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Quality Matters

Sustainability Issues of Traditional Chinese Herbal Medicine- Part 1: Restricted Herb and Resource List

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This month I want to share with you a list of restricted Chinese herbs that we maintain here at Mayway USA. This is a list of restricted and/or prohibited Chinese herbs that cannot be exported from China or imported into the US. Some of these restrictions are only now being implemented and have not yet been put into operation at all ports of entry. These are the restrictions



being applied in Oakland, CA as of September 2011 and are subject to change. Links to a number of resources including regulatory agencies that provide much more information are included in the list.

FDA (Food & Drug Administration) <http://www.fda.gov/>
Herbs that have been banned and/or restricted from importation:

"Poisonous" plants and substances

Ban Mao 斑蝥/Mylabris—cantharidin toxin (Obsolete B1036[†])

Bing Lang 檳榔/Arecae Semen—carcinogenic/addictive

Chan Su 蟾酥/Bufo Venenum—bufo-toxins, cardiac glycosides (Obsolete B1038[†])

Da Fu Pi 大腹皮/Arecae Pericarpium—carcinogenic/addictive

Ji Nei Jin 雞內金/Gigeriae galli Endothelium Corneum—potential source of avian flu virus*

Ma Qian Zi 馬錢子/Strychni Semen—strychnine (Obsolete B1050[†])

Ying Su Ke 罌粟殼/Papveris Pericarpium—opium alkaloids/addictive (Obsolete B1047[†])

*Bulk herb only; finished products from Ji Nei Jin are exempt.



Sliced Bing lang

Unfit for human consumption

Can Sha 蠶砂/Bombycis Faeces—excrement

Wu Ling Zhi 五靈脂/Trogopteri Faeces—excrement

Ye Ming Sha 夜明砂/Verpertilionis Faeces—excrement

Zi He Che 紫河車/Hominis Placenta—human product

Contains aristolochic acid

Guang Fang Ji 廣防己/Aristolochia fangchi Radix—(Obsolete B1056[†])

Guan Mu Tong 關木通/Aristolochiae manshuriensis Caulis—(Obsolete B1055[†])

Ma Dou Ling 馬兜鈴/Aristolochiae Fructus—(Obsolete B1053[†])

Qing Mu Xiang 青木香/Aristolochiae debilis Radix

Xi Xin 細辛/Asari Herba

Contains Ephedrine Alkaloids or is a part of the Ephedra plant*

Ma Huang 麻黃/Ephedrae Herba

Ma Huang Gen 麻黃根/Ephedrae Radix

*In addition to the FDA restriction on the use of Ma Huang in dietary supplements, the PRC no longer issues an export license for this herb.

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) Herbs that are regulated (require an export permit) and/or prohibited (no importation allowed) Updated 10 Oct 2010:

Appendix I lists species for which no commercial trade is allowed in order to protect them from extinction.

Bao Gu 豹骨/Pardi Os (Panther or Leopard bone + any other parts)

Dai Mao 玳瑁/Carapax Eretnochelydis (Hawksbill turtle shell)

Hou Zao 猴棗/Calculus Macacae Multatae (Rhesus monkey bile stone)

Hu Gu 虎骨/Tigris Os (Tiger bone + any other parts) (Obsolete B1071†)

Mu Xiang 木香/Aucklandiae Radix (aka Saussurea costus, Family Asteraceae)

She Xiang 麝香/Moschus (certain species)

Shi Hu 石斛/Dendrobii Herba (wild species only; artificially propagated hybrids are exempted)

Ta Gan 獺肝/Lutrae Jecur (Sp. Lutrae lutra, L. Nippon) Otter liver

Xi Niu Jiao 犀牛角/Rhinoceri Cornu (Rhino horn)

Xiang Pi 象皮 Xiang Ya 象牙/ Corium et Dens Elephantis (Elephant skin and tusk)

Xiong Dan 熊胆/Vesica Fellea Ursi (Obsolete B1065†)

Yang Zi E 揚子鱷/Carapax Alligatoris (Yang Zi Alligator skin)

Zhu Long Cao 豬籠草/Herba Nepenthe (sp. = N. khasiana & N. rajah; Pitcher Plants)

Appendix II lists the species which are threatened, but for which limited trade is allowed. An export permit is issued only if the specimen was legally obtained and if the export will not be detrimental to the survival of the species. Some of these species are being farmed and are available in limited quantities. In some cases, substitute species are available.

Bai Ji 白芨/Bletillae Rhizoma

Chuan Shan Jia 穿山甲/Manitis Squama

Chen Xiang 沉香/Aquilariae Lignum resinatum

Da Ji 大薊/Euphorbiae Radix



ji nei jin



Ma qian zi

Gan Song 甘松/Rhizoma Nardostachyos (sp. Nardostachys grandiflora =N. jatamansi DC.)

Gan Sui 甘遂/Euphorbia Kansui Radix

Gou Ji 狗脊/Ciboti Rhizoma

Gui Ban 龜板/Testudinis Plastrum

Hai Ma 海馬/Hippocampus

Hong Dou Shan 紅豆杉/ Cortex Taxus (sp. = T. chinensis, T. sumatrana, et al.) Himalayan Yew

Ling Yang Jiao 羚羊角/Saigae Cornu (Critically endangered)

Qing Tian Kui 青天葵/Herba Nerviliae (Family Orchidaceae)

Rou Cong Rong 肉蓯蓉/Cistanches Herba

Shan Ci Gu 山慈菇/Cremastrae Pseudobulbus

She Xiang 麝香/Moschus (certain species)

Shi Hu 石斛/Dendrobii Herba (certain species—see note under Appendix I)

Shou Shen 手參/Radix Gymnadeniae (Family Orchidaceae)

Su Tie (et al.) 蘇鐵/Herba Cyas Revolutae (This Sago Palm is widely cultivated)

Tao Er Qi 桃兒七/Radix et Rhizoma Podophylli (Mandrake)

Tian Ma 天麻/Gastrodiae Rhizoma

Xian Ren Qiu 仙人球/Herba Echinopsis Multiplis & Herba Opuntiae (Cactaceae Family)

Xi Yang Shen 西洋參/Radix Ginseng (sp.=

Panax quinquefolius; unless obtained from within the US; that is, it cannot be “imported” without a permit)

Zhu Long Cao 豬籠草/Herba Nepenthe (all sp. not listed under App. I; Pitcher Plants)

Zi Tan Xiang 紫檀香/Pterocapri Indici

Lignum (sp. = Pterocarpus santalinus; red sandalwood)

CITES

Current Appendices as of 10 Oct 2010 (42 pages)
<http://www.cites.org/eng/app/Appendices-E.pdf>

Contrary to some prior reports in other sources:

1. The PRC Class Protections I, II, and III are enforceable only within the PRC and are irrelevant to importation or possession restrictions in the United States.
2. Lu Hui 蘆薈/Aloe Certain species (Aloe barbadensis & A. vera) are specifically excluded from the CITES Appendices
3. Ren Shen 人參/Radix et Rhizoma Ginseng (Panax) is not listed on any CITES Appendices except for plants from the Russian Federation
4. Shan Yao 山藥/Rhizoma Dioscoreae is not listed on any CITES Appendices
5. Hu Huang Lian 胡黃連/Rhizoma Picrorhizae is not listed on any CITES Appendices, Species Picrorhiza scrophulariiflora is specifically excluded from the Appendices.
6. Ba Dou 巴豆/Croton tiglium is not listed on any CITES Appendices. Even though it is a member of the Family Euphorbiaceae, which contains 7500 species, only succulent plants of this family are subject to the provisions of the Convention.
7. Mai Ma Teng 買麻藤/Herba Gneti (sp. = Gnetum gnemon) is not listed on any CITES Appendices. (However, species Gnetum montanum is listed under CITES App. III)
8. Ze Qi 澤漆/Herba Euphorbiae Helioscopiae) is not listed on any CITES Appendices. See note in #6 above. It is considered highly poisonous.
9. Xian Ren Zhang 仙人掌/Herba Opuntiae stems, flowers, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genera Opuntia are exempted from CITES restrictions.

USDA (United States Department of Agriculture)
<http://www.aphis.usda.gov/>

Restricted from importation (may be only sold in a powdered form or enclosed in a paper sachet)
Tu Si Zi 菟絲子/Cuscuta Semen—can sprout/
noxious, invasive plant
Bai Mao Gen 白茅根/Imperatae Rhizoma—can
sprout/noxious, invasive plant

Federal Noxious and Invasive Weeds List: <http://plants.usda.gov/java/noxious?rptType=Federal>

USFW (US Fish & Wildlife)

<http://www.fws.gov/angered/>

NMFS (National Marine Fisheries Service)

<http://www.nmfs.noaa.gov/pr/laws/mmpa/>

DFG (CA Department of Fish & Game)

<http://www.dfg.ca.gov/wildlife/nongame/>



Restricted and or prohibited under the 1973 US Endangered Species Act (ESA)

The USFW and the NMFS are in charge of enforcing that all products derived from and containing derivatives of species listed in the 1973 ESA are prohibited from importation and interstate trade. Possession or sale of ESA listed species or products without an ESA importation permit can be prosecuted as a felony.

E Jiao 阿膠/Asini Corii Colla—Equus Asinus is listed on the ESA*

*This should apply only to Equus africanus; Mayway is appealing this ban.

Endangered Species Act (1973, as amended) 16 USC CHAPTER 35

<http://uscode.house.gov/download/pls/16C35.txt>

ESA List of Species (Amended) 50 CFR 17.11 (30 pages)

<http://www.usda.gov/rus/water/ees/pdf/esaalist.pdf>

Special status of genus *Panthera*

Tigers, lions, jaguars, panthers, and leopards are afforded special protection. All trade in tiger parts is illegal under CITES Appendix I and a domestic trade ban has been in place in China since 1993. *Panthera tigris* is also a beneficiary of the Rhinoceros and Tiger Conservation Act of 1994. In 1998, this Act was amended to prohibit the sale, importation, or exportation of products labeled or advertised as rhinoceros or tiger products, even if there were no actual parts in the product. The law states that a person shall not sell, import, or export, or attempt to sell, import, or export, any product, item, or substance intended for human consumption or application containing, or labeled or advertised as containing, any substance derived from any species of rhinoceros or tiger. USFW has extended this ruling to include any product in which any part of any animal in Genus *Panthera* has been used as a substitute or alternative for tiger parts. A formal petition to de-list the tiger from the 1973 ESA was denied on August 12, 2010.

Special status of abalone

Haliotis cracherodii (Black) and Haliotis sorenseni (White), two species of abalone, are listed on the Endangered Species Act and possession of any part, including the shell, of these species of abalone is a felony under US law. Chinese herbalists using and possessing Shi Jue Ming/ Haliotidis Concha must have documentation that this herb was not obtained from these species. Your herb supplier should have a Statement of Origin accompanying every lot that is imported. Standard species from the PRC Pharmacopeia 2005 are: Haliotidis diversicolor Reeve, H. discus hannai Ino, H. ovina Gmelin, H. ruber (Leach), H. asinina Linnaeus, or H. laevigata (Donovan).

Special status of seals and sea lions

Hai Gou Shen 海狗腎/Callorhini Testes et Penis (seal penis; aka wan na qi) is a body part of an animal that is protected under the Federal Marine Mammal Protection Act (1972). Possession of this herb, even if not for sale, is a felony.

Special status of bears in California

If you have any bear parts in your dispensary, store, or clinic, it is considered prima facie evidence of your intent to sell these parts and it will be prosecuted as a felony. This includes any part of any bear including, but not limited to: gall bladders, bile, paws and teeth. CA law assumes that if you are in CA and have any bear parts, then they came from poached animals within CA (even if it originally came from a bear "farm" in China!). Many other states have laws protecting bears but suffer from a loophole regarding origin. Currently, there is a law before Congress to create a federal law protecting bears: H.R.3480 - Bear Protection Act of 2009. It reads in part: To conserve global bear populations by prohibiting the importation, exportation, and interstate trade of bear viscera and items, products, or substances containing, or labeled or advertised as containing, bear viscera, and for other purposes. This bill has bi-partisan, but not universal support in the Senate and House.



Wu ling zhi



Da fu pi

Potentially Unsafe Herbs (may be subject to detention and/or may require a permit to import)

Ba Dou 巴豆/Crotonis Fructus—poisonous oil content

Bing Pian 冰片/Borneolum—camphor resin

Fu Zi 附子, Cao Wu 草烏, Wu Tuo 烏頭/Aconitum sp. – Aconitine alkaloid content

Hu Ji Sheng 槲寄生/Visci Herba—(mistletoe) toxic lectin content

Qian Niu Zi 牽牛子/Ipomoea hederacea, I. nil, I. purpurea (=Pharbitis)—ergot alkaloids

Man Tuo Luo 曼陀羅/Datura Stramonium—tropane alkaloid content

Niu Huang 牛黃/Bovis Calculus—cow gall stone

Qian Dan 鉛丹/Minium—lead content

Tian Hua Fen 天花粉/Trichosanthes Radix – trichosanthin content (abortifacient)

Tian Xian Zi 天仙子/Hyoscyamus niger – tropane alkaloid content

Other Herbs Classified as Obsolete†

Lei Gong Teng 雷公藤/Tripterygii Radix—(Obsolete B1051†)

Mi Tuo Seng 密陀僧/Litharge (Obsolete B1061†)

Peng Sha 硼砂/Borax—toxic (Obsolete B1063†)

Qing Fen 輕粉/Calomelas—very toxic (Obsolete B1058†)

Xiong Huang 雄黃/Realgar—poisonous (As₂O₃) (Obsolete B1060†)

Xun Gu Feng 尋骨風/Aristolochiae Herba—aristolochic acid (Obsolete B1057†)

Zhu Sha 朱砂/Cinnabaris—HgS w/heat→Hg (Obsolete B1045†)

†Obsolete Substances, Chinese Herbal Materia Medica, 3rd Edition, Bensky, Clavey, Stoger, et al., Eastland Press, 2004.

Other Herbs that Mayway USA does not carry as raw (bulk) herbs:

An Xi Xiang 安息香/Benzoinum—resin (balsam)

Shang Lu 商陸/Phytolaccae Radix—harsh cathartic

Sheng Tie Luo 生鐵落/Ferri Frusta—toxic

Su He Xiang 蘇合香/Styrax—resin (balsam)

Yuan Hua 芫花/Gengwa Flos—harsh cathartic

Yang Qi Shi 陽起石/Actinolium—probable asbestos content

Parasitic plants, citrus plants, and potentially contaminated plants

These are regulated products and herbs which may be restricted or require special processing. (Otherwise, these herbs may require a special permit or may be prohibited from importation.)

- Huo Ma Ren 火麻仁/Cannabis sativa L., seed
- Zhi Ke 枳殼, Zhi Shi 枳實/Citrus aurantium (immature Bitter Orange), C. Kotokan, C. natsudaidai, C. wilsonii, Poncirus trifoliata, C. unshiu
- Chen Pi 陳皮, Ju He 橘核, Ju Hong 橘紅, Qing Pi 青皮, Citrus reticulata, C. tangerina, C. erythocarpa, C. grandis, C. unshiu, C. nobilis, C. leiocarpa, C. tankan, C. medica
- Yi Yi Ren 薏苡仁, Shu Yi Ren 熟薏苡/Coix lachrymajobi
- Bai Xian Pi 白鮮皮/Dictamnus dasycarpus
- Wu Zhu Yu 吳茱萸/Evodia rutaecarpa
- Shi Da Gong Lao 十大功勞/ Mahonia bealei, M. fortunei, M. japonica
- Sang Bai Pi 桑白皮, Sang Shen 桑椹, Sang Ye 桑葉, Sang Zhi/Morus alba
- Yue Ju/Murraya paniculata
- Zhu Ru 竹茹, Zhu Li 竹瀝, Tian Zhu Huang 天竺黃/

- Phyllostachys nigra (Bambusaceae)
- Song Jie 松節, Song Ye 松葉/Pinus massoniana
- Tu Jing Pi 土荆皮/Pseudolarix amabilis
- Fu Xiao Mai 浮小麥/Triticum aestivum
- Chuan Jiao 川椒 Hua Jiao 花椒, Chuan Jiao Mu 川椒目/ Zanthoxylum schinifolium, Z. Bungeanum, Z. Simulans, Z. Piperitum Z. nitidum
- Yu Mi Xu 玉米鬚/Zea Mays
- Huang Bai 黃柏/Phellodendron chinensis

Every effort has been extended to make this as accurate and as complete a document as possible. However, omissions and errors may have occurred. Mayway USA would like to keep this list correct and current. Please contact Skye Sturgeon at skysturgeon@mayway.com with corrections and questions. ■

Bio: Skye Sturgeon, MSOM, DAOM (candidate) is the Quality Assurance Manager and Special Consultant for Mayway, USA. Skye is a core faculty member at the American College of Traditional Chinese Medicine where he is also enrolled in ACTCM's doctoral program. Previously, Skye was president of the Acupuncture & Integrative Medicine College, Berkeley. Before making Chinese medicine his career choice, Skye was a clinical biochemist and toxicologist.

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