



浙江七子花

Seven-Son Flower from Zhejiang: Introducing the Versatile Ornamental Shrub *Heptacodium jasminoides* Airy Shaw

Gary L. Koller

This fall, the Arnold Arboretum will begin distributing seedlings and rooted cuttings of a splendid new shrub from China

In 1916, Alfred Rehder of the Arnold Arboretum described a new genus of shrub in the pages of *Plantae Wilsonianae*, the hefty, three-volume "enumeration of the dried plants collected by Mr. E. H. Wilson during his expeditions to western China in behalf of the Arnold Arboretum." Dubbed *Heptacodium* "in allusion to the seven-flowered heads of the inflorescence" (from the Greek ἑπτά, seven, and κώδεια, a poppyhead), the genus was assigned to the Caprifoliaceae, the family to which *Lonicera* (the honeysuckles) and *Abelia* belong. Translated, the plant's Chinese name means "seven-son flower from Zhejiang."

Wilson collected the plant at Hsing-shan in western Hupeh (Hubei) province, China (Collection Number 2232). He made two collections of it, one in July and the other in October 1907, from cliffs at nine hundred meters (about three thousand feet) above sea level, where it was rare. In examining the herbarium specimens, Rehder found "that only a single ripe fruit was available for examination," which probably explains why no living plants resulted from that expedition. Rehder named the plant *Heptacodium*

miconioides because, he wrote, "In its habit and general appearance this plant suggests a member of the family of *Melastom[at]aceae* and on account of the comparatively small flowers in terminal panicles it resembles particularly *Miconia*. Only close examination," he continued, "showed that this interesting plant belongs to the *Caprifoliaceae*." It is interesting to note that Wilson collected *Magnolia biondii* near the same site, but at an elevation of six hundred meters (above two thousand feet). *Magnolia biondii* recently was introduced to North America through the efforts of the Arnold Arboretum.

The next reference to the genus *Heptacodium* did not occur until thirty-three years later, in 1952, when Henry Kenneth Airy Shaw, a taxonomist at the Royal Botanic Gardens, Kew, described "A Second Species of the Genus *Heptacodium* Rehd. (Caprifoliaceae)" in the *Kew Bulletin*. Airy Shaw states that

for many years there have lain in the Kew Herbarium two sheets of an undetermined Chinese shrub with opposite trinerved leaves and a terminal thyrses of superficially jasmine-like flowers. . . . Having previously taken some interest in the Caprifoliaceae (Honeysuckle Family), the writer recalled a rare shrub collected in Hupeh and described by Rehder. . . . [R]eference to the isotype preserved at Kew showed that this was clearly the correct generic disposition of the mysterious specimen. . . . The discovery is of some

Opposite: A leaf of *Heptacodium jasminoides* Airy Shaw showing the trinerved venation. This and the other photographs that accompany this article were taken by the author in the Arnold Arboretum during the fall of 1985. Professor Zou Shou-qing kindly supplied the calligraphy, which says "Zhejiang seven-son flower."

interest, since the original species was noted by Wilson as being very rare, and as far as I am aware has not been collected since.

Airy Shaw described the new species, naming it *Heptacodium jasminoides*. Since he had only dried herbarium specimens, no living material of the new species could be distributed.

The 1980 Sino–American Botanical Expedition

Heptacodium again disappeared from the view of plant scientists outside China. The first opportunity Western botanists had to observe it firsthand did not come until recently, when the 1980 Sino–American Botanical Expedition provided seeds and the opportunity to introduce living plants to North America. The American contingent of the Expedition consisted of Stephen A. Spongberg of the Arnold Arboretum; Theodore R. Dudley of the United States National Arboretum; Bruce Bartholomew of the University of California Botanical Garden at Berkeley; David E. Boufford, then at the Carnegie Museum in Pittsburgh (now with the Arnold Arboretum); and James Luteyn of the New York Botanical Garden. They collaborated with a team of Chinese scientists from various institutions in exploring the native wild flora. Their travels through China took them to Hangzhou Botanical Garden in Hangzhou, Zhejiang province, China (30° 15' north latitude, 120° 16' east longitude, at 26.42 meters [about 83 feet] above sea level). Spongberg and Dudley report that while on a tour of the Garden on November 1, 1980, they were shown a plant of *Heptacodium jasminoides*. Multiple-stemmed and arching, it was growing in full sun. The staff of the Garden kindly accommodated the Americans's request for seeds. Dr. Dudley, who felt great excitement at seeing a living plant of *Heptacodium*, a genus he had read about while doing research on the Caprifoliaceae,

recalls having avidly and voraciously plucked the fruits.

The seeds came from a plant originally dug up in the Zhejiang Province Preserve, approximately five hundred miles south of Hangzhou. This is the type locality for *Heptacodium jasminoides*, and Dudley feels that the original seedlings are as authentic as botanists can hope to get at the present time. The seeds proved to be fresh and reliable, producing plants at both the Arnold Arboretum (AA 1549-80) and at the National Arboretum (NA 49226). The National Arboretum's records state that the seed parent was a tall, arching, multistemmed shrub about five meters (sixteen and a half feet) tall. Dudley reports that seedlings were quickly distributed to the Cary Arboretum of the New York Botanical Garden in Millbrook, New York. I was unable to find that any plants had been introduced to the University of California Botanical Garden at Berkeley. Thus, it appears that only the three East Coast gardens were responsible for the original introduction materials.

On February 26, 1981, the Arnold Arboretum obtained a second lot of seeds (AA 403-81) through the 1980 *Index Seminum* (Item 519), circulated by the Hangzhou Botanical Garden to botanical institutions throughout the world. It is quite likely that a number of other gardens received seeds of *Heptacodium jasminoides* through this distribution.

As of January 1986, the Arnold Arboretum had six plants from the 1980 Expedition. They are growing out of doors in the nursery and range from two to three meters (about six to ten feet) in height. One plant from this seed lot appears to be a compact form, for, while it is the same age as the other plants, it is only seventy-five centimeters (about thirty inches) tall. It is, however, crowded into the middle of a row of tightly spaced seedlings and is therefore subject to intense competition. Perhaps, if given more space, its growth will accelerate to the typical rate.



A spray of Heptacodium jasminoides. The “opposite trinerve leaves” and “superficially jasmine-like flowers” are easily seen in this photograph.

Barry R. Yinger, the Curator of Asian Plants at the National Arboretum, reports that the National Arboretum has eleven plants from the original collection, which recently were planted outdoors, in China Valley. In addition, they have one plant (NA 54102) that they acquired from Dr. James C. Raulston, Department of Horticultural Sciences, North Carolina State University, Raleigh. Dr. Raulston obtained his original cuttings when he was on a field trip to the Arnold Arboretum in 1983. (This demonstrates just how fast plants can change hands, passing from one garden to another, once they arrive in North America!) At this point it seems that all plants in North America can be traced back to these two seed lots, which appear to have a common origin in a single parent plant at the Hangzhou Botanical Garden. Since the genetic diversity is there-

fore so limited, it is important that we seek additional germplasm directly from wild sources in China.

Our first order of business was to get the seeds to germinate. As with most seeds for which we have no recorded experience, we divided the seed lots into a number of treatment groups. Peter Del Tredici of the Arnold Arboretum's plant-propagation staff reports that the best germination resulted from exposing the seeds to five months of warm stratification at 65 degrees Fahrenheit in a moist medium consisting of equal parts of sand and peat moss, followed by three months of cold stratification at 36 degrees Fahrenheit. Five seeds in Lot 1549-80 and six in Lot 403-81 germinated after this treatment. Unfortunately, our records do not indicate how many seeds were sown in either lot; we therefore cannot give germination percent-

ages. Four additional seedlings resulted from alternative treatments.

Hardiness

Once we had obtained seedlings, we turned our attention to the question of cold hardiness. Would the seedlings of *Heptacodium jasminoides* at the Arnold Arboretum survive outdoors during the winter? We found that they grew rapidly and were large enough to be transplanted outdoors in regular rows within one or two seasons. They have survived three, perhaps four, winters out of doors. During their first winter out of doors, the plants resided in the shadehouse with winter shelter of white pine boughs. The original seedlings were then moved to a location in the nursery immediately adjacent to the weather station, where daily temperature records are kept. According to Robert G. Nicholson of the plant-propagation staff, they were exposed to a minimum winter temperature of minus 10 degrees Fahrenheit during January 1984. No special winter protection was given them. They are growing in an open location in an exposure of full sun, in acid soil with excellent air and soil drainage. We have not observed any winter injury nor any type of dieback due to climatic or soil conditions at our site. The Arnold Arboretum has already distributed plants to sites with much lower minimum winter temperatures so as to establish quickly the cold tolerance of this species.

Growth

Growth has been rapid and vigorous. After five growing seasons, our oldest plants stand from just under two to three meters (six to ten feet) tall. Plants growing at the same location in the nursery for at least three years have produced seasonal growth that averaged ninety centimeters (thirty-six inches). At the base of the new (1985) growth, the thickest stems had a girth of one and one-quarter to

one and nine-tenths centimeters (one-half to three-quarters inch). The plants have produced multiple stems originating from ground level, and the growth thus far is erect and upright, with little side-growth development. Small branches are square or four-angled. The thickest stem on any of the plants is four and one-half centimeters (one and three-quarters inches) in diameter at approximately two and one-half centimeters (one inch) above the soil level. The stems produce thin bark that peels off in small, paperlike strips or sheets. During the winter, these plants stand out from their neighbors because of their light tan to brown bark. It is eye-catching and a relief from the darker browns and brown-black bark patterns typical of most plants in winter. Both the winter color and the shredding bark are reminiscent of *Kolkwitzia*, while the stem color is similar to that of *Diervilla*.

While growth has been rapid, no mature plants of *Heptacodium jasminoides* yet exist in North America. Therefore, it remains to be seen what the ultimate height, spread, and form might be. According to the Chinese literature, the plant grows as a small tree, reaching seven meters (twenty-three feet) in height. They state that it grows best in the shade of trees. During April 1985, I had the



A close-up view of the inflorescence

opportunity to visit the Hangzhou Botanical Garden and to observe firsthand a cutting rooted from the original specimen collected at the type locality. The plant grew as part of a mixed-woodland situation where, because of overcrowding, it stretched for light. As a result, it was thin and gaunt, stood approximately six meters (twenty feet) tall, and did look like a small tree. I questioned my Chinese guide about the plant and was told that it was rare in China and at one point was thought to exist no longer. In my travels, which admittedly were limited, I saw no other specimen of *Heptacodium*.

As a young plant, *Heptacodium* seems to develop multiple branches from near soil level. With some training, it should grow quite well as a single-stemmed standard. Indeed, it might make the perfect-sized small tree for cramped urban and modern landscape spaces.

Foliage

The foliage of *Heptacodium jasminoides* is one of the plant's finest assets. The leaves, which measure eight to ten centimeters (three to four inches) long and about five to five and two-thirds centimeters (two to two and one-quarter inches) wide, are opposite. Their bases are rounded or heart-shaped and their tips pointed. Their margins are entire but somewhat wavy. Visually, the leaves are remarkable because of their deeply impressed, trinerved veins, which run parallel to the margins. They bear a superficial resemblance to the leaves of species in the tropical family, Melastomataceae.

As with most plants, leaves on young, lush major stems are most vigorous, while those on older and secondary branches are much smaller. During the spring season of 1986, I kept a close watch for the appearance of the new-season foliage and found it to be among the earliest to appear, commencing its growth during approximately the third week in

April. The leaves emerge a light to medium green and become a handsome dark green as they mature. During autumn, after the leaves of most neighboring plants have fallen away, the leaves of *Heptacodium* still cling fast, remaining until middle to late November.

On nursery plants exposed to full sun, the leaves fell away without any change in color, however, except perhaps for the slightest tinge of yellow. However, rooted cuttings that grew nearby in quart-sized plastic containers and provided with light shade did turn a splendid shade of muted purple. What caused this color? Was it moisture stress,



Illustration of an inflorescence, a single flower, and a fruit of *Heptacodium jasminoides* as rendered in Volume 4 of *Iconographia Cormophytorum Sinicorum* (see the "Bibliography and Iconography").

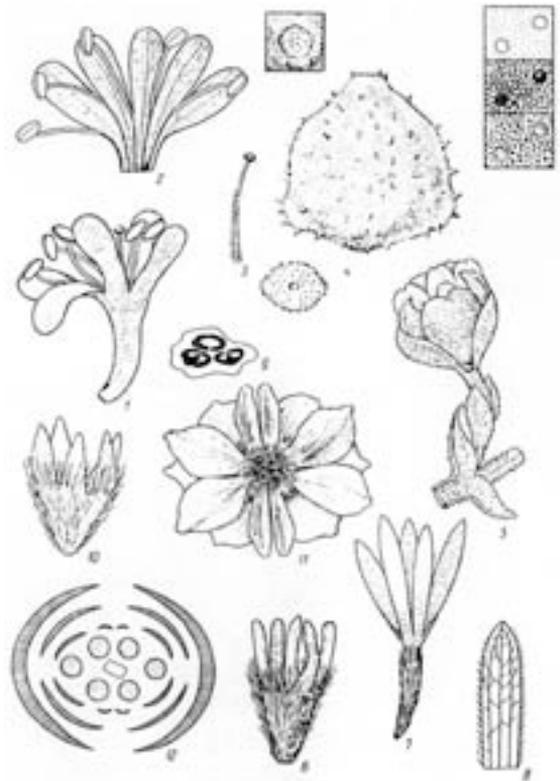
shade, cramped root space, or slightly greater warmth provided by nearby brick walls? It is evident that the plant possesses the potential for autumn color, and I am sure that, under the right environmental conditions the color might be a significant ornamental asset. Will the long retention of leaves ultimately be a hazard to the plant? The leaves might trap and hold early-season ice and snows, allowing a buildup of weight, causing structural damage to the plant's trunk and stems.

Flowers and Fruits

The most distinctive ornamental assets of *Heptacodium jasminoides* derive from its flowers and fruits. The flower buds form in June and increase in size ever so slowly, bursting forth in mid-August. Single flowers are quite small but are borne in a tiered, six-flowered whorl that is terminated by a flower, hence the name *Heptacodium*, in allusion to the seven-flowered thyrse-like inflorescences. The flowers are pale, creamy white and in structure resemble those of *Lonicera*. They open slowly, in sequence from the bottoms to the tops of the inflorescences. In Massachusetts, the flowering period is quite long, lasting from mid-August until early October, when it is put to rest by the onset of chilling temperatures and frost. It appears that the flowering period is triggered by photoperiod; Dr. James C. Raulston of North Carolina State University suggests that *Heptacodium* might be used as a flowering houseplant that could be retained and planted outdoors. When grown for the flowering pot-plant market, it could be kept small with growth-controlling chemicals.

Flowers are abundant on the plant, and they are borne on an annual basis. If the flowers were presented in May, they would hardly be worthy of a second look because they simply cannot compete with lilacs, azaleas, or spiraeas. Coming late in the season as they do, however, they become significant

late-season flowering specimens. In the vicinity of Boston, Massachusetts, flowering is heaviest from mid-August to late September. Occasional flowers appear until mid-October. How much longer would flowering last where the autumn is longer and milder?



Anatomical details of the flowers and floral parts of both *Heptacodium jasminoides* Airy Shaw (1–8) and *Heptacodium miconioides* Rehder (9–12) as shown in Novosti Sistematiki Vysshikh Rastenii, Volume 2 (1985) (see the “Bibliography and Iconography”).

Heptacodium jasminoides 1, corolla, 2, a corolla laid open, 3, style and stigma, 4, a pollen grain, 5, bracts and bractlets, 6, calyx, 7, fruit, 8, calyx lobe in the fruit

Heptacodium miconioides 9, diagram of the ovary in cross section, 10, calyx, 11, bracts and bractlets as seen from above; 12, floral diagram

Perhaps it would last twice as long in California or Georgia.

The premier ornamental feature of *Heptacodium jasminoides* is its fruits, which are borne in clusters. What makes the fruits so valuable from an ornamental point of view is the fact that the calyces do not fall off when flowering is over, but persist and (more importantly) continue to grow. Individual fruits develop slowly from the flowers; light green at first, they ripen to the most glamorous rose to purple. A large cluster of fruits, each fruit with its "accrescent persistent calyx," is more spectacular than the blossoms at the peak of flowering, especially when the cluster is held high and glows with backlighting from the sun. The rich purple color remains attractive for several weeks as the fruits continue to ripen. At full maturity, the fruits turn tan and slowly fall away.

***Heptacodium jasminoides* in North Carolina**

In a letter of February 1, 1986, Dr. Raulston answered questions I had posed about his continued interest in *Heptacodium*. He has become enthusiastic about this plant, he replied, and has decided that it would be worth trying to increase its numbers and to get it into the nursery trade somehow. He described his experiences with *Heptacodium* in some detail.

During the autumn of 1985, at the University of British Columbia Botanical Garden in Vancouver, he had seen for the first time a plant, about six feet (just under two meters) tall, in full flower. The attractive flowers were very fragrant. This past winter, an all-time low temperature of minus nine degrees Fahrenheit occurred at the North Carolina State University Arboretum. No injury was noted among the plants, so it was generally felt that the plants would be hardy indefinitely in this location. Plants at that locale also bloomed in late September to early

October. The reddish calyces, which remained colorful long after the flowers were gone, were also impressive there. "One of the plusses for commercial production," he writes, "is the easy propagation." He continues:

I find that softwood and semi-hardwood cuttings can be rooted easily and quickly under mist at any time of year that the plant has the appropriate wood available. Single node cuttings allow rapid build-up of material. I would gather that it is quite photoperiodic—in the greenhouse under long day conditions I can keep it growing through the winter to allow continual cutting production. The flowers are likely produced under short day conditions—which makes me think that it could possibly have potential for a pot plant crop—multiple cuttings per pot, pinched, growth retardant-treated, flowered at any time of year—then could be planted out to the landscape for further growth.

Dr. Raulston has about thirty cuttings rooted in his bench now. They are in active growth, receiving exposure to light from 10:00 p.m. until 2:00 a.m. He informs me that he was trying to build up a supply of plants to give away in August, at the annual distribution to nurseries in North Carolina.

In another letter, Dr. Raulston discloses that Mrs. Chin Chin Lee, a graduate student, intends to work on *Heptacodium* for her doctoral dissertation research project. This is an exciting development because it probably will be the first research conducted in the West on fresh material of the genus *Heptacodium*.

***Heptacodium jasminoides* in Canada**

Upon learning that the University of British Columbia Botanical Garden in Vancouver is raising *Heptacodium*, I contacted that garden's staff for details. Charles Tubesing, plant propagator, informed me that the Garden had received three *Heptacodium* seedlings (Accession Number 23220-083-83) on Feb-

ruary 9, 1983. The seedlings trace back to the National Arboretum's Accession Number 49226, the original seed introduction to North America. Peter Wharton, curator of the Garden's Asiatic plants, said that the three seedlings were planted out into the permanent collections two years ago; because their exact cultural requirements were unknown, they were placed in different areas. Each plant gets an exposure of full sun and grows in a sandy, stony soil derived from glacial till. One plant is in direct root competition with a nearby Douglas fir (*Pseudotsuga menziesii*). The soil's pH is in the region of 5.0 to 6.0. Their response indicates that *Heptacodium* can endure considerable drought. All three plants survived; in fact, they have grown to a height of four to five feet (one and one-fifth to one and one-half meters) and first flowered in 1985. Wharton said they were flowering by early July. He noted, however, that there had been an abnormally hot spring and that he would expect flowering to begin a bit later with usual spring temperatures. Unfortunately, he did not have the opportunity to note when flowering had ceased. Wharton commented that the plants flowered profusely and produced a delightful scent. The bold foliage he thought would make the ideal background subject for a shrub border.

Propagation of *Heptacodium jasminoides* at the Arnold Arboretum: Germination Experiments

In early December 1985, we harvested seeds from the Arnold Arboretum's own plants of

Heptacodium jasminoides. We are now attempting to learn more about the seed biology of the species. We had feared that the growing season in Boston would be too short for the seeds to mature, but Peter Del Tredici reports that as of mid-June 1986 seedlings had developed from the seeds we collected here. To achieve germination, we used the following procedure: Seeds collected from Accessions 1549-80 and 403-81 on December 17, 1985, were cleaned, divided into lots of two hundred, assigned Accession Number 1284-85, and sown in a warm greenhouse. One lot was sown in the greenhouse without any prior exposure to cold, one lot was exposed to one month of cold before being sown, and a third lot was exposed to cold for three months before being sown in the greenhouse. As of June 12, 1986, the results were those shown below in the tabulation.

As the tabulation shows, one month of cold stratification sped up germination but reduced the amount of germination from 14 percent to 7 percent. The tabulation also shows that three months of chilling resulted in no germination at all, which suggests that cold stratification actually inhibits the germination of *Heptacodium*, a conclusion supported by the fact that seeds stored for five months in warm stratification germinated at a rate of 7 percent, while seeds given the same treatment, followed by a month of cold stratification, failed to germinate at all. This conclusion should be considered strictly provisional, however, because the germination of seeds imported directly from Hangzhou was not inhibited by a warm treatment followed by cold stratification. Since germina-

Treatment	Number of Seeds That Germinated	Time To Germinate, months
Sown in warm greenhouse	28	5
Exposed to one month of cold before being sown	14	4
Exposed to three months of cold before being sown	0	—

tion tests are still in progress, these results might have to be interpreted differently at a later date.

During the first week of April 1986, seven of the original seedlings were transplanted from the nursery at the Dana Greenhouse to a prominent and permanent location at Jamaica Plain, near the Centre Street gate. They had stood eight to twelve feet (about two and one-half to three and two-thirds meters) tall. Before they were transplanted, they were severely pruned and reduced to a height of four feet (about one and one-quarter meters) so as to ensure their survival after transplanting. Four plants were placed adjacent to the gate in a sunny location, and three were placed across the gravel driveway in semishade, but within fifty feet (fifteen meters) of the first group. This seedling population should provide cross pollination, if in fact cross pollination is necessary, and will, we hope, result in abundant seed crops and a permanent seed colony for New England.

As of June 2, 1986, all seven of the transplants had survived and had already produced lush new-season growth; some shoots had already reached lengths of twenty inches (fifty centimeters). At the same time, we lifted the compact plant and moved it to a new location in the Dana Greenhouse nursery, where it will be subjected to less competition from neighboring plants. Continuing careful observation will reveal whether this individual really is compact.

Propagation by Softwood Cuttings

The Arnold Arboretum has already produced several hundred plants from softwood cuttings. The cuttings were taken from both seedling lots during the summer of 1985. On July 8, one hundred twenty cuttings were taken from all eleven parent plants. The cuttings, which were four to six inches (ten to fifteen centimeters) long, were given a five-second dip in a solution of ten thousand parts



A large cluster of Heptacodium fruits, each with its "accrescent persistent calyx" These clusters of rich purple fruits are the chief ornamental feature of Heptacodium jasminoides. The color lasts for several weeks as the fruits continue to ripen



A close-up view of a fruit cluster. The calyxes are especially obvious in this photograph.

per million indolebutyric acid (IBA) in a mixture of fifty percent ethyl alcohol and fifty percent deionized water. The cuttings were then stuck in a mix of equal parts of sand and perlite and placed under intermittent mist (a two and one-half-second blast every two and one-half minutes). By October 1, ninety-seven of the one hundred twenty cuttings (eighty-one percent) had developed excellent root systems.

One hundred more cuttings were taken on July 26 and given the same treatment as above. Of them, seventy-nine (seventy-nine percent) had developed roots by October 1. These rooted cuttings have been distributed to institutions and specialty collectors in Alabama, California, Delaware, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Ohio, New York, North Carolina, South Carolina, Pennsylvania, Virginia, and Wisconsin. Robert G. Nicholson tells me that seeds have been supplied to nurseries in Canada, the Netherlands, and England, as well as to the Royal Botanic Garden, Edinburgh, and the Royal Botanic Gardens, Kew. During 1985, five seedlings that had originated at the United States National Arboretum were growing at the Darthuizer nursery in Leersum, Holland.

Allen C. Haskell of New Bedford, Massachusetts, recently reported that as of April 1, 1986, he began taking cuttings from his specimen weekly in an attempt to determine the best time to make new-season softwood cuttings from an outdoor plant. In a period of two and one-half months, he succeeded in producing over two hundred rooted cuttings. Haskell found that the timing made little difference in terms of the quantity and quality of rooted cuttings. Cuttings were taken from exceptionally soft wood, treated with Hormex #16, placed in a sweat-box, and left undisturbed until they had rooted. During this short time period, the rootings have been so successful that in some instances the roots penetrated the peat pots in which the



The thin bark of Heptacodium, peeling off in paperlike strips or sheets.

cuttings were planted. Haskell commented especially about the lush quality of the early new-season growth, which he considered surprisingly vigorous despite the poor root system of this specimen, which he had acquired in late September 1985.

***Heptacodium jasminoides*: Secure in Its Newfound Home**

A rare Chinese plant has been brought to North America; within the short span of six years it has received preliminary testing, has been stock increased, has been distributed widely across North America (and to Europe), and has become the subject of a research project. I suspect that in a few more years *Heptacodium jasminoides* will be more abundant in North America than it is in its homeland, if it isn't so already. Once again the gardens and botanical research institutions of North America have proven themselves to be good custodians of species that are rare or threatened in their native lands.

To date, *Heptacodium jasminoides* remains untested in residential and commercial landscapes. If it is considered a flowering shrub, I fear that many people will view it as too

large for small contemporary landscape species. Trained to a single stem or to a few main trunks, it will form a small, late-summer-flowering tree growing to approximately twenty feet (six meters). Its smallness, lateness of flowering, and fragrant blossoms guarantee it a niche at a time when few other small trees bloom. It makes the perfect candidate for planting at summer resorts, where it can contribute to the festiveness of a summertime retreat or sanctuary. The open base, which might be considered leggy, can be utilized as a space in which to mass shorter shade-tolerant shrubs, herbaceous perennials, and spring bulbs. Its tolerance of droughty soil might enable it to adapt to urban soils too poor for the growth of other species. Should *Heptacodium* turn out to be as tolerant of salinity as *Lonicera*, *Diervilla*, and *Leycesteria*, it will be the perfect subject for seacoast locations and along high-speed roadways where cars whip up mist laden with deicing salts in winter. The fact that *Heptacodium* propagates easily, grows rapidly, transplants with ease, and reestablishes vigorous growth within one growing season makes it a landscaping plant that will be valued highly by the nursery industry.

Distribution of *Heptacodium jasminoides* by the Arnold Arboretum

This fall, the Arnold Arboretum will distribute rooted cuttings and seedlings of *Heptacodium jasminoides*. To speed its entry into private gardens, we will be pleased to supply Friends of the Arnold Arboretum and other readers of *Arnoldia* who live in the conterminous ("Lower Forty-eight") states of the United States with two plants for a cost of thirty dollars, prepaid, packaging and shipping included. Readers who wish to obtain plants of *Heptacodium* should direct their orders, along with full payment, to:

Heptacodium Distribution
The Arnold Arboretum
Jamaica Plain, MA 02130-2795.

Acknowledgments

In addition to the individuals mentioned in this article, I acknowledge with thanks the assistance of Peter Del Tredici (for allowing me to cite the results of his germination experiments), David E. Boufford, Robert McCartney, Zhang Zhi-ming, John H. Alexander III, and the staff of the Hangzhou Botanical Garden, who made possible the introduction of *Heptacodium jasminoides*.

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A Word about the Cover Artist and Her Work

Arnoldia is delighted to have for the cover of this issue a fine new painting of *Heptacodium jasminoides* by the young botanist and botanical illustrator Amy Eisenberg, who has spent the past several years illustrating and familiarizing herself firsthand with plants in their natural habitats. A wilderness ranger and naturalist at Sequoia National Park for several years before coming to the Arnold Arboretum in 1985, she currently is working at Mount Yu National Park in central Taiwan as advisor to the Republic of China's Ministry of the Interior. Ms. Eisenberg holds degrees in botany from Utah State and Humboldt State universities, and has done additional graduate study at Harvard University. Her illustrations of plants have appeared in such periodicals as the *American Journal of Botany*, *BioScience*, the *Journal of the Arnold Arboretum*, *Madroño*, and *Mycologia*. Three of her drawings were published in the Summer 1986 issue of *Arnoldia*.

Heptacodium Notecard Available

Through the artist's generosity, the Arnold Arboretum is pleased to offer for sale a notecard featuring a full-color reproduction of Amy Eisenberg's painting of *Heptacodium jasminoides* (see the cover of this issue of *Arnoldia*). Measuring 5 by 7 inches, the cards (plus envelopes) are available for purchase at the Arnold Arboretum Shop in the Hunnewell Visitor Center for \$1.00 each, or \$8.50 per dozen. They are also available, prepaid, by mail. To order cards by mail, send a check for the full amount (which includes postage and handling), made out to "The Arnold Arboretum," to:

Arnold Arboretum Shop
Hunnewell Visitor Center
The Arnold Arboretum
Jamaica Plain, MA 02130-2795