A Return to the Land of the Rising Sun

2005 Quarryhill Expedition

After a long hiatus, it was time to return to Japan for more fieldwork. Our last expedition to Japan was in 1997, the others being in 1987 and 1989. Previous journeys had taken us throughout Hokkaido, Honshu, Shikoku, Kyushu and Yakushima. This time we decided to focus on the mountains of northern Honshu, an area rich in deciduous trees and shrubs, with a varied over-story of conifers and a diverse herbaceous flora. I was joined by Robert Jamieson, Head Gardener of the Howick Arboretum, Tim Boland, Director of the Polly Hill Arboretum in Massachusetts, and Peter Brownless, Nursery Manager of the Royal Botanic Garden, Edinburgh.

Other than almost stepping on a doku hebi, a rather unfriendly and very poisonous snake, a couple days of very heavy rain while climbing in the mountains, and Robert almost disappearing in a fast moving river as a rung on a precarious suspension bridge snapped, the journey went very smoothly. This was no doubt due to the careful planning by our guide and old friend Shigeto Tsukie. To our delight, Tsukie had arranged for us to stay in Minshiku and Ryokan, traditional Japanese style inns, that were mostly in very scenic areas and that were also Onsen. Onsen are bathing facilities, sometimes quite large and often with indoor and outdoor pools, heated by natural hot springs. The healing power of the sizzling hot water provided a great way for us gaijin to relax after each day’s hike in the mountains in search of plants.

In three and a half short weeks we managed to make 300 collections, almost half of which will be new additions to Quarryhill. We were particularly pleased to find seed of Pinus pumila, Magnolia salicifolia, Thujopsis dolabrata, Torreya nucifera, Hamamelis japonica, Acer diabaticum, and Disanthus cercidifolius, plants we have long wanted for Quarryhill’s collection. We also collected spores of several interesting ferns. These were sent to the Royal Botanic Garden, Edinburgh for germination, and will be returned to us when ready as young plants. A special treat for me was a return to the exact tree that I had climbed 18 years previously, Sciadopitys verticillata, the rare and beautiful umbrella pine. There were no cones this time, but fortunately we have several trees in the garden from seed collected during the earlier expedition. We also paid a visit to what was reported to be the largest sugi (Cryptomeria japonica) in Japan, although I think I have seen larger in Yakushima. Called Shogun Sugi, the 1400 year old sacred tree is growing next to a small but picturesque shrine built in 1519 in the village of Agamachi, Niigata Prefecture.

There is nothing quite like seeing plants in their wild habitats to instill an understanding of how they prefer to grow. Our visit to the mountains of northern Japan certainly did that and so much more.
The Mission of Quarryhill Botanical Garden is to advance the conservation, study and cultivation of the temperate Flora of Asia

Advisory Committee Meeting

The first ever meeting of Quarryhill's Advisory Committee took place on October 18, 2005. Committee members Tony Kirkham, Head of the Arboretum at the Royal Botanic Gardens, Kew, Charles Erskine, retired from Kew, Mark Flanagan, Keeper of the Gardens of Windsor Great Park, Daniel Campbell, retired from UC Berkeley Botanical Garden, and Nicholas Turland of Missouri Botanical Garden (filling in for Peter Raven) were at the meeting. Committee Chair Lord Charles Howick was unable to attend. The all day meeting focused on an examination of Quarryhill’s mission, the garden’s collection policies, the expansion of the garden, and how best the resources of the garden might be utilized. The meeting concluded with a brief presentation of some of the committee’s thoughts to Quarryhill's Board of Directors followed by a sumptuous dinner at Board President Willa Mundell’s home. A follow-up written report from the committee was recently received outlining their ideas and recommendations. This report will play an essential role in the development of a master plan for the future of the garden.

New Laser Engraver

Thanks to the overwhelming and spontaneous generosity of Quarryhill member Marion McKinsey, a new era in signage and garden interpretation has begun with the purchase last year of a remarkable new laser engraver. The Universal M-300 has successfully begun its mission to populate the garden with beautiful and durable new visitor signs made of fade-resistant anodized aluminum, now evident in great numbers in the western reaches of the garden. Soon, all accession plant tags will also be produced by the engraver and we have already made a number of engraved wooden signs for the roadways and parking areas near the offices. In addition, Quarryhill can now boast its first official highway sign hanging above Highway 12, replacing the obsolete “Three Springs Ranch” sign from days of yore. Thank you Marion for your unparalleled gift to Quarryhill!

New Member Hours

Effective immediately, Quarryhill will be opening the garden for self-guided tours to all members, free of charge as usual, Tuesdays thru Saturdays from 10am to 3pm, year-round including the winter months. There will be a sign-up sheet in the reception area, by the large circular sign board, and all visitors are required to both sign in and out during their visit. Guests are welcome when accompanying members and are asked to pay the standard fee of $15 per person, or $5 for children, full-time students and seniors 65 and above. Watch for free guest passes, 2 per member, coming your way soon with our next membership mailing.

“Gardens, like money in the bank, accumulate interest as they grow”

-Chinese Proverb
Rare Maple Conservation

In October of 2005, I visited the three known remaining populations of a rare and beautiful maple, *Acer pentaphyllum*. They are all in western Sichuan, China, in the Hengduan Shan\(^1\) near the Yalong Jiang\(^2\) and its tributaries. The Hengduan Shan is a vast remote and rugged mountainous area, with the highest summit being Gongga Shan, also known as Minya Konka, at 24,790 feet. Conservation International has declared the “Mountains of Southwest China”, which includes the Hengduan Shan, to be one of the earth’s 34 biodiversity hotspots, places of high endemism and rich biological diversity.

The *A. pentaphyllum* sites are a little more than two long days drive west from Chengdu, Sichuan. Having decided to brave the roads and the difficult conditions, Quarryhill board member Tamia Marg, her husband Tom Anderson, and Joanna Welti accompanied me. Our first stop on the way was at Luding, a small city on the Dadu He\(^3\). I have visited Luding several times over the years, the first time in 1988, and was amazed at the rapid changes that have taken place. That night at our hotel we had dinner with the Governor, Sun Guang Jun, and explained to him the purpose of our visit. He expressed great interest in and concern for the survival of *A. pentaphyllum* and offered to help in any conservation efforts.

We continued west the next day over two very high passes, the Zheduo at 13,615 feet and the Gaoersi at 14,485 feet, to Yajiang, a Tibetan town on the Yalong Jiang. The next day we headed south 19 miles along the west side of the Yalong Jiang to the first population. The trees occurred on a very steep east-facing mountainside of loose shale on the west side of the river, though a few were seen with binoculars on the east side. They were growing at c. 9055 feet with *Quercus cocciferoides*, Desmodium, Koelreuteria paniculata, Zanthoxylum, Sophora davidii, Elsholtzia, Indigofera, Bauhinia brachycarpa, Deutzia, Cupressus duclouxiana, *Quercus cocciferoides*, *Desmodium*, *Koelreuteria paniculata*, *Zanthoxylum*, *Sophora davidii*, *Elsholtzia*, *Indigofera*, *Bauhinia brachycarpa*, *Deutzia*, *Cupressus duclouxiana*, *Quercus cocciferoides*, *Desmodium*, *Koelreuteria paniculata*, *Zanthoxylum*, *Sophora davidii*, *Elsholtzia*, *Indigofera*, *Bauhinia brachycarpa*, *Deutzia*, *Cupressus duclouxiana*, (Continued on page 4)

In The Garden

Winter provides a stark and beautiful transparency to the garden, as new vistas are revealed and the richness of bark and berry is accentuated. The lustrous evergreen foliage of the *Cotoneaster salicifolia*, from Sichuan, is almost completely obscured by its copious and brilliant orange-scarlet fruit. Other Cotoneasters have also demonstrated an exceptional quantity of berries this year, in colors from orange to deep red. In like fashion, the *Idesia polycarpa* sports its grape-like bunches of pendant orange-red berries, regally adorning its leafless branches.

*Camellia japonica* (from Kyushu, Japan) and *C. pitardii* (from Guizhou, China) are among these early wakers. Birch, particularly *Betula albosinensis* (from Sichuan, China), display their stunning bark textures and colors, often exfoliating in tortuous fashion. *Ilex dimitrophyllos*, from Japan, appears to set fruit more heavily in alternate winters, with this year’s crop proving especially full of brilliant, red berries that nearly overwhelm its classic, holly-leaved foliage. *Michelia doltsopa* is in its full, voluptuous bloom of creamy-white flowers in the Meadow area at the garden’s middle, while *M. compressa*, in contrast, has discreetly begun its display of small, delicate white flowers with their purple-tinged centers. *Michelia maudiae* has also begun its sensational show of large white flowers, now in full bloom at its top and soon to invade its lower branches.

Camellias, now in peak bloom, punctuate the otherwise muted and earthy tones of a sleepy garden, displaying vivid reds and pinks set brilliantly against a backdrop of rich evergreen leaves. *Camellia japonica* (from Kyushu, Japan) and *C. pitardii* (from Guizhou, China) are among these early wakers. Birch, particularly *Betula albosinensis* (from Sichuan, China), display their stunning bark textures and colors, often exfoliating in tortuous fashion. *Ilex dimitrophyllos*, from Japan, appears to set fruit more heavily in alternate winters, with this year’s crop proving especially full of brilliant, red berries that nearly overwhelm its classic, holly-leaved foliage. *Michelia doltsopa* is in its full, voluptuous bloom of creamy-white flowers in the Meadow area at the garden’s middle, while *M. compressa*, in contrast, has discreetly begun its display of small, delicate white flowers with their purple-tinged centers. *Michelia maudiae* has also begun its sensational show of large white flowers, now in full bloom at its top and soon to invade its lower branches.

(Continued on page 4)
Buddleja crispa, Berberis, Fraxinus, Arisaema, Artemisia and a low growing bamboo. Approximately 21 mature trees were seen along a 2-mile stretch of the road between 40 and 150 feet above the river. Very little seed was seen on the trees. Regenerating seedlings were found in one location only, in a steep ravine under a large 30-foot tall A. pentaphyllum. There were approximately 50 seedlings from 1 to 8 inches high, mostly one year old.

There are several immediate threats to the survival of the population. First and foremost is intense grazing, of which there were signs everywhere primarily from goats, sheep and cattle. Yaks also were seen nearby as well as deer. The few seedlings seen were in an almost inaccessible area and many were growing under or in shrubs presumably offering some protection from the grazing. The second major threat was firewood gathering. Many of the trees showed signs of repeated cutting. Villages heavily dependent on wood for fuel are found throughout the Yalong River canyon. There were also signs of logging. The third threat is road construction and repairs. Because the mountains are so steep, a large cut into the side of the mountain has to be made to build a roadway. The roads tend to be built just above the rivers, which is exactly where the A. pentaphyllum are found. The areas above and below the roads frequently collapse during the summer rains requiring even bigger cuts to repair the washed-out roads. These road repairs further destroy habitat.

Two other potential catastrophic threats to the population are fire and landslides. Because the A. pentaphyllum population is so small, a big fire during the dry season or a large landslide could easily destroy all the trees. Landslides are common in the area due to seismic activity combined with the steepness of the mountains and extensive logging.

A less immediate threat, but perhaps of greatest concern, is the planned construction of a nearby dam downriver that will raise the water level significantly. We were not able to determine the expected height of the reservoir, but Mr. Cao, leader of the nearby Milong Township, told us that their village would be completely submerged. Milong is 2 miles upriver from the A. pentaphyllum population and is approximately 50 feet above the river.

The story was much the same at the other two sites. Although the three populations are a long days drive from each other because of the high passes and bad roads, they are only about 50 miles apart as the crow flies. In total we saw less than 200 trees at the three sites. Regeneration was poor to non-existent. The local authorities that we met were completely unaware of the rarity and threats to the survival of the maple. They all expressed a keen desire to work with us to save the trees from extinction. We are now planning the second phase of this important conservation program – protective measures for the three known populations, seed collecting for ex situ conservation and to produce plants for reintroduction, and conservation education programs for the people that live in the region.

Should you want to know more about this program and help prevent the extinction of this beautiful maple, please call Bill McNamara at 707 996 3166.
Garden Visitors

Last August brought three prominent horticulturists to Quarryhill, beginning with Oren McBee, Nursery Manager of the Smithgall Arboretum, a satellite garden of the Atlanta Botanical Garden. Oren was here primarily to observe Quarryhill’s nursery operation, but was also very interested in the design and layout of Quarryhill. We have a close relationship with Atlanta Botanical Garden and have distributed many plants to them over the past few years. Well-known nurseryman Bob McCartney, of Woodlanders Nursery in Aiken, South Carolina arrived a week later and expressed astonishment at the richness of Quarryhill’s collection. In his own words in a thank you note he wrote, “Just wanted to let you know that my visit to Quarryhill was not only a highlight of this trip, but a highlight of my horticultural experience. I saw so many plants I had only heard of and some I had never heard of...” Andrew Bunting, Curator of the Scott Arboretum at Swarthmore College in Pennsylvania arrived next. He was very curious to see how some of the same species that grow at the Scott Arboretum perform here under very different conditions.

Two of India’s foremost rosarians, Viru and Girija Viraraghavan visited in January to see some of Quarryhill’s more than 30 different species roses. They were in California to speak at the Great Rosarians of the World Annual Lecture Series at the Huntington Botanical Gardens. Though, too early to see any flowers except a few on the *Rosa chinensis* var. *spontanea*, they were delighted to see *Rosa gigantea* thriving, as they are from seeds they had sent us from India a few years ago.

Also in January plant explorer, author, and Heronswood nursery owner Dan Hinkley stopped in with fellow author and journalist Ketzel Levine. Dan has an encyclopedic memory of thousands of plants that he has seen and collected on his many travels. It was a real pleasure walking through Quarryhill with Dan and Ketzel sharing stories while they admired Quarryhill’s many plant treasures.

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