

The
View
FROM

高瀑園
HIGH FALLS GARDENS

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SAVE THE DATE

Aug. 14
Garden Weeding Party
(Practitioners)

Sept. 18
HFG Annual Field Day

Oct. 16
Garden Clean-Up Party
(Practitioners)

Oct. 30
Conference sponsored by
CADE Medicinal Plant
Project and Farmers'
Museum, Cooperstown NY

*Call or email HFG for
details and directions.*

Dear Friends of High Falls Gardens,

Events of this spring have served to remind us how our efforts to create a garden — which human need defines as a sanctuary, a protected place to savor and study Nature — are all too dependent on forces in the big world. Our sense of control, whether in the garden or in the world at large, is an illusion. We can only cooperate with Nature, which rewards the gentler human virtues such as self-understanding, empathy and persistence.

In international affairs, it is the lack of these very qualities in our leaders that generates such stupidity and needless destruction as recently witnessed. The bomb-droppers, bioengineers and other control freaks throughout human history have never been able to understand that meekness is not the same as weakness. Those of us who have chosen to go back to the Garden have a lot of gentle persuasion to do before we can inherit the Earth.

Bee Colony Survives Winter, But Not Spring

HFG is now an initiated member of the ranks of embattled beekeepers, having lost our one colony to the awesome environmental pressures on the honeybee. In February the bees were still flying around on every calm, sunny day. But spring build-up never happened, and by June they were all gone.

The post-mortem analysis was accomplished with the aid of valuable information gleaned from a three-day workshop on Organic Beekeeping presented at the end of April by Gunther Hauk and Ron Breeland at The Pfeiffer Center in Spring Valley, New York. We believe that the most likely explanation is that the Varroa mites were present in the colony by March. The mites' preferred

breeding place is inside the drone cells and when the queen begins intensive laying to create "spring build-up," the dramatic upsurge in hive population that usually takes place in March and April, the mites increase in numbers exponentially. Laden and weakened by the mites, the bees could not deal with the mouse that invaded the bottom super, then the ants, then a raccoon or skunk that stuck its grubby little claw inside and grabbed handfuls of honeycomb. In their normal state the bees are strong enough to defend themselves against such invaders.

Experienced beekeepers often are able to determine what's happening inside the colony and can take measures to support the bees. Our inexperience is cause for mourning, but fortunately the Organic Beekeeping workshop provided enough new information to make us wiser as well as saddened, and next year we will try again.

The reasons for the dramatic decline of the honeybee are controversial in a way that's familiar to students and practitioners of Chinese medicine and other holistic philosophies, who hold that disease is caused by imbalance in the organism rather than by bugs. Bugs are Nature's housekeepers, they invade and recycle diseased plants and animals in order to promote the health of the whole. The organic beekeepers believe that the honeybees' problems are due to pervasive immune system weakness caused by diverse environmental pressures. These adversities range from the massive amounts of pesticides dumped on suburban lawns (the total quantity now dwarfs that used in conventional agriculture) to the disruption of the communal life of the hive by conventional

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The View FROM HIGH FALLS GARDENS

P.O. Box 125
Philmont, NY 12565 USA

Jean Giblette, *Publisher*

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For further information contact
High Falls Gardens,
P.O. Box 125,
Philmont, NY 12565 USA
phone 518-672-7365
or email hfg@capital.net.

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DEAR FRIENDS

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beekeeping practices such as artificial production and insemination of the queen, feeding with refined sugar water, routine destruction of drones and suppression of swarming behavior. The honeybee is also the miners' canary species among our domesticated animals. While cows, chickens and pigs nominally survive the torture tactics of modern conventional agriculture with its antibiotic-laden confinement systems, the bees respond by dying en masse. The beekeepers wonder what it will take to alert the world — failure of a major food crop due to lack of pollination, perhaps?

Yet the workshop at The Pfeiffer Center, originally limited to twenty-five participants, drew an assortment of forty-five professional beekeepers, commercial growers, gardeners and hobbyists — the latter categories thought by many to represent hope for the honeybees' future. If enough backyard gardeners can be mobilized to provide sanctuary for the bees, relating to them in a respectful and humane manner rather than instrumentally as honey factories, then their chances of survival may be enhanced. Our gardens may serve as arks, floating in the deluge until humankind awakens from its illusion of control.

New Sprinkler System

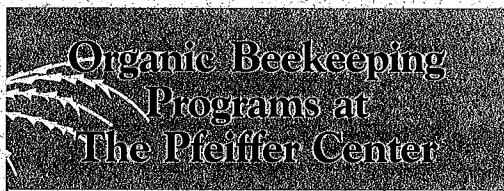
As we go to press the main field at Hillview Farm sports a new sprinkler system, just in time to mitigate the drought. Once again this past winter snow cover was minimal,

and rainfall abnormally low throughout the spring with the second-driest April on record. HFG advisor (and organic farmer with over twenty-five years experience) Steve Gilman suggested we adapt the inexpensive, low-tech system he uses on his fields and then helped us through the details. Now a new five-horsepower pump draws water from the creek into a two-inch water pipe that cuts across the field. Six faucet units made of standard plumbing parts stand up from the main line and feed twelve hoses with adjustable impulse irrigators at the ends. Modular and flexible, the system allows for hoses to be gathered up and stored at the end of the season, while the main line will eventually be buried to ease maintenance of the white Dutch clover aisles between the beds. Drip irrigation, a water-conserving technique desirable for perennial beds or for some vegetable row cropping operations, was ruled out in this situation because the clover aisles need water too, and a very large number of lines would be required. Many thanks to Steve, and also to Steve Richardson of Philmont who contributed some ABS water pipe and fittings.

Chinese Herbs Planted at Quirk Middle School

To follow up a report in the previous issue of *The View*, we are happy to confirm that not all plans were waylaid this spring. The Quirk Middle School near downtown Hartford, Connecticut overcame obstacles to plant several species of Chinese medicinal plants in two raised beds on their premises. HFG provided guidance for the project and Johnny's Selected Seeds of Albion, Maine donated the seeds.

Pauline White and her fellow teachers at Quirk were all ready to plant in an empty lot across the street that had been reserved for community gardens. City officials then found an unsafe level of lead in the soil and prohibited the students from using the site. The intrepid teachers, undeterred, pushed for the creation of raised beds in the central courtyard of the school, a large, windowless brick structure built during the 1960's.



Organic Beekeeping
Programs at
The Pfeiffer Center

For information on when the next program on Organic Beekeeping will take place, call The Pfeiffer Center at 914-352-5020 x20, or email info@pfeiffercenter.org.

Visit of Chinese Agronomist Derailed by Embassy Bombing

Last year during Robert Newman's tenure as curator of the medicinal plant garden of the Nanjing Institute of Botany, he met and befriended several colleagues. One of them is Wu Zhong-fa, Senior Agronomist and Garden Manager of the Guangxi Botanical Garden of Medicinal Plants, the largest such collection in China. About Newman's age (fortyish), with a bachelor's degree in agriculture from the Forestry College of the Guangxi Agricultural University, Wu had worked his way up at the GBGMP, writing or co-authoring several books and articles in the process and becoming an authority on the ginger family. The idea of an exchange visit came up when Newman was in Guangxi, a visit during which Wu could see the medicinal plants growing in North America and also teach the Americans who are growing the Chinese species. The GBGMP agreed to back the visit financially, and Newman mobilized his U.S. network.

From January to the end of May we worked on The Visit, and a number of people at various botanical and agricultural institutions got pretty excited about it and even pledged contributions toward expenses. We had a great itinerary arranged for Mr. Wu. First off (with Jean acting as chauffeur), he would go to UMass Amherst, which under Lyle Craker's direction had contributed essential paperwork to the visa process, then to Cornell to present a seminar arranged by Professor and Plant Pathology Department Chair Helene Dillard of the NY State Agricultural Experiment Station. Then to Claverack to review the plants at HFG's Hillview Farm field, then up to the Adirondacks to see native medicinal plants in the wild, courtesy of

Kate Gilday and Don Babineau of Woodland Essence Teaching Center, next to Avoca to see Matthias and Andrea Reisen of Healing Spirits Herb Farm, also to Cooperstown to see wild-simulated cultivation of American ginseng at Sylvan Botanicals, thanks to Sylva and Scott Harris.

And that was just in New York! He was also scheduled to spend time with Cindy Riviere of Plant It Herbs in Ohio, attend an intensive one-week course including field work called "Medicinal Plants of Southeastern Ohio" at Ohio University, and visit Peter Borchard of Companion Plants. Also included on the itinerary were the Montgomery Botanical Center in Miami (specializing in palms and cycads), Elixir Farms in Missouri, and finally West Coast stops including Jerry Black of Oregon Exotics and, of course, Robert Newman.

Just as all the kinks were finally worked out and Wu had the correct paperwork to take to the U.S. Consulate in Guangzhou to get his visa, the Gang-That-Couldn't-Shoot-Straight bombed the Chinese embassy in Belgrade. All the U.S. consulates in China closed and when they reopened they laid down new rules, making it much more difficult to apply for visas. After several hassles and delays, Wu was finally turned down and by way of explanation handed a general rejection notice claiming insufficient evidence to "establish to the consular officer's satisfaction that [he had] sufficiently strong professional, economic, social or family ties to China to compel [him] to leave the United States after a temporary stay."

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DEAR FRIENDS

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The ninth of June was planting day and the kids went to work with a vengeance, assembling the units, shoveling clean fill, raking and, finally, tucking in the seedlings nurtured for months in their classrooms. They had previously constructed attractive trellises made of tree branches for the *Codonopsis pilosula* to climb on. *Allium tuberosum*, *Astragalus membranaceus*, a *Ginkgo biloba*, *Glycyrrhiza uralensis*, *Impatiens balsamina*, *Perilla*

frutescens, *Prunella vulgaris*, and *Scutellaria baicalensis* filled out the beds.

Outside the courtyard at one end of the school lot, the neighborhood is graced by a few old trees spared by some merciful hand during school construction. Among them is an enormous grandfather ginkgo, said to be one of the largest on the East coast. 園

Practitioners and Growers Join Forces in Minnesota

If last November's elections left any doubt that progressive populism is alive and well in the North Star state, consider that in May the Minnesota state legislature passed the Organic Agriculture Education and Promotion Act, which provides financial support to farmers for the cost of organic certification, one of the first such pro-organic initiatives at the state level. In a less widely known development, during the same time a Twin Cities group including both practitioners of traditional Chinese medicine and experienced herb growers got together and formed a Medicinal Herb Network.

Fifteen people with diverse affiliations in health and agriculture rolled up their sleeves to cooperate, Minnesota-style, in a serious investigation of the prospects for the domestic cultivation (and direct marketing) of Chinese medicinal botanicals. This union of growers and practitioners is a marriage that High Falls Gardens has been trying to broker for some time, and in this case no introductions were required. When the Network discovered in March that HFG had done a lot of the ground-work, they invited Jean back to her home state to

be guest speaker at a two-day workshop held at the Northwestern College of Chiropractic in Bloomington. (Northwestern is in the process of merging with the Minnesota Institute of Acupuncture and Herbal Studies, MIAHS, in St. Paul to become Northwestern Health Sciences University as of September 2000.)

Workshop Looks at North Asian Medicinal Plants

About twenty people attended the workshop on Friday, April 16, and the next day a core group met to review the fine points. They were briefed on HFG's progress to date and given some of the plant material from the Newman group. Jean pulled 108 plant species names out of her database for the Network to investigate, showed slides of many and discussed cultivation potential in USDA climate zones 3-6. With Minneapolis/St. Paul at 45 degrees north (Beijing and New York City are at 40 degrees), Minnesota is at the same latitude as Northern Mongolia and Russian Siberia and covers diverse ecosystems from the northern arboreal forests to fertile prairies in the south. The Asian medicinal plants of well-known northern hardiness include *Platycodon grandiflorum*, *Schisandra chinensis*, *Phellodendron amurense* (an Ailanthus-like tree named for the Amur River) and, of course, the herbaceous Paeonias. Others, like the wide-ranging *Astragalus membranaceus* and its substitute species *A. mongolicus*, forest plants such as *Cimicifuga dahurica* (Sheng Ma) and bog plants such as *Alisma plantago-aquatica* (Ze Xie) are also worth a closer look.

The Minnesota group had already concluded, as had HFG, that two projects are essential to the development of domestic production. One is basic market research, beginning with a survey to ask practitioners about which herbs they use, which will determine preferences in product mix. Another, the development of sensory analysis protocols (see article, page 6), is necessary to establish qualitative equivalency between the domestically-grown and the imported products.



CHINESE AGRONOMIST

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We already knew that plant studies are not a national priority at the moment, but why must an official agency of the U.S. government harrass a visiting scientist who presents the heretofore correct paperwork? As one friend of HFG commented acidly, "Why don't you suggest to the Feds that one of your herbs has a potential military application, and you'll have your scientist over here in about fifteen minutes!"

After apologizing to Mr. Wu, Jean phoned Senator Moynihan's office and was told that they can and do protest such rejections but it would take at least a month. That was too much of a delay for the agricultural season and everyone agreed to postpone until next year. Newman's network members are now contemplating ways to insure that next time Wu will be handed his visa on a silver platter. ☞

Both of these are projects that have been on the High Falls Gardens drawing boards for some time, demonstrating once again the synchronicity of creative activity.

Fertile Soil for New Ideas

Jean was impressed with the substantial resources the Minnesotans bring to the work. The Network is sponsored by the Agricultural Utilization Research Institute (AURI), a legislatively-funded technical assistance unit, and the Minnesota Institute for Sustainable Agriculture (MISA), an umbrella group that includes the University of Minnesota. The Network's cultivation trials are already funded, and AURI will be funding the State Department of Agriculture to do the practitioner survey. Bethany Davidson of the University's Center for Alternative Plant and Animal Products serves as coordinator for the Network.

The University has recently reorganized several of its colleges in what is apparently excellent preparation for the 21st century. The Network is part of the College of Agriculture, Food and Environmental Sciences, which will "study the relationship of landscape health and human health in a more holistic, integrated manner," according to Craig Hassel, Network member and associate professor

of Food Science and Nutrition. Network member Mary Jo Kreitzer is the director of the Center for Spirituality and Healing, charged with "bringing evidenced-based approaches to complementary modalities, to the extent possible given the underlying assumptions and framework of other health care systems of practice." To translate the university-speak, this represents a startling new level of open-mindedness. The Center has already given impetus to several initiatives in the field of complementary medicine. According to Craig, "The presence of the Center means that we exist in a state of creative tension which allows us to do many things we would not be able to do otherwise." For example, this year the elders of several Native American nations have accepted an invitation to lead a six-part seminar on the Spirituality of Food. The third in the series will focus on medicinal herbs! (Sorry, participation is by invitation only.)

Growers Jeff Adelman and Renne Soberg are the Network's cultivation point people. Jeff has a large greenhouse operation west of the Twin Cities in Farmington. He already has an extensive collection of southeast Asian plants due to his work with the Hmong, the Cambodian hill people who were resettled in

the Minneapolis/St. Paul area and are active in the farmers' markets there. Renne, a commercial herb grower, has previous experience with feasibility studies of medicinal herbs as potential crops and has conducted many trials at his farm. Minnesotans are old hands at giving serious consideration to new specialty crops, for the farm economy has suffered for a long time and many people have lost their livelihoods.

The Network's practitioners of Chinese medicine are all ready to get their hands on some live plants. Rose Haywood, an administrator at Northwestern who now, during the merger, serves as Dean of Clinical Services at MIAHS, followed up the Workshop by applying for a SARE grower grant to carry out trials of Angelica species. [We received word just before *The View* went to press that she was awarded the grant.] Network member Chris Hafner, Director of the Cloud River Clinic of Traditional Chinese Medicine in Minneapolis, is conversant with European herbal traditions as well as the Asian. ☞

ACE WEEDER FETTERED

This year the annual HFG Memorial Day Weeding-Beyond-the-Call-of-Duty Award was given once again to Mary McDermott of Portsmouth, NH. Thanks, Mary.

The Prospects for Sensory Analysis of Medicinal Herbs

An exciting outcome of the High Falls Gardens presentation to the Medicinal Herb Network in Minneapolis is that participants agreed to work toward developing a system for the sensory, or organoleptic, analysis of Chinese medicinal herbs.

As recognized during the workshop, to market domestically cultivated Chinese medicinal herbs in North America requires that practitioners recognize the medicinal equivalency of the home-grown product to the imported. Chemical analysis can confirm identity of plant species and show that the profile of known compounds is roughly the same. But ultimately the market, like the market for California wines, judges the product based on taste and other sensory cues.

While Western science offers plenty of laboratory analysis techniques to determine the chemical constituents of plant material, from bioassays to high pressure liquid chromatography to DNA fingerprint profiles, all our formidable technology has yet to identify every component of any one single plant species. Moreover, the knowledge of exactly how all the chemicals work in synergy to produce their medicinal effects is far beyond us at present. (This is the reality that causes so much consternation among opponents of bioengineering. How can we tinker with a plant's genetics *and release it into the environment*

when we don't know how it works in the first place, let alone how it affects other organisms?)

Chemical analysis for identification purposes and one form of quality control is being instituted at Kew Gardens in London, where an Authentication Centre for Chinese Medicine will serve to protect the worldwide market against substitutes, fakes and contamination. This type of quality control, while welcome, is only one side of the picture. Quality in medicinal herbs, as with organic food, also refers to more elusive characteristics.

Take, for example, potency. The Western medicinal herb industry has tried to address this question by (rather arbitrarily) designating one of the plant's constituents as the "medicinally active ingredient" and using a measurement of its quantity as a standard of potency. However, as the history of biochemistry in the twentieth century has been a process of uncovering one layer of complexity after another, now the worldwide scientific community generally agrees that, at this juncture, the whole plant fraction (root, stem, leaf, flower) must be considered to be the medicinally active ingredient. The question then arises of whether the "medicinally active ingredient" concept is yet one more case

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"Descriptive analysis is fairly precise once it's set up properly, with participants trained and sensitive to these characteristics," says Network food scientist Bill Stoll.

High Falls Gardens: The Music

Jim Glinksy, Friend of HFG and participating grower in New Portland, Maine, wrote us recently that he and his wife Elise enjoy bluegrass music and have been learning to play the hammered dulcimer, tin whistle and five-string banjo. Did we know that the dulcimer made its way from the West to China about four hundred years ago? It became known as the yang qin, a core instrument in traditional Chinese orchestras.

Jim alerted us to the existence of a CD called *New Frontiers* by two Ohio musicians, Kim Murley and Dan Levenson, who record and tour nationally as *Blue Rose*. Kim began playing the dulcimer as a child and, after studying yang qin at the Shanghai Conservatory of Music in the early 1990's, she has been introducing Chinese music to American audiences. *New Frontiers* features Kim on the yang qin performing several lovely traditional tunes, such as "Thunder on a Dry Day" and "Rosy Cloud Follows the Moon," accompanied by Dan on fiddle, or banjo. Also included are two of Kim's dulcimer compositions and some Western traditional pieces for a very lively medley.

"I feel that this music fully embodies the spirit of the High Falls Gardens project and highly recommend it as valuable to anyone interested in the intermingling of Chinese and American culture," wrote Jim. Further, he suggested Elderly Instruments, Inc. in Lansing, Michigan (phone 517-372-7870, website elderly.com) as a good place to order this CD as well as other traditional music from around the world. Or contact Blue Rose directly at 216-382-6586.

Another Documentary Film of Note

Readers may remember our Winter 1998 film review of *The Knowledge of Healing*, an impressive documentary on Tibetan medicine now being independently distributed by IN Pictures and its new home video label *Hollywoodn't*. At least a couple of our readers ordered copies based on that review; and as a result we were invited to the April 29th New York premiere screening of their new documentary, titled *In Search of Kundun With Martin Scorsese*, directed by Michael H. Wilson. This one is also of interest to students of Chinese and Tibetan culture as well as to film students, as it documents the making of Scorsese's commercial film *Kundun*.

For one who knows nothing of movie-making the process is fascinating, especially when it involves inviting three hundred Tibetan exiles to North Africa to cooperate in recreating their culture for the camera. None of the actors in *Kundun* are professional but their accomplishments, and those of the other film makers, are substantial. The documentary adds considerable depth to that work; an amazing dimensionality is achieved with the juxtaposition of clips from the movie and archival footage. For example, part of *Kundun's* recreation of the 1953 meeting of the 14th Dalai Lama with Mao Tse-Tung is shown along with actual film footage of that historic event, as well as a recent interview with the Dalai Lama in which he reminisces about his impressions at the time.

To order the videotape of *In Search of Kundun With Martin Scorsese*, priced at \$49.95 for individual consumers, contact IN Pictures by phone at 310-451-8722, fax 310-451-9722, email inpix@earthlink.net or at their website inpictures.com.

SENSORY ANALYSIS

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of industry using bad science to grease the trade routes and, by the way, to give brokers leverage over the growers.

Meanwhile, on the other side of the picture, there exists a time-tested measurement apparatus that yields replicable results. It's the human nose and tongue, connected to an informed brain. Wine-makers and perfume manufacturers have been using this effectively in the West for ages. In Asia it's the traditional means to select and grade plant medicines. In fact, all Asian pharmacology is based on taste, nature and energetic properties; the system having developed within a literate cultural matrix that sustained a descriptive vocabulary and master-apprentice training for many generations.

Therefore, anyone who has thought through the problem of bringing domestically-cultivated Chinese medicinal herbs to market can recognize the need for comparative sensory evaluation of the material. When this problem was presented to the Medicinal Herb Network in Minneapolis, the response was, "Oh, sure! We've been doing that with food products for a long time." University nutritionists described how they obtain replicable

results using trained graduate students as evaluators. Among several applications of sensory or organoleptic analysis, there is a practice popular in the food industry since the 1970s known as descriptive analysis. This method uses a star graph, a graph with multiple radial axes, to plot qualitative characteristics to yield a distinctive profile. An appropriate sample of the food is held as the standard and each aspect of its sensory characteristics is specifically defined with a vocabulary of terms. Then other samples are compared to the standard, the object being to detect defects or undesirable variations. "Descriptive analysis is fairly precise once it's set up properly, with participants trained and sensitive to these characteristics," says Network food scientist Bill Stoll.

The "can do" attitude of the Minnesota group portends an exciting future for herbalists and growers and for the assimilation of traditional Chinese medicine in America. Whether it's Asian botanicals grown in American soil or native American plants evaluated for use in traditional Chinese formulas, medicinal herbs will make their way to an expanded market if only we forget the magic bullet and concentrate on good science. ☐

Box 125, Philmont, New York 12565 USA

HIGH FALLS GARDENS

高溪園

Join Us —

BECOME A FRIEND OF HFG NOW!

High Falls Gardens (HFG) seeks to advance the practice of traditional Chinese medicine in North America through cultivation and study of Asian medicinal plants. A garden has been established in the Hudson Valley region of New York to propagate material received directly from China and to serve as a teaching and research facility.

With over 180 species grown during the 1998 season, the collection affords ample opportunity for study including comparisons with closely related native medicinal plants. The project is supported through public and private funding sources, including membership in the Friends of HFG.

Yes! Enclosed is my annual dues of \$15, payable to High Falls Gardens, which entitles me to a newsletter subscription, access to resources and advance notice of special events.

Name _____

Address _____

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