After the conference I traveled with Lars Sandgaard to Northen Jutland, where we visited several garden centers and a natural area covered with heathers, sphagnum, and other natives.

I returned to Copenhagen where I had the opportunity to visit several public gardens including the Queens Garden (Rosenborg Have) and the University of Copenhagen Botanic Garden (Botnisk Have). Both were impressive in their plant collections and plantings.

Back to the U.S.A. with good memories of a warm and gracious group of plants-persons.

Recent Plant Introductions from China©

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Last September I participated in a 3-week plant collecting expedition to Shanxi province, an area of north-central China, west of Beijing. The expedition was sponsored by the Beijing Botanical Garden and included colleagues from the Morton Arboretum, the United States National Arboretum, and the Chicago Botanic Garden. The trip was conducted through NACPEC, the North America China Plant Exploration Consortium, a group of eight organizations that has participated in 11 trips since 1991. The goals of this consortium are to:

- Broaden the genetic pool of known species.
- Extended hardiness and increase vigor.
- Broadened adaptability to difficult microclimates.
- Increase insect and disease resistance.
- Conserve rare and endangered species.
- Select improved horticultural forms.
- Evaluate and introduce appropriate new species.
- Facilitate exchange of information and personnel between Chinese and North American institutions.

NACPEC has visited several areas in China, ranging from Heilongjiang and Jilin provinces in the north, through Shanxi, Hubei, and Shaanxi provinces in central China, and south-east to Jiangxi and Guangxi provinces. As a result we have collected plants of varying cold-hardiness, from those suitable for U.S.D.A. Hardiness Zones 7 and 8 to ones hardy well into Zone 4. The outcome of these efforts is over 600 living accessions that are being grown by the member institutions.

The plants collected on the September 2002 trip to Shanxi should be very cold hardy and well adapted to our increasingly hot summer conditions. This area has not been well visited by western botanists, and it yielded plants of ornamental and scientific value. The Midwestern participants on this trip are especially interested in these plants for their growing conditions, and we are also interested because of their potential usefulness in urban environments. Some of the highlights include Meyer and Wilson spruces (*Picea meyeri* and *P. wilsonii*), Armand pine (*Pinus armandii*), Tatar wingceltis (*Pteroceltis tatarinowii*), Chinese fringetree (*Chionanthus retusus*), six species of oaks (*Quercus* sp.), Henry maple (*Acer henryi*), and wild peony (*Paeonia obovata*). Some of these collections represent the first infusions of seed of these species in many decades.

It is still too early to adequately assess these latest collections, but after more than a decade of expeditions, with numerous accessions being grown in many locations throughout the U.S.A. and Canada, the NACPEC members are beginning to understand how the various introductions are performing. At the Morris Arboretum we have observed many outstanding plants, several plants that are neither cold hardy nor able to withstand our summers, and some that have been rogued from our collection due to a lack of horticultural merit.

With the wealth of information that comes from several years of growing these plants, our next major goal is to have them widely disseminated. Currently the wild-collected Chinese plants serve our important internal goals of education, research, and horticulture; but it is the external goal of having these plants utilized by the greater professional audience that is the critical next step. The purpose of this presentation is to highlight a few plants and to encourage and excite the members of I.P.P.S. to utilize these collections to their fullest.

I have chosen a sampling of plants to share with you today with several messages in mind. Some plants, as in the Chinese hemlock (*Tsuga chinensis*), have broad appeal and potentially great impact in the nursery industry. Others such as Chinese filbert (*Corylus fargesii*) have more restricted appeal but are new and interesting. And ones like Chinese spicebush (*Lindera reflexa*) are strictly collectors' plants and propagation challenges (or headaches depending on your point of view).

The plants that I will discuss are:

***Abies holophylla* and *Abies nephrolepis*, needle and Khingan firs.**
These are two firs that show great promise as being adapted to the mid-Atlantic region and perhaps areas further south. Needle fir is native to China, Korea, and southeast Siberia. We have several mature specimens at the Morris Arboretum that have grown very well for close to 80 years, so it clearly is well adapted to our growing conditions. Khingan fir has a wider range in eastern Siberia and Northern China and is potentially more useful in poorly drained soils than other firs. We only have young plants of this species and look forward to further evaluation.

***Acer griseum*, paperbark maple.**
This is everyone's favorite small maple but is notoriously difficult to propagate. We have several plants collected in Hubei in 1994 that are growing vigorously. We have not had any success vegetatively propagating these, but have planted them near other paperbark maples, hoping for increased cross-pollination and seed viability.

***Corylus fargesii*, Chinese filbert.**
This tree form of filbert has grown very vigorously since coming to us as seed in the fall of 1996. Since then a group of these trees has reached 12-15 ft in only 7 years. The most remarkable feature of Chinese filbert is its exquisite exfoliating coppery-tan colored bark, which resembles that of young river birch. Very little has been written or observed about this species, but the tree from which seed was collected stood 40 ft tall, and was growing in a mixed deciduous forest.

***Lindera reflexa,* Chinese spicebush.**
This is a beautiful relative of our native spicebush (*Lindera benzoin*) and swampbay (*Persea palustris*). This shrub has been planted at the Morris Arboretum since the spring of 2001 and suffered no damage from last year's moderately cold winter. This is truly a connoisseur plant, especially because of the difficulty with its propa-

gation. However, its smooth red and green twigs make it a fascinating addition the winter garden.

***Pinus koraiensis*, Korean pine.**
The Korean pine is relatively well known but still underutilized. Its excellent cold hardiness and tremendous adaptability make it a superb alternative to our native *P. strobus*. In addition to the small plants from China, we have a number of plants grown from seed collected in Korea in the 1980s.

***Tsuga chinensis,* Chinese hemlock.**
This Asian hemlock has shown significant resistance to the hemlock woolly adelgid that is devastating our native species. We have several accessions collected in southeast China in the late 1990s that are among the first infusion of germplasm of this species since E.H. Wilson collected it in before 1910. We are growing a number of these new plants throughout the Morris Arboretum and are also eager to evaluate their long-term performance.

In summary, after the efforts that have gone in to collecting, tracking, propagating, growing, planting, and sustaining these plants, the next great challenge and goal is to enable their broader use. The aim of this talk has been to whet the appetites of I.P.P.S. members and stimulate their interest in the remarkable plant diversity from recent collecting trips to China. My foremost goal is to have propagators visit the Morris Arboretum and other arboreta with these collections, pruning shears in hand, and make use of this fabulous resource. Only by completing the step of dispersing these plants to a wider audience will we as botanical institutions fully achieve our plant exploration goals.