Fire</b>	<i>Ye Ming Sha</i> <i>Jue Ming Zi</i> <i>Qing Xiang Zi</i>
<b>Clear Summer Heat &amp; Damp</b>	<i>Dan Zhu Ye</i>
<b>Dispel Wind Heat</b>	<i>Jue Ming Zi</i>
<b>Moisten Intestine</b>	<i>Jue Ming Zi</i>
<b>Night Blindness</b>	<i>Ye Ming Sha</i>
<b>Nourish Body Fluid</b>	<i>Shi Gao</i> <i>Lu Gen</i>

**Nourish Kidney Yin**

*Zhi Mu*

**Red Eyes - Eye Inflammation**

*Xia Ku Cao*  
*Zhi Zi*  
*Jue Ming Zi*  
*Qing Xiang Zi*  
*Ye Ming Sha*  
*Xiong Dan*

**Skin Problems**

*Zhi Zi*  
*Xiong Dan*

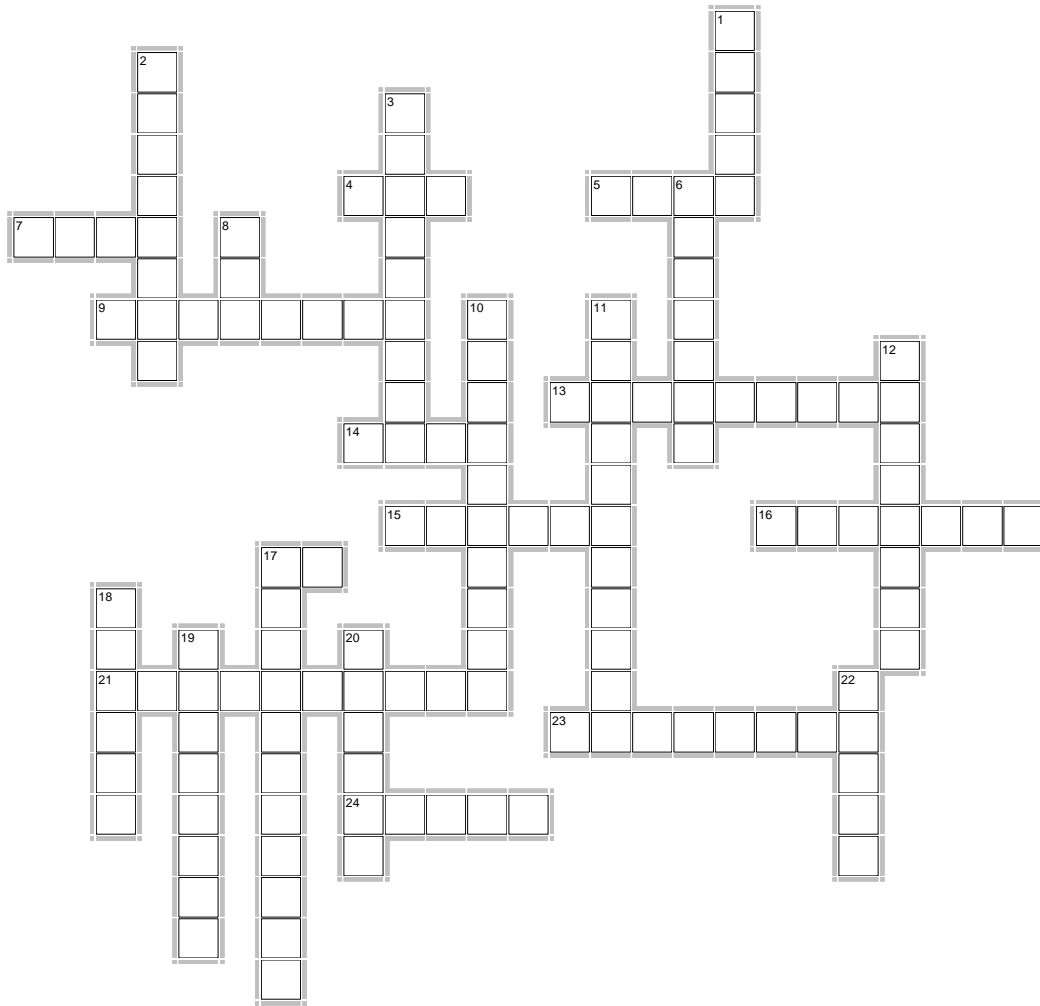
**Soften Hard Masses & Nodules**

*Xia Ku Cao*

### **Clear Heat Quell Fire Herbs Study Questions**

- 1) What Taste (1) and Nature (2) do most herbs have in the Clear Heat and Quell Fire category?
  - 1)
  - 2)
- 2) What is the strongest herb to Clear Heat in the Qi Level?
- 3) What is the most common herb to Clear both Excess and Deficient Heat?
- 4) What herb can Clear Heat in the Liver Channel, Soften Hard Masses, and Treat Eye and Ear Inflammation?
- 5) Name 4 herbs in the Clear Heat Quell Fire category that treat eye problems?
- 6) What herb in the Clear Heat Quell Fire category is used to Clear Lung and Stomach Heat and is used to Nourish Yin, and is especially useful when Yin has been damaged?
- 7) Prolonged use or excessive dosages of Bitter Cold herbs will usually damage which of the 3 Burners?
- 8) Which of the following functions is not a function of Bamboo Leaf (*Dan Zhu Ye*)? Clear Heat - Promote Urination - Treat Heat in the Heart Transferred to the Small Intestine - Calm Liver
- 9) What herb is in a different category than the rest: Spica Prunellae (*Xia Ku Cao*), Gypsum (*Shi Gao*), Rhizoma Phragmitis (*Lu Gen*), Semen Cassiae (*Jue Ming Zi*), Semen Celosiae (*Qing Xiang Zi*), Radix Bupleuri (*Chai Hu*), Fel Ursi (*Xiong Dan*)?
- 10) What channels are associated with *Zhi Mu*?
- 11) What are the energetic directions of *Jue Ming Zi*?
- 12) What is the typical dosage for *Qing Xiang Zi*?
- 13) What are the cautions for *Ye Ming Sha*?
- 14) Name 2 herbs in Clear Heat Quell Fire category that can Clear Heat in all 3 Burners.
- 15) What herb is used mostly for Liver Heat with eye problems & constipation?

## Clear Heat Quell Fire Herbs



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### Across

4. **WEI**—Aversion to Wind, chills, mild upper body ache, dry mouth, thirst, sore throat, red edges of tongue, floating, rapid pulse are symptoms of ..... Level Heat
5. **COLD**—Clear Heat herbs have a ..... nature
7. **FIRE**—Drying, rises to head, injures Yin and Blood
9. **XIONGDAN**—Bear gallbladder
13. **YEMINGSHA**—Bat feces
14. **YING**—Afternoon fever, dry mouth, irritable, dry tongue with a scanty coat, thready, rapid pulse are symptoms of ..... Level Heat
15. **BITTER**—Heat clearing herbs are often .....
16. **STOMACH**—Burning epigastrium, thirst, hunger, gum problems, sour regurgitation, bad breath, red tongue with dry yellow coat, full, deep, rapid pulse are symptoms of ..... Fire
17. **QI**—High fever, dry mouth, thirst, dry stool, bitter taste, red face and eyes, irritable, red tongue with yellow coat, full, rapid pulse are signs of ..... Level Heat
21. **PHRAGMITIS**—Effective, yet mild acting herb to Clear Heat
23. **DANZHUYE**—Good herb to use to Clear Heat in Deficient constitutions
24. **LIVER**—Irritable, angry, red face and eyes, bitter taste, red tongue, wiry, rapid pulse are symptoms of ..... Fire

## Down

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1. **BLOOD**—High fever, dry mouth, skin eruptions, manic behavior, bleeding, tremors, dark red tongue, rapid pulse are symptoms of ..... Level Heat
2. **GARDENIA**—Especially good herb to Clear Heat in all 3 Burners and Clear Damp Heat
3. **JUEMINGZI**—Good for eye problems associated with Heat and constipation
6. **LIANXIN**—Good to Clear Heart Fire
8. **YIN**—To treat Empty Heat you should Tonify .....
10. **PURGATIVES**—..... can be used to Clear Heat
11. **ANEMARRHENA**—Clears both Deficient and Excess Heat
12. **YANGMING**—High fever, profuse sweating, dry mouth, thirst, constipation, scanty dark yellow urine, bitter taste, red face and eyes, irritable, mouth sores, red tongue, full, rapid pulse are symptoms of ..... Stage Heat
17. **QINGXIANGZI**—Good for eye problems due to Liver Fire
18. **GYPSUM**—One of the coldest and strongest herbs to Clear Heat
19. **PRUNELLA**—Especially good to Clear Liver Channel Heat
20. **MIDDLE**—Clear Heat and Quell Fire herbs can easily damage the ..... Jiao
22. **HEART**—Palpitations, mouth and tongue sores, thirst, restlessness, insomnia, red tip tongue, full, rapid pulse are symptoms of ..... Fire