

How Eleuthero Became a Major Chinese Herb

An eye-witness account of efforts to develop Chinese Eleuthero root

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In 1978, a five-member team of Americans visited northeast China to gain insights into two Chinese medicinal herbs that were gaining popularity in the United States. Both plants were being depicted as “ginseng” and were derived from the family Araliaceae, being from the genera *Acanthopanax* and *Panax*. The visit was arranged by the Fmali Herb Company, Santa Cruz, California, as follow-up to two prior visits by the company’s founders to southern China in 1976 and 1977.

The Fmali Herb Company was established in 1971 by Ben Zaricor and Louise Veninga. As they relayed to me, their first herb product was the analgesic Tiger Balm[®], a Singapore product formulated on the basis of traditional Chinese medicine experience. Their interests, now sparked in East Asian herbal medicine, soon turned to Asian ginseng (*Panax ginseng*). This root herb became a major product in the western world in the 1970s with the rise of the back-to-nature movement that included returning to herbs for health care. Fmali was instrumental in that herbal resurgence with ginseng as its banner; Louise produced the first English language book aimed directly at this subject: *The Ginseng Book* (Ruka Press, 1973; revised 1974). The book had a large section on American ginseng (*P. quinquefolius*), a good review of Chinese and Korean ginseng, and included brief mention of *Eleutherococcus senticosus*, for which she relayed reports indicating that its actions were in many ways comparable to *P. ginseng*. This herb had gained the moniker “Siberian ginseng”.

For practical reasons, Ben and Louise developed their herb company focused on western herbs, mostly American herbs and especially those from the Appalachian region that crossed their home state of Tennessee, which included wild and cultivated American ginseng. In 1976, I was hired to design the facility and oversee the activities of Fmali Company’s Botanical Research Laboratory, which carried out quality control checks for crude herbs and confirmation of their botanical features.

Also in 1976, Fmali applied for and was accepted to become one of the small American companies allowed to attend the Bi-Annual Trade Fair in Canton (aka Guangzhou, in Guangdong Province, China). This International Fair had been established in 1957, but the Chinese government did not invite Americans in its first decade. Ben and Louise went to that event with an intent to look for useful herb products from the Chinese tradition, especially Chinese ginseng. Up to then, Americans interested in ginseng got their supplies mainly from Korea or, to a lesser extent, used American ginseng. The next year, Fmali was again accepted to the Fair, but Ben couldn’t attend and sent me in his place to accompany Louise. That was my first of eight visits to China from 1977-2004.

Fmali’s pursuit of ginseng led to interest in a newly marketed product, as of 1973, containing “Siberian ginseng.” It was a liquid extract (ca. 33% alcohol) developed in Russia based on research into adaptogens. The investigations were led by I.I. Brekhman, I.V. Dardymov, and their coworkers, with results published during the period 1961-1978. The research focused on a few herbs found in Siberia, which included *P. ginseng* and *E. senticosus* (eleuthero for short), and the latter had become their primary interest because it represented for them a “new herb” in contrast to ginseng. Russian botanists Ruprecht and Maximovich in the 19th century provided the genus name *Eleutherococcus* to reference the plant’s large fruit clusters, with fruits widely separated (*eleuthero* is from the Greek indicating separate, distinct, or free). The German botanist Hermann Harms in the early 20th century changed the Russian genus designation to *Acanthopanax* because of its botanical relationship, though a somewhat remote one, to the better known genus *Panax*, and this is the name that Chinese researchers retained. *Acantho-* is from the Greek and *sent-* from the Latin referring to thorns or spikes, which this plant has in abundance on its stems.

Siberian ginseng extract, produced by one of Russia’s health product endeavors, Imedex, was promoted as an adaptogen, to maintain homeostasis under influence of various stresses and to aid immune functions. The herb

came from an area adjacent to north China, where it had been known since ancient times as Wu Cha, and Ben and Louise figured that they could get the herb from China and take advantage of the awareness and wave of sales that the Imedex product had generated in the United States. They did some checking and found that China did supply Wu Cha.

As a consequence of Fmali's initial introduction of Chinese-sourced eleuthero, Imedex saw the potential problem for their fast-growing business, which had exclusive access to the Russian-sourced herb. Imedex initiated a law suit, complaining that Fmali didn't have *E. senticosus*, which Imedex had understood was a rare item of Siberia. Fmali prevailed in that argument.

The issue of proving the identity of Chinese eleuthero led to a trip that Ben arranged—a 1978 visit to northeast China, where the herb grew wild, so as to further investigate the matter. There were five of us on the trip: Ben Zaricor (1947-2022); James Duke, PhD (1929-2017) who had just been appointed head of USDA's new Medicinal Plant Resources Laboratory in 1977; botanist Walter Lewis PhD (1930-2020) who had just published, with his wife Memory, the book *Medical Botany: Plants Affecting Man's Health* (Wiley, 1977), Fmali's herb specialist Subhuti Dharmananda (b. 1950); and journalist Mike Chinoy (b. 1952). Mike was involved in East Asian reporting, with special interest in China; he had been to China in 1973 right after President Richard Nixon's visit, and came with us as his next visit. He then became a regular China reporter, starting 1979, working with CNN, and is currently Senior Fellow at University of Southern California's U.S.-China Institute. Ben and Louise had known of Dr. Lewis from their college studies at Washington University in St. Louis, Missouri, where he was a professor. Walter Lewis and James Duke had been presenters at the first Herb Trade Association Symposium (1977) that Fmali Company had hosted in Santa Cruz.

For this China visit, the American group flew into Beijing and then on to Harbin, the capital city of the large Heilongjiang Province, which is well north of the Korean Peninsula and adjacent to the southeastern part of Siberia where Brekhman and Dardymov had been collecting their herbs for study. The first stop there was at the Heilongjiang Institute of Traditional Chinese Medicine, which had close ties with the larger Heilongjiang University of Chinese Medicine. This Institute was one of the original Chinese research centers responding to the information coming from Russia regarding eleuthero. In 1973, in the first issue of that Institute's journal, a brief article was published about eleuthero's adaptogenic function, based on their own laboratory animal research imitating what the Russian scientists had done. And, in 1978, just prior to the American visit, members of the Institute presented laboratory information on eleuthero's immune-activating function at a conference in Shanghai.

The Institute was the site of a "Wu Cha Conference", a gathering of TCM specialists and our group of five, September 21-26, 1978. Among other topics, the Chinese professors presented to us information on how they made the plant identifications, including anatomical features, taxonomy, ecology, and chemical constituents as well as clinical applications of eleuthero. Ben relayed to them import/export problems for the American market; Dr. Duke described the USDA's cancer screening program that included Chinese herbs; Dr. Lewis spoke about populations of American ginseng; and I described current status and challenges in the study of Chinese herbs for those of us working in the west.

Our group was given a tour of the facilities, and one part was a visit to a very large room of tall narrow cabinets; we were shown how each of these had herb samples that had been collected, displayed, and labeled by botanical experts (see *Photo 1*). With regard to eleuthero, they had samples of different species that had a similar common name (ones that included "wu cha" in their complete name) and were sometimes confused in the herb trade. We were also shown several activities related to identification strategy, such as microscopic examination of sliced roots, stems, and other plant parts, and evaluation of the herb extracts by thin layer chromatography (TLC) and ultraviolet (UV)-visible Absorption Spectroscopy, which they recommended as a reference method for detecting authentic versus adulterant species. They made it clear that botanical identification of Chinese *E. senticosus* was definitive. Its Chinese common name is *ciwujia* (*wujia* being a different transliteration of wu cha), where *ci* refers to the very spiny stems of this species.

We were then taken by train on a journey to Nan Cha, a town in the northeast area of Heilongjiang, not far from the border with Russia, and from there by car to where we were shown eleuthero plants growing in the wild (see *Photo 2*). Clearly, some people had gone out ahead and found these specimens at a convenient site in the woods so that we could be taken directly to the place near a roadway. The plants were quite distinctive in appearance. We were also taken to a ginseng farm, where we were shown the growing plants in different stages (the duration from planting seedlings to harvesting roots was six years) and given a good opportunity to ask questions about ginseng cultivation, with crop rotation, soil feeding, harvesting, and drying among the topics answered and shown to us, as we were there at the time of ginseng harvest (see *Photos 3, 4*). A few years afterward, this region of Heilongjiang Province became a source of Chinese-cultivated American ginseng (*Panax quinquefolius*), an herb used by Chinese herbalists for more than two centuries as distinct from Chinese ginseng, now a local resource to replace the expensive imported American wild ginseng root.

Ben was able to make arrangements to get the “Siberian ginseng” from this part of China with assurance of it being in accord with the botanical identifications the researchers had provided, thus to resolve any questions about identity that had been raised. Previously, Fmali had to rely on their suppliers’ stated botanical designation of raw materials and on Fmali’s in-house chromatography testing, but the Wu Cha conference showed that a more complete confirmation of the identity for eleuthero was already available.

This conference in Harbin demonstrated to the researchers and the government officials who accompanied us that there was real American interest in the value of eleuthero outside China. This experience inspired the Institute members to produce a booklet in Chinese and English called “Chinese Ciwujia Studies” (1981). The English language version of one of the articles, “Chinese Ciwujia in Old and New Herbal Perspectives” was then reproduced in the *Journal of the Institute for Traditional Medicine* (ITM; 1982), a quarterly journal of the organization I founded end of 1979. ITM, armed with this and other sources of knowledge on the subject, pursued a project of illuminating the research on and practical use of ginseng and eleuthero, and later produced a review titled “The Nature of Ginseng: From Traditional Use to Modern Research” (2002).

It turned out that eleuthero had a rather modest history of use in Chinese medicine. It was mainly known as one ingredient in a formula of herbs having similar actions, most of them being *Acanthopanax* species, made into a wine for arthritis; a version of it is still produced today. Other investigators had found evidence of the herb’s use in a longevity tonic, Kang Bao, described in a 15th century medical text (Ming Dynasty period). The Chinese had only recently become especially interested in this herb after the Russians started promoting it; the researchers in Heilongjiang had been monitoring the medical publications of the Soviet Union and Korea for useful guidance in herbal investigations and came across the burgeoning research activities. Now having conducted their own studies, China was able to exploit this valuable resource. After the Wu Cha Conference, eleuthero was soon made available as a raw material or dried extract from several enterprises in Heilongjiang and taken up by European and American TCM enthusiasts as well as western herbalists.

In addition to eleuthero, Ben was soon getting more herb materials for Fmali Company from China than from his U.S. sources. During the three years after the conference, he returned to China two to three times annually to make business arrangements, especially in Harbin, from which he also initiated import of vials of Ginseng-Royal Jelly (Chinese name *Renshen Fengwangjiang*). Those extracts in glass ampoules became a popular product in the U.S., especially enjoyed as an energy restorative. Royal Jelly is another health product of Heilongjiang Province, derived from bee secretions used to feed the queen bee and her early stage larvae.

I made a follow-up visit to the Institute in Harbin in 1981, and after presentations to their members on developments of Chinese herb medicine in the U.S., I hired one of the researchers we had met at the 1978 Harbin Conference, Fu Kezhi, Assistant Professor of Medical Botany and Pharmacology. His task, which he then pursued for the next 20 years, was to search for articles on Chinese medicine subjects I asked about and translate the articles so that I could relay the information to health practitioners, such as acupuncturists, in English-speaking countries. The literature search was carried out at the library of Heilongjiang University of

Chinese Medicine, and the results led to numerous print articles sent to practitioners and many of them posted on the ITM website. His work also aided the design of several herb formulas prescribed by TCM practitioners.

Fu Kezhi later visited me in the U.S. and by that time his efforts had moved from study of eleuthero onto other projects, such as the broader issue of differentiation of authentic from substitute herbs and, most especially, on development of cultivated licorice (*Glycyrrhiza uralensis*), for which he had become the foremost expert in China. We collaborated on a project establishing small licorice farms, somewhat like the ginseng farms, which would serve as models for multiplication of the efforts across Heilongjiang. Licorice, one of the most widely used of Chinese medicinal herbs, had been solely collected from the wild at that time and its supplies were being decimated, thus requiring a plan to initiate cultivation. Fu Kezhi produced a book on the subject published in 2006 along with his son Fu Mining and colleague Wu Rihua. Licorice cultivation has since become a significant source of the crude herb. Likewise, by 1997, eleuthero wild plants were diminishing in population due to heavy demand that had developed, both in China and for export, so cultivation possibilities were investigated. Today a substantial portion of the herb is obtained from cultivated stocks.

The work of the Heilongjiang Institute of Traditional Chinese Medicine, the investments of Fmali Herb Company, and the visit of the American team to northeast China had significant impact on the development of Chinese herbs for the western world. The experiences illustrated how natural resources are revealed to be of importance, and how herbs are brought from their growing place, whether gathered wild or cultivated, to their position in natural health care practices.

End Notes

Page 1:

The Ginseng Book by Veninga is long out of print, but used copies may be found from online sellers. Not to be confused with the book by the same name by Stephen Fulder (Avery Publishing, 1996).

The primary English language article by Brekhman and Dardymov was “New Substances of Plant Origin which Increase Nonspecific Resistance,” *Annual Review of Pharmacology* 1969; 9, pp 419-430, accessible as a scan via <https://www.annualreviews.org/doi/abs/10.1146/annurev.pa.09.040169.002223> In addition to ginseng and eleuthero, these researchers showed particular interest in *Schisandra chinensis* (Schisandraceae) and *Rhodiola rosea* (Crassulaceae) which have since become widely used in health products, with raw materials supplied by China. Demand for rhodiola became so high that it was entered into the endangered species list (CITES II) in 2023.

Page 2:

Articles describing the lives and contributions of three members of the group visiting China are found in HerbalGram:

James A. Duke—A Diverse Life of Botanical Bounty, Issue #117, pp. 44-57, accessed at <https://www.herbalgram.org/resources/herbalgram/issues/117/table-of-contents/hg117-feat-jad-alifeofbot/>

Walter H. Lewis: 1930–2020, Issue #129, pp. 77-78, accessed at <https://www.herbalgram.org/resources/herbalgram/issues/129/table-of-contents/hg129-obit-lewis/>

Benjamin Reed Zaricor: 1947-2022, Issue #135, accessed at <https://www.herbalgram.org/resources/herbalgram/issues/135/table-of-contents/hg135-obits-zaricor/>

A brief article on the Wu Cha Conference was published in the News and Notes section of the *Quarterly Journal of Crude Drug Research* (1979; 7:1, pp 89-90), which can be accessed as a scan via <https://www.tandfonline.com/doi/abs/10.3109/13880207909067457?journalCode=iphb17>

Page 3:

The booklet, *Chinese Wujia Studies* was published as a short run by Heilongjiang Scientific and Technical Press, Harbin (1981). Its contents were partly based on the 1978 conference topics, but were mainly aimed at future work for Chinese researchers. It had six articles, including one clinical observation in which eleuthero extract was used by IV administration during the recovery phase of Cor pulmonale, a type of heart failure usually due to prolonged hypertension. This booklet is not accessible outside a copy at ITM's library.

The article "Chinese Ciwujia in Old and New Herbal Perspectives" was written by Fu Kezhi, Meng Qingsheng, and Gao Kuibin of the Heilongjiang Institute of Traditional Chinese Medicine. Meng Qingsheng was Assistant Professor of Medical Botany; Gao Kuibin was also Vice President of Traditional Chinese Medicine at the Academy of Traditional Chinese Medicine, Harbin. All were there at the 1978 Wu Cha Conference.

The *Journal of the Institute for Traditional Medicine* (ITM; 1982) was published on a very short run and is not accessible outside a copy at ITM's library.

The article "The Nature of Ginseng: From Traditional Use to Modern Research" (2002) has been posted online at: <http://www.itmonline.org/arts/ginsengnature.htm>

Use of eleuthero as a longevity tonic was prominently depicted in an article, "Advances on Anti-Ageing Herbal Medicines in China" by Chen Keji and Zhang Wenpen of the Chinese Academy of Traditional Chinese Medicine, Beijing. This article, which also had sections on eight other Chinese tonic herbs, was published in the journal *Abstracts of Chinese Medicine*, 1987; 1:2, pp. 309-330. The journal was produced as a short run and is no longer available outside a few specialty libraries.

The 2006 book on licorice cultivation is in Chinese and English, published as a short run by Northeast Forestry University Press, and it included my 2005 article: "From Wild to Cultivated: Supplying Key Chinese Herbs, with Licorice as an Example." This book is not accessible outside copies at ITM's library.

The regular visits to China by Ben Zaricor were interrupted by a fire that destroyed the Fmali Herb Company building end of November 1981. He and Louise kept the company going utilizing other facilities and quickly rebuilt on the site with a new warehouse and offices as well the quality control laboratory. Though continuing Chinese imports, they turned attention to other product interests, especially teabag formulations, flavorful blends developed locally and European medicinals developed in Switzerland. Fmali wound down its operations in 2005, with the sale of their leading tea product—Good Earth[®] Tea—to another company, and Ben and Louise pursued other interests.

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*Photo 1. At the Heilongjiang Institute Examining Botanical Samples of Eleuthero
Left to Right Team Members: Walter Lewis, Ben Zaricor, Subhuti Dharmananda, James Duke*



Photo 2. James Duke Taking a Close Look at Wild Eleuthero Plants



*Photo 3. During Ginseng Harvest, Examining Root Structures
Left to Right Team Members: Ben Zaricor, Subhuti Dharmananda, Walter Lewis, James Duke*



Photo 4. Mike Chinoy Filming Ginseng Harvest, Overseen by Chinese Government Official