Concerning This Issue

What better way to wind up the summer than with blackberries? Jan Pirzio-Biroli, with the help of Lee Weber's beautiful drawings, explores the berries we hunt for and those with which we do battle. Ward Horn has written an informative article about a gentler type of vine, the clematis. Jean Witt has completed the series of articles on Korea, begun by her husband the late Joseph Witt. Mr. J.G.S. Harris tells us about the day on Ullung-do that the Witts missed. Closer to home, Wenonah and Grant Sharpe have written an article about the Friendship Grove on Campus Parkway.

The next issue of the Bulletin will help celebrate the Arboretum's 50th anniversary and the building of the new Visitor Center. Next time you are at the Arboretum please stop by to watch progress on the new building. This is an exciting time to be an Arboretum Foundation member. Anyone who wishes to give to the Visitor Center building fund is encouraged to contact the Arboretum Foundation office.

Nancy Pascoe
University of Washington

Arboretum

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COVER
Clockwise from top:
Rubus laciniatus, Rubus ursinus and Rubus discolor.
Drawings by Lee Weber.

Summer 1985 (48:2)
Of Lattices and Clematises*

WARD HORN

Ward Horn, who saw his first clematis in Salem, Oregon in 1921, is on the board of directors of the Arboretum Foundation. Since his retirement he has been an active Arboretum volunteer as a guide, in seed exchange and in plant records.

Because it grows upon a lattice  
The hoi polloi say clematis,  
But Webster still will give a hiss  
Until they call it clematis.

Don't take that bit of doggerel seriously — Webster is now permissive. Moreover Clematis doesn't always grow upon a lattice; it is useful as a ground cover, for draping over fences, clambering through shrubs or trees and hiding unsightly objects. No matter how it may be pronounced or grown, many Clematis species and hybrids make fine garden subjects. Many of them bloom in summer and early fall, a time when color may be especially welcome. (As I write this, late in September, in my garden 'The President' is putting out its third set of blooms.)

Clematis belongs to the Ranunculaceae, or buttercup family, along with delphiniums and anemones. There are between 250 and 300 species, depending upon which botanist does the classifying. Most of them are vines from temperate regions of the Northern Hemisphere. None is native to western Washington, although C. vitalba, the traveler's joy or old man's beard of Europe, has escaped and is widely distributed throughout Seattle and perhaps elsewhere in the state. The very similar C. ligusticifolia is native east of the Cascade Mountains as are the

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*Clematises is the proper plural form, however it is awkward and so I have used Clematis as both singular and plural. The Clematis authority, Ernest Markham, has set the precedent.
smaller trailing lavender-colored *C. columbiana* and the herbaceous purple *C. hirsutissima*. The latter two are not generally recommended for planting on the wet side of the Cascade Mountains. However, *C. alpestris*, which is closely related to *C. columbiana* is cultivated and available in several forms from nurseries in England.

**Species Cultivated in the Seattle Area**

A few *Clematis* species and their cultivars are available from nurseries in our area. The evergreen, fragrant and slightly tender *C. armandii* is a favorite in Seattle gardens. The white or light pink flowers appear early in the spring. Another well-known spring-flowering species is the deciduous *C. montana* and its cultivars which are available in various shades of white and pink. An especially fine form of this is *C. m. rubens*, which has bronze-colored foliage. Both of these species grow vigorously, and *C. armandii* may require a great deal of pruning to keep it neat and within its assigned space.

Two lesser-known species which are also available in our area are the late-blooming, deciduous *Clematis texensis* with red flowers and the yellow-flowered *C. tangutica*. Both of these species have rather small blooms with attractive foliage and grow to a height of 10-12 feet. *C. texensis* is said to do poorly in the Pacific Northwest and two separate plantings in the Arboretum have failed. However, I have seen it growing in Salem, Oregon and one of its hybrids, the pink 'Duchess of Albany,' does well in Seattle. Other fine species are available through specialty nurseries and mail order catalogues.

**Large-Flowered Cultivars**

Although the above species and others that are less readily available are fine garden plants, the interest of most gardeners is centered on
Clematis 'Barbara Dibley' flowering on the north wall of the Arboretum lathhouse.  

Left: seedheads of Clematis 'Barbara Dibley'.

photo: courtesy of the Washington Park Arboretum.

the large-flowered cultivars. These are mostly hybrids of *Clematis lanuginosa*, *C. viticella* and *C. patens*.

The first known *Clematis* hybrid was produced in 1835. Extensive breeding was carried out in Europe and, to a lesser extent, in the United States during the last half of the nineteenth century. Some hybrids were also introduced from Japan. These showy flowers were very popular during the late Victorian and Edwardian eras. For example a New York nursery catalogue issued in the late nineteenth century listed 73 varieties, more than available in the United States today. Even the names such as 'Lord Nevill', 'Mrs. Cholomondeley' (pronounced "Chumley"), 'Madame Baron Veillard' and 'W.E. Gladstone' belong to a by-gone time.

Cultivation of Hybrid Clematis

The large-flowered hybrids grow especially well in the Pacific Northwest. Cultural directions can be found in many general garden reference
books. The requirements are specific: the soil should be deep, well-drained, not strongly acid and rich in organic matter. The planting bed should either not be exposed to direct sunlight or kept cool in some way. My own experience and the records of the Arboretum confirm these requirements. My few plants are growing in beds that were dug to a depth of 2½ feet, enriched with compost and dressed with dolomite limestone. On the other hand, I have had failures when I planted them in our unimproved, shallow and acid glacial soils. The history of Clematis in the Arboretum bears out my experience. Many of us remember the fine
Clematis montana.

Clematis collection on the north lathhouse which was planted in 1958 and grew well until the lathhouse was removed in 1983. The soil there had been improved but records show that the same varieties did not survive when they were planted in unimproved soils in other parts of the Arboretum. Of course, other factors may have been involved.

This discussion of soil requirements relates only to the large-flowered hybrids. Obviously the naturalized Clematis vitalba is not fussy in this respect, and I doubt if many of the C. armandii plants which grow so vigorously in our area have received any special treatment. In fact, there is very little information on the culture of species.

Pruning of Clematis

Weather, diseases, insects and pruning shears can cause great damage in the garden. Clematis does not require pruning in order to bloom well, and when planted so as to clamber through shrubbery or in trees can be left to wander at will. However, in most gardens some pruning will be necessary to keep it within its allotted space and to remove old, unproductive wood. The pruning directions that are found in various reference works may, at times, seem to be contradictory, but they say the same things essentially.

Clematis, for purposes of pruning, may be divided like Gaul into three parts. First, those such as C. armandii and C. montana which bloom early from previous year's wood. These should be pruned like spring-flowering shrubs, immediately after blooming. Second, are species and hybrids that bloom later in the season on new wood. These can be cut back during the dormant season. The C. jackmanii is typical of this group. These are the ones to be planted in areas where cold weather damages or kills the vines, (Clematis are generally root hardy). The third group includes species and hybrids which produce a first set of blooms from old wood, and under favorable conditions, bloom again later in the season from new wood. The blooming habit may differ with the variety. For this group directions may vary according to the authority one consults. One manual calls for removing dead and weak stems and shortening the previous year's growth back to a strong pair of leaf axil buds during February and early March.
Another source recommends a light "corrective" fall or early spring pruning followed by pruning out the flowered portions immediately after the first bloom.

I suggest that the novice study the directions carefully and apply the pruning shears cautiously until he or she becomes acquainted with the plant's growth and blooming habits. Gardeners who do not know which type of pruning applies should watch their plants for a year or two and note when flowers are produced, whether from old or new wood, or both, and prune accordingly.

The following list is compiled from gardening books and commercial catalogues. Included are the large-flowered cultivars most likely to be found in Pacific Northwest nurseries and garden supply centers. The pruning recommendations are indicated by a (2) or a (3) corresponding to pruning styles discussed in the text.

Barbara Dibley (3)
Barbara Jackman (3)
Belle of Woking (3)
Comptesse de Bouchaud (2)
Daniel Deronda (3)
Duchess of Edinburgh (3)

Ernest Markham (2)
Gipsy Queen (2)
Hagley Hybrid (Pink Chiffon) (2)
Henryi (3)
Jackmanii (2)
Languinosa Candida (3)
Lord Nevill (3)
Madame Baron Veillard (2)
Madame Edouard Andre (2)
Mrs. Cholmondeley (3)
Nelly Moser (3)
Pink Chiffon (see Hagley Hybrid)
Prins Hendrik (3)
Ramona (3)
Rouge Cardinal (2)
Susan P. Emory (3)
The President (3)
Ville de Lyon (2)

The standard reference work is The Large and Small Flowered Clematis and Their Cultivation in the Open Air by Ernest Markham (3rd revised edition, 1951). A quick and handy reference is Sunset's, always useful, The Western Garden Book. A more extensive coverage is found in Wyman's Gardening Encyclopedia.

Clematis montana hiding a chain link fence in the photographer’s garden.  
photo: Joy Spurr
A Day on Ullung-do

J.G.S. HARRIS

Mr. Harris is a member of the International Dendrology Society. He is particularly interested in maples, of which he has a large collection at his home in England.

We came across the Eastern Sea from mainland Korea and we waited; at last in the distance we saw the island like a jewel in the sea — Ullung-do, a small volcanic island about 15 miles across. So many parts of the world are beset by tourism and development which damages the native flora so to find an island which is little populated and unassailed by tourists, with much of its unique flora unharmed, is a special delight to the botanist and dendrologist.

We arrived at the village of Todong, on the south side of Ullung-do, on the 30th of September. We were accompanied by Dr. Lee of the Seoul National University, who is a noted botanist and authority on Korean flora. The following day, October 1st, was Korean National Day and a holiday for everyone. Dr. Lee however had very kindly arranged for some of us to be taken on the mail boat to the tiny port Chonbu dong on the north side of the island. From there we could walk across the island, climbing the shoulder of the largest volcano, Songinbong, and then back to Todong.

It was a warm sunny day with a clear blue sky. The coastline was spectacular with bold scenery and mountains tumbling down directly into the glassy sea. At Chonbu dong local people were strolling around in their national costume; we were particularly delighted by two children beautifully dressed in brightly colored silks. Dr. Lee led us out of the small village past two churches and up a path which soon climbed steeply. After a short while, he stopped by a grove of trees which we instantly recognized as Acer okamutoanum. Mr. Brian O. Mulligan had mentioned this maple in "Maples Cultivated in the United States and Canada", (American Association of Botanic Gardens and Arboreums, 1958) as one which should be introduced. It is a plant completely unknown in the western world which is related to Acer mono, its leaves are however more like those of the Norway maple, Acer platanoides. Along the path we also found plants of Actinidia polygama tumbling over the path with pink-flowered Sedum takesimense and Artemisia feddei. After a while we reached a wooded plateau which was several acres in
extent and represented the only flat land on the island. At its entrance, we found a specimen of Sorbus commixta, full of bright red fruit. Nearby Ampelopsis brevipedunculata var. heterophylla was scrambling wildly over some herbaceous and old woody plants, its bright blue fruits glistening in the sun. We lunched on this small plateau. Afterwards we noticed some Scrophularia takesimensis displaying its maroon-colored flowers and then we saw a most delightful harebell, Campanula takesimana, the flowers with pale blue petals and a pinkish throat. As we left the plateau the path wound upwards through the wood and suddenly we saw red dots adorning the forest floor. These were recognized as the berries of Maianthemum dilatatum a most delightful woodland plant with white flowers in spring. Indeed, at that time these woods on Ullung-do must be a paradise, but now, in autumn, little was in flower. However there was much to observe, including Chrysanthemum zawadskii with white flowers like a moon daisy, Polystichum falcatum, a delightful fern with delicate foliage, and the local violet, Viola verecunda, one plant of which was found to have a small seed pod. These were but a few of the herbaceous plants growing there. Suddenly we spotted the cork tree, Phellodendron insularis, which is endemic to the island, and a little further on the local linden, Tilia insulare.

Now the character of the wood changed as we passed into a mixed deciduous forest, the dominant trees the hornbeam (Carpinus laxiflora), and the local beech (Fagus crenata var. multiflora). A small tree aflame with red autumnal color in the forest arrested us, it was the rare local maple Acer takesimense which is closely related to Acer pseudo-sieboldianum. Soon the path turned steeply upwards and the forest

*Ullung-do, plateau at the center of the island.*

photo: J.G.S. Harris
became more dense. On the forest floor, Daphne asiatica and a number of herbaceous plants were observed. These included a beautiful Hepatica maxima, which has large glossy green leaves and bright yellow flowers in spring, and also a leaf which undoubtedly belonged to a species of Trillium. After a very hard climb, which left many of the party exhausted, the path at last reached the top of a ridge on the shoulder of Songinbong and there in the afternoon sunlight were the fat seed pods of Lilium hansonii displayed on tall stems — a just reward for all our toil.

At this point the path came to an end and there was no sign where it continued. Dr. Lee led us along the ridge through a dense thicket of Sasa kurilensis and then we wandered back and forth along the ridge until a path was found which led us down a steep slope on the far side of the shoulder. It was getting dark and we were still a long way from Todong whose lights we could see twinkling in the distance in the early evening. For the last hour or so we picked our way down from the mountain back to our hotel, where we arrived about half past eight in the evening, tired but triumphant after a wonderful day which really satisfied the plant hunters’ dream. Carl Ferris Miller, the Witts and the rest of the party awaited and they were mightily relieved to see us.

(The editor would like to thank Dr. Lee for the use of the line drawings from his book, Illustrated Flora of Korea, published 1982.)
A Horticultural Tour of Korea
or Life After M*A*S*H
Part III, Odae-san to Chollipo

JOSEPH A. AND JEAN G. WITT

The day after our visit to Ullung-do was spent driving up the coast from Pohang to Dragon Valley, with a stop at Mt. Odae National Park. The eastern coastline, in marked contrast to the volcanic cliffs of Ullung-do, afforded long vistas of white sandy beach with many small, knobby offshore islands. On the shore grew many Japanese black pines, *Pinus Thunbergii*, while the hills were covered with *P. densiflora*.

At Kangnung we turned west and climbed to about 800 meters over a coastal range and soon were up high enough to catch our first glimpse of autumn color. We followed a dirt road to Mt. Odae National Park up a stream valley to Woljung-sa (temple), and found that the color was nearly at its height. Mt. Odae (Odae-san), the principal peak of this mountainous area, rises to more than 1,500 meters and is forested with a wide variety of shrubs and trees. *Abies nephrolepis* was the most prominent conifer, with some trees as large as 3 feet in diameter, and 60 to 70 feet tall. The brightest colors were provided by *Acer pseudosieboldianum* (a small tree reminiscent of our vine maple), vivid red *Euonymus sieboldianus*, *Rhododendron mucro-nulatum*, *Rhododendron schlippenbachii*, and lemon yellow *Lindera obtusiloba*. Entire hillsides were laced together with vines such as *Aris-tolochia mandschuriensis*, *Ampelopsis* species, and *Vitis coignetiae* which does beautifully in Seattle and shows the same superior red color. The white stems of birches, *Betula costata* contrasted with the subdued browns and russets of oaks and *Zelkova serrata*.

Leaving the bus in the valley bottom, our group hiked up the now rather steep road for a mile or so to take a closer look at the vegetation. The waning afternoon was spent photographing the brilliant hillsides, collecting a few seeds, enjoying the scenery, and wishing that time had allowed us to follow the road to the top. We were rather surprised, and somewhat envious, to be overtaken by the collecting party from Kew, bound for higher elevations in a Landrover. A few charred stumps on the slope furnished a partial answer to our question as to whether Korean forests ever burned; given the wet Korean summers, fire is probably not as common as it is in the Pacific Northwest.

We returned to the bus at about 6 p.m. and
lunch we took the cable car up to the steep pinnacles of a nearby mountain top, some 800 meters above the valley floor. The foliage had been touched by frost and was not as colorful as it had been at Odae-san. In this high rocky setting we found several oaks, maples, and the Korean lilac, Syringa velutina in fruit, as well as Rhododendron mucronulatum, and Pinus koraiensis. In spite of the cloudy day the view from this high vantage point was spectacular — sharp rocky peaks rising sheerly from the deep narrow valley, pines, a colorfully mixed hardwood forest, and beyond them the East Sea (Japanese Sea). We agreed heartily with the Koreans’ choice of Sorak as a favorite vacation spot!

During this part of our tour we were joined by our guide’s attractive young wife and their small pre-school-age son, who was not in the least awed by our busload of Caucasian strangers.

Sinhung-sa, the temple not far from our hotel, was being refurbished with fresh paint and a new entrance gate, but this did not deter the constant stream of visitors who wandered through the temple garden. Long rows of buses were parked outside. Fifty thousand people per day are said to visit Sorak during the peak tourist season.

Fair weather returned the following day and our route took us back to Yangyang, then west along the southern side of Sorak-san, over a well-engineered, though steep and winding highway. The fall color was some of the best we had yet seen. A short stop at the summit (around 850 meters in elevation) gave us a chance to investigate the flora while walking up an adjacent ravine which was filled with deciduous trees and shrubs. These included Euonymus sachalinensis, Magnolia sieboldii (multistemmed and 20 feet tall) maples and birches. Dr. Lee, who was familiar with the site, suggested there might be white-flowered forms of Rhododendron schlippenbachii growing here, so we collected seed. Later in the morning, a second stop afforded us a better view of the crags and spires of the south side of the Sorak mountains — the deciduous forests in the foreground were bright gold.

On our way west toward Seoul we made a short trip to visit the giant ginkgo at Yongmoon-sa, a truly ancient tree said to be the largest living specimen of Ginkgo biloba in Korea,

continued to Dragon Valley ski resort, arriving after dark. The next morning was clear, with a definite nip of frost in the air. Snowless ski resorts in Korea are no more attractive than they are at home: however, large trees, elaborately braced till the roots could take hold, had been moved in as the first stage of landscaping to make the place look less raw. We poked around the edges of the cleared area, where the fringe of shrubs and late-blooming asters and gentians suggested the fence rows of the Palouse country in eastern Washington.

Returning to the coastal highway, we continued north along the shore of the Japanese sea toward Yangyang. At a rest stop along the way we were inundated by a sea of black-uniformed middle school children, bussed in to view a monument. In the forenoon we crossed the 38th parallel, former line of demarkation between the Republic of Korea and the People’s Republic of Korea.

A few miles beyond the city of Yangyang we turned west toward the resort area of Sorak Mountain National Park. This is a favorite holiday spot for the Koreans, since it has fabulous scenery and superb fall color. After

Largest ginkgo, 1100 years old, at Yongmoon-sa.

photo: J.A. Witt
and perhaps in the entire orient. The tree is female, over 1100 years old and still fruiting. It is 61 meters tall, and 4.27 meters in circumference. It was so large and tall that we had to photograph it in two sections — the trunk, close by, and the top from as much distance as we could manage in the crowded temple grounds. Our one regret was that it had not yet assumed the spectacular golden fall color for which ginkgos are famous. On the way back to the bus, we paused to listen to a group of Korean women singing in very melodic voices as they rested beside the trail. We exchanged smiles, and they seemed pleased that we had enjoyed their impromptu concert.

The highway to Seoul continued past low hills forested with Pinus koraiensis and valleys which supported agricultural fields. The crops included rice, vegetables of all sorts, and an occasional patch of ginseng, Panax schinseng, which is grown in the shade of little rice straw "hutches". Orchards, chiefly of oriental pears and apples, extended up the slopes, but did not appear to be irrigated.

After a night in Seoul, we left the next morning for Chollipo Arboretum, on the final leg of our trip. The road took us through the town of Suwan, past rice-field land, elaborately diked, then west toward Sosan Seaside National Park, on the edge of the West or Yellow Sea.

Chollipo Arboretum, which adjoins the park, is a private arboretum, belonging to Mr. Carl Ferris Miller. The site is highly scenic, with a fine beach and a view of offshore islands (one of which is part of the Arboretum grounds). Our party stayed in three Korean-style guest houses, complete with floor sleeping mats, but with the concession of western bathrooms. We also experienced first-hand the warmed floors of the traditional Korean ondol system, whereby heat from small fireboxes on the outside of the house is drawn through flues under the floors and out by a tall chimney. Some of us went swimming in the West Sea, still pleasantly warm in November. The outgoing tide exposed long stretches of flat beach with yellow sand where we saw local women collecting shellfish on the rocks.

The climate in this part of Korea is moderate, somewhat warmer than the Pacific Northwest in summer and about as cold in winter. Chollipo Arboretum grows many species that are too tender for us in Seattle, while we are able to grow some plants which are not successful with them. For example, rhododendrons are not a
strong feature in Chollipo, but they grow many species of the Laurel Family (Lauraceae) which are a failure with us. One answer to this may be the timing of their rainy season, which is the reverse of ours — Korean summers are wet, and their winters dry. They normally receive about 40 inches of rain per year, but were suffering from a rather severe drought at the time of our visit in late fall. The temperature of the offshore water, far warmer than Puget Sound in November, is also surely a factor.

The level of maintenance at Chollipo was enviable — a dozen of gardeners work under the supervision of Mr. Miller’s adopted son, who acts as a live-in manager. The collections cover a broad range of woody plant materials, and include many trees and shrubs new to us, which will be worth trying in Seattle; especially some species of *Litsea* and *Neolitsea* of the Laurel Family. Mr. Miller is interested in magnolias, and especially in hollies, and has a large collection of *Ilex* specimens, some of which should be tried in the Washington Park Arboretum. Television crews from Seoul appeared one morning and interviewed some of our tour members — a horticultural tour of Korea was something of a “first,” and we were apparently news.

Our stay at Chollipo was the highlight of our trip, and we returned to Seoul with considerable regret, feeling that our time in this interesting country with its wealth of horticultural material had been all too short. The plantings in the pavilion garden at the Shilla hotel now consisted chiefly of yellow chrysanthemums, descendants no doubt of the small yellow-flowered plant we had seen in the wild.

The final two days of our tour were spent sight-seeing in Seoul, visiting such places as the national museum and some of the city’s many palaces. Changdok Palace, originally built in 1405, (which was used as the king’s residence until 1925), and Kyongbok Palace, where vendors offered for rent colorful native costumes for Korean tourists to have their pictures taken. We explored Lotte Center, a modern underground shopping arcade in the heart of Seoul, which was the equal of any shopping mall at home. However we really preferred the more typical Korean markets, and spent our final afternoon buying small gifts of celadon and lacquer ware, and wishing we had room for
some of the beautiful brass work.

The long flight home was enlivened by the presence of a group of Korean babies, on their way to the United States for adoption. The people in charge apparently depend regularly on passengers helping to cuddle and quiet the wailing infants — and our group did not disappoint them.

We arrived tired and glad to be home, but feeling that our Korean adventure had been very special. We sincerely hope that the horticultural contacts which we initiated can be followed up with future exchanges of plant materials, to the benefit of our gardens on both sides of the Pacific.

(My special thanks to Florence Free and Jean Horton for their assistance in finishing Joe's outline of this last segment of our trip — JGW.)
Plants That Grow Naturally In The Arboretum
The Genus Rubus — The Brambles

JAN PIRZIO-BIROLI

The following article, dealing with the six species of Rubus that grow naturally in the Arboretum, is based upon a series of drawings made by Lee Weber, the first student intern assigned to the Center for Urban Horticulture/Arboretum. During the Winter and Spring quarters of 1983, Lee made over thirty drawings of plants native mainly in western Washington in fulfillment of her last two quarters’ work for a Bachelor of Arts degree from Evergreen State College. These drawings were intended to become the basis of a rather detailed brochure on native plants. However, with present budgetary considerations in mind, we have decided that if Lee’s beautiful drawings are ever to reach a wide audience, they had best be published as a series in the Arboretum Bulletin with the kind of descriptive material that was planned for the original publication.

The members of the genus Rubus include the blackberries (all of which are prickly vines) and many other species ranging from shrubs to delicate ground-covers. These members of the Rosaceae (rose family) have in common five-petaled flowers with numerous stamens. All of the species produce more or less edible fruits composed of numerous drupelets (tiny one-seeded, fleshy individual fruits) arranged upon a receptacle (core) to which they may or may not adhere, and which may be rounded, domed or conical in longitudinal section. The leaves within the group tend to be compound, usually with toothed margins, although in some species they are merely toothed and lobed. As in most members of the rose family, the leaves of Rubus are usually stipulate; i.e., they have appendages at the base.

Four of the six species illustrated are native to the Pacific Northwest; the other two are the common blackberries found in waste places throughout our area, which have become naturalized here from the Old World. All six plants occur naturally in the Arboretum.

Rubus spectabilis (salmonberry)

This spreading, three-to ten-foot shrub is well named botanically (spectabilis = spectacular), for it is one of the most ornamental of the native woody species of Rubus. Its flowers, though fleeting, have bright cerise petals; a fringe of stamens remains beneath the developing fruit. Although the stems of R. spectabilis have thorns, these are not particularly threat-
ening unless one finds oneself in a salmonberry thicket. Although *R. spectabilis* is not considered a truly weedy species, it is difficult to eradicate where it is well established. The Arboretum has a sterile, double-flowered form in its collections: *R. spectabilis* 'Olympic', which was found on Hood Canal, on the Olympic Peninsula in Washington.

Flowers: solitary; petals reddish.
Fruits: salmon-colored or yellow, only lightly attached to the receptacle; edible but somewhat insipid.
Leaves: trifoliolate, glabrous.
Habitat: moist woods or streambanks, western
Washington to mid elevations in the Cascades. It ranges from Alaska to northwest California.

Uses: the fresh berries were eaten by the Northwest Indians but were too soft to dry; the sprouts were cooked and eaten with dried salmon. The astringent quality of the bark and leaves was exploited by the Indians for medicinal purposes.

**Rubus parviflorus** (thimbleberry)

This stoloniferous subshrub produces the largest flowers among the native species despite its name: *parvi* = small, *florus* = flower. The thimbleberry is a coarse plant approximately two to six feet tall. It is readily identifiable even in winter when its buds are roundish nodules on puberulent, stiffly upright light brown stems. It is very difficult to eliminate from a garden because of its numerous underground stolons.

Flowers: white, the petals up to an inch long, in loose clusters of two to nine.

Fruits: red to glaucous red, softly hairy, coming off the receptacle as a shallow thimble-shaped cluster (hence the common name); edible but rather dry, with variable flavor: deliciously tart to some, flavorless to others.

Leaves: more or less three-lobed, two to ten inches across, softly pubescent, thin-textured.

Habitat: moist to dry woods and open places, sea level to subalpine, throughout western North America from Alaska to southern California and northern Mexico, east as far as the Great Lakes.

Uses: berries were eaten by Northwest native Americans in different combinations from tribe to tribe, but the fruit was considered too soft to dry. The shoots were eaten in early spring. Like *Rubus spectabilis*, *R. parviflorus* was recognized to have astringent qualities and was, therefore, used by various tribes for various medicinal purposes. The Cowlitz boiled the bark for soap. Because of their large size, the leaves were used to line baskets or wrap other foods. (Our Arboretum guides suggest to school children that because they are very soft-textured the leaves can substitute for bathroom tissue in the woods.)

**Rubus leucodermis** (black raspberry, blackcap)

This slender, trailing or arching vine is easy to recognize because of the whitish color of its branches (*leuco* = white, *dermis* = skin). The stems and leaves have hooked prickles. In the Arboretum, blackcap grows in tangles of low native vegetation.

Flowers: petals white, smaller than the recurved sepals; flowers in clusters of two to seven.

Leaves: trifoliolate or three-lobed, grayish-tomentose beneath and prickly.

Fruit: This is the wild black raspberry, having more than 40 drupelets which come off the receptacle as a whole fruit; delicious when available but not produced in great quantities.

Habitat: fields, canyons and low elevations in the mountains, British Columbia to southern California, from seacoast to Montana, Utah, and Nevada.

Uses: the berries were eaten fresh or dried, sometimes in combination with *Rubus ursinus*. Again, the sprouts were eaten fresh in spring.

**The Blackberries**

These plants are all vines with prickly leaves and stems. They produce succulent purplish-black fruits that adhere to the receptacle, which therefore becomes part of the "berry." All the blackberries are delicious fresh or frozen, and they make excellent pies, jams and jellies. The leaves are also used for herbal tea. All of the blackberries are difficult to eradicate from the garden.

The introduced Himalayan blackberry (*Rubus discolor*) and evergreen blackberry (*R. laciniatus*) are weedy species which often grow together in waste places, vacant lots and on roadsides. These are the most readily available neighborhood blackberries if one has a good machete and the courage to penetrate the head-high thickets of stout, thorny, interlacing branches.

**Rubus ursinus** (Douglas berry, dewberry, Pacific blackberry; another common name is "blood, sweat and tears" because it takes so long to get enough of them . . . )

This delicate, trailing vine with slender, hooked prickles is the famous "true" blackberry beloved of northwesterners. In fact, old-time families have favorite, secret places where they traditionally collect the tart fruits. *Rubus ursinus* creeps along the ground in many of the wilder
parts of the Arboretum.

Flowers: often dioecious, i.e., male (staminate) and female (fruiting) flowers on separate plants; petals white, narrow and pointed, less than half an inch long, longer in the male than in the female flowers; in clusters of four to ten.

Fruits: up to an inch long; narrow, rather firm.

Leaves: trifoliolate, prickly; the terminal leaflet larger and sometimes three-lobed.

Habitat: frequently found in open places or even in woodlands up to mid elevations; British Columbia to northern California, east to Idaho.

Uses: because of its excellent flavor, *Rubus ursinus* has been used in the development of such horticultural varieties as loganberry and boysenberry. The fruit is used fresh or dried, often combined with that of *R. leucodermis*. Tea has been made from the vine with leaves attached. There are occasional medicinal uses.

*Rubus discolor* (R. procerus, R. fruiticans; Himalayan blackberry)

This is the common broadleaved "wild blackberry" of our roadsides. The stout stems have large, hooked prickles.

Flowers: white, sometimes tinged with pink, about an inch across, the petals rounded at their tip; up to 20 flowers in a single cluster.

Fruits: large, juicy drupelets aggregated into a round berry up to three quarters of an inch wide.

Leaves: semi deciduous, with white or grayish pubescence beneath, five-foliate, the leaflets dentate but not deeply cut as in the following species.

Habitat: an escape in southern British Columbia south to California, mostly west of the Cascades, but also in southeast Washington along the Snake River. Introduced from the Old World, possibly from Europe although opinions differ.

*Rubus laciniatus* (evergreen blackberry)

*Rubus laciniatus* differs very little from *R. discolor* except for the deeply incised, evergreen leaves, and the more recurved thorns. The fruits, though somewhat sweeter in flavor, have larger seeds than those of *R. discolor*. Each species will have its advocates. *Rubus laciniatus*

is thought to be a cultivated plant of European origin, and its range is similar to that of *R. discolor* except that it sometimes extends into Idaho and is also found on the Atlantic coast.

As is noted in the general statements about blackberries, these two weedy species are often found growing together and, in fact, somewhat intertwined.

REFERENCES

Pollination Notes

It should be mentioned that the flowers of the salmonberry produce a lot of nectar and are are very partial to them. Thimbleberry, on the other hand, offers only pollen — quite a contrast lebees to the salmonberry. One often finds the small longhorn beetle on the flowers of the thimbleberry, so there can be little doubt that the flowers are thus pollinated. The flowers of the Himalayan blackberry and the evergreen blackberry are visited and pollinated mostly by honeybees. As sources of honey, they are not bad at all! Let’s not forget that these plants often invade areas on a massive scale; the flowers, therefore, are quantitatively important.

B.J.D. MEEUSE
The Friendship Grove Revisited
25 Years Later

WENONAH FINCH SHARPE AND GRANT W. SHARPE

Wenonah F. Sharpe is active in Washington Women in Timber. Grant W. Sharpe is Professor of Forest Resources at the University of Washington. Together they have published wildflower guides for six national parks.

The State of Washington, the City of Seattle, the University of Washington, northwest forest products industries and the College of Forest Resources are all looking eagerly toward international horizons. This expansion of interests is vital in order to survive, to grow, to build and to maintain leadership in international trade and cultural exchanges.

The International Friendship Grove, located at the western portion of the Campus Parkway median, is living proof of Seattle’s international outlook. In 1960, the Fifth World Forestry Congress was held on campus. A forester from each of the 65 participating nations had a young tree of suitable size and species to plant in a ceremony on August 29th (see Arboretum Bulletin, Winter 1960). This event was planned by the United States Forest Service with the cooperation of the University of Washington Arboretum and the Department of Natural Resources, as well as other local arboreta.

The planting ceremony was elaborate and well attended. Bleachers had been constructed on the north side of Campus Parkway, as well as a speaker’s platform for guests of honor and some of the participants. A color guard, made up of Sea Scouts and a Marine band, preceded the official heads of the delegations, as they marched to the planting area. Each country’s representative was flanked by a Girl Scout or Campfire girl carrying a shovel, and by a Boy Scout bearing the native flag of the delegate. These trios marched to the designated tree, and stood by it while the speeches were given.

Master of ceremonies, Dr. Henry Schmitz, began by telling the delegates, “When you hear the name of your nation, your flag will be raised on high, you will be given your shovel, and you may proceed to shovel the rich earth and complete the planting of your tree”. Dr. Richard McArkle then took a bucket of water borne by two Campfire Girls, and while the band played “Golden Friendships,” poured it around the base of the Douglas fir that represented the host country, the United States. This was to symbolize the nurturing of the grove.
Top: Dr. Henry Schmitz, past president of the University of Washington, serves as Master of Ceremonies, at the tree planting ceremony on Campus Parkway, September 3, 1960. Delegates from 65 nations stand next to the young trees that will represent their country.

Bottom: A present day view from the ceremonial platform site on Campus Parkway. At left, a University of Washington graduate student from Buenos Aires, Argentina, can be seen visiting the grove.

photo: James Sneddon.

photo: Grant W. Sharpe.
Dr. McArdle, in the name of the Fifth World Forestry Congress, presented the International Friendship Grove to the University of Washington, with this comment: "It is our hope, Dr. Odegaard, that as President of the University of Washington, you will accept this grove and help us keep alive the spirit of friendship which we have planted here today".

In their answering addresses, Dr. Odegaard, Mr. C.R. Ranganathan (India), President of the Fourth World Forestry Congress, and Professor Eino Saari (Finland), President of the Third, all spoke of the beauty and solace of trees, and their role from ancient times of uniting the past with the present. Dr. Odegaard spoke of "these trees . . . symbolizing the warmth of the human heart speaking across the babel of tongues, the strangeness of cultures, and the tenseness of social relations".

Professor Saari commented that "these trees have been planted today by a generation which has experienced how immense man's suffering can be as a result of suspicion and hate between nations, but which in spite of this, is optimistic and bold enough to have a firm belief that better understanding . . . can be achieved".

25 Years Later
One of Mr. Ranganathan’s comments at the ceremony is particularly pertinent 25 years later:

"In setting out to create this Grove, the Organizing Committee has, however, undertaken a task which will require much fostering care on the part of the custodians of the Grove to bring the trees, drawn from many distant lands, to maturity. This too, is perhaps symbolic of the fact that international friendship needs careful fostering."

How have these trees survived Seattle’s climate and the 25 years of traffic, both human
and vehicular? Cars exiting the University Bridge stream past and several buses stop beside the Grove. Students from Terry-Lander dormitory short-cut through these exotic and indigenous species on their way to classes.

As might be expected, even with replacements of the casualties and some horticultural first aid, a few trees appear to be lacking in vigor, while others have flourished and are undiplomatically crowding their neighbors. On the whole, however, most seem thrifty and do credit to the Arboretum’s care in selecting suitable stock and managing a tricky August moving and replanting.

Thanks to the largely intact labels stating species and country, the Grove has considerable interest for visitors. The USSR’s Siberian larch (Larix sibirica) growing beside Yugoslavia’s Serbian spruce (Picea omorika) conjure up visions of distant lands and impart a slight frisson; India’s cedar (Cedrus deodara) and Norway’s spruce (Picea abies) are old friends seen frequently in the gardens and street plantings of the coastal area. It is pleasant to remember these 65 countries meeting to discuss something as non-threatening as international forestry cooperation, and engaging in so symbolically hopeful an act. The growth and survival of these trees while the world has engaged in less life-engendering activities is reassuring, and leads to thoughts of further goodwill that might flow from this Grove.

In his Winter 1964 Arboretum Bulletin article, “A Further Report on the Friendship Grove,” Lloyd Thorpe commented on the continuing enthusiasm of traveling foresters on seeing the Grove and observing how “their” tree was growing. He also told of taking pictures with him on trips abroad, and of the interest and goodwill generated by this personal gesture. Of particular cogency are his comments on the “orphan status” of the Grove:

“No one continuing, long-lived, interested and dedicated organization of people who love trees and understand them has come forth as champion and steward. There is need of such an organization to interest itself in the physical welfare of the Grove, to enhance its visitor potential, and to nurture the international friendship idea by maintaining friendly and periodic contact with men and women of the nations whose tree roots now search for life in the mother earth of the Campus Parkway.”

There has recently been an effort by interested faculty to involve the University of Washington Landscape Committee. Additional land is needed in order to transplant some of the trees, and provide growing space for all. Suggestions were made about utilizing one portion of the adjoining parkway median. Permission to do so has not yet been secured. A fund to accomplish the proposed relocation, as well as to effect other improvements, seems necessary as a first step toward keeping a good idea alive and well in our internationally minded city. The Grove’s 25th Anniversary year, 1985, seems an excellent time to go forward.

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Assistant Professor of Plant Materials

Dr. Clement Hamilton has accepted the position as Assistant Professor of Plant Materials in the Center for Urban Horticulture. He will be applying his training in classical plant taxonomy to the plant materials and taxonomic problems of horticultural plants, using the collections of the Washington Park Arboretum. He will also be active in the development of the Otis Douglas Hyde Herbarium, teaching of university courses, and participation in the public outreach programs of the Center.

Born in Ohio, Hamilton took his undergraduate work at Harvard University in geology, where he was a National Merit Scholar. Following a 2-year stay at Songkla University in Thailand where he became especially interested in tropical plants, he took his Ph.D. degree at Washington University through the Missouri Botanical Garden. He is a plant collector and a musician. He and his wife, Karen, who is a botanical illustrator, will arrive in Seattle in early September.
Friendship Grove Tree List

ARTHUR LEE JACOBSON

The following listing of the trees is arranged from east to west, with a loop around the western end by the dense Escallonia shrubbery. Some of the name plaques are gone, or bear inaccurate names.

1. Norway Spruce
   (Picea abies)
   Norway

2. European Beech
   (Fagus sylvatica)
   Germany

3. Austrian Pine
   (Pinus nigra)
   Austria

4. Northern Red Oak
   (Quercus rubra)
   Denmark

5. Japanese Red Pine
   (Pinus densiflora)
   Japan

6. Montpelier Maple
   (Acer monspessulanum)
   Italy

7. Korean Pine
   (Pinus koraiensis)
   Korea

8. Oriental Hornbeam
   (Carpinus orientalis)
   Israel

9. Western Larch
   (Larix occidentalis)
   The Union of South Africa

10. Eastern Hemlock
    (Tsuga canadensis)
    Venezuela

11. Cork Tree
    (Quercus suber)
    Spain

12. Eastern White Pine
    (Pinus strobus)
    Guatemala

13. Golden Chain Tree
    (Laburnum x Watereri 'Vossii')
    Switzerland

14. Scots Pine
    (Pinus sylvestris)
    Sweden

15. Hop Hornbeam
    (Ostrya carpinifolia)
    Greece

16. China-Fir
    (Cunninghamia lanceolata)
    China
17. European White Birch
   (*Betula pendula*)
   Finland
18. English Oak
   (*Quercus robur*)
   The United Kingdom
19. Engelmann Spruce
   (*Picea engelmannii*)
   Uruguay
20. Little-leaf Linden
   (*Tilia cordata*)
   Netherlands
21. Deodar Cedar
   (*Cedrus deodara*)
   India
22. Sycamore Maple
   (*Acer pseudoplatanus*)
   France
23. Douglas Fir
   (*Pseudotsuga menziesii*)
   The United States of America
24. Siberian Larch
   (*Larix sibirica*)
   The Soviet Union
25. Polish Larch
   (*Larix decidua var. polonica*)
   Poland
26. Paper Mulberry
   (*Broussonetia papyrifera*)
   Malaya
27. Texas Black Walnut
   (*Juglans microcarpa*)
   Cameroon
28. Madrona
   (*Arbutus menziesii*)
   Thailand
29. Amur Maple
   (*Acer ginnala*)
   Bulgaria
30. White Willow
   (*Salix alba*)
   Ireland
31. Norway Maple
   (*Acer platanoides*)
   Belgium
32. European Mountain Ash
   (*Sorbus aucuparia*)
   Czechoslovakia
33. Boxleaf Azara
   (*Azara microphylla*)
   Peru
34. Lodgepole Pine
   (*Pinus contorta*)
   Malagasy
35. Oriental Arborvitae
   (*Thuja orientalis*)
   Burma
36. Montezuma Pine
   (*Pinus montezumae*)
   Mexico
37. Macedonian Pine
   (*Pinus peuce*)
   Rumania
38. Sugar Maple
   (*Acer saccharum*)
   Canada
39. Sugar Pine
   (*Pinus lambertiana*)
   Honduras
40. European Hackberry
   (*Celtis australis*)
   Hungary
41. Western Red Cedar
   (*Thuja plicata*)
   The Philippines
42. Flowering Ash
   (*Fraxinus ornus*)
   Iran
43. Dragon Spruce
   (*Picea peuce*)
   Yugoslavia
44. Chestnut Oak
   (*Quercus prinus*)
   Gabon
45. Sitka Alder
   (*Alnus sinuata*)
   Iceland
46. Himalayan Horsechestnut
   (*Aesculus indica*)
   Pakistan

1 Until it produces nuts identification is tentative. It was originally listed as *Juglans hindsii*.
2 Intended to be Tatarian Maple, *Acer tataricum*.
3 Intended to be White Beam, *Sorbus Aria*.
4 Intended to be Jelecote Pine, *Pinus patula*.
5 Either the schneckii Sugar Maple, or the Black Maple *Acer nigrum*.
6 Intended to be Serbian Spruce, *Picea omorika*.
47. Italian Cypress⁷
   (Cupressus sempervirens)
   Jordan
48. Roble Southern Beech
   (Nothofagus obliqua)
   Argentina
49. Sakhalin Spruce
   (Picea glehniï)
   Viet-Nam
50. Port Orford Cedar
   (Chaemacyparis lawsoniana)
   Sudan
51. Himalayan Spruce
   (Picea smithiana)
   Nepal
52. Red Spruce
   (Picea rubens)
   Liberia
53. Sweet Gum
   (Liquidambar styraciflua)
   Haiti
54. Turkish Oak
   (Quercus cerris)
   Turkey
55. Portugal Laurel
   (Prunus lusitanica)
   Portugal
56. Blue Atlas Cedar⁸
   (Cedrus atlantica f. glauca)
   Lebanon
57. Algerian Fir
   (Abies numidica)
   Tunisia
58. Cider Gum⁹
   (Eucalyptus gunnii)
   Australia
59. Red Southern Beech
   (Nothofagus fusca)
   New Zealand
60. Monkey Puzzle Tree¹⁰
   (Araucaria araucana)
   Brazil
61. Noble Fir
   (Abies procera)
   Colombia
62. Bigleaf Maple
   (Acer macrophyllum)
   Ghana
63. Small-leaf Eucalpyt¹¹
   (Eucalyptus parvifolia)
   Indonesia
64. Dombey Southern Beech
   (Nothofagus dombeyi)
   Chile

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³Originally listed as Cupressus lindleyi, a name considered synonymous with C. lusitanica.
⁸Intended to be Cedar of Lebanon, Cedrus libani. A possibility exists that this represents an atypical aberration, or, is possibly, even a hybrid. It is definitely unlike other Cedars of Lebanon in Seattle. (It should be remarked that the ascribed Cedars of Lebanon vastly outnumber the actual ones.)
⁹Originally Eucalyptus gigantea according to the lists, a name definitely synonymous with E. delegatensis.
¹⁰Originally listed as Eucalyptus johnstonii.
¹¹Originally Golden Chinquapin, Chrysolepis chrysophylla.
Book Review


To quote the "Introduction": "To Qualify as a Plant that Merits Attention", each plant must be one seldom seen in the general landscape. It may be a traditional old favorite that is in danger of disappearing from nurseries, or perhaps a species or new cultivar that has not received adequate recognition". Following acknowledgements to numerous assistants and distinguished contributors the book commences with a descriptive "Glossary of Botanical Terms". This is followed by six pages of excellent drawings of leaf forms, inflorescences, flowers and fruits. There is then a full page map showing the USDA plant hardiness zones, which regrettably is not in color to show the different zones more clearly.

The text consists of 143 selected trees, listed alphabetically, starting with Abies and concluding with Zelkova. Each tree is allocated a full page for a description of its principal features, its needs and problems, if any, in cultivation, and its landscape value. On the facing page are color photographs of the tree, usually a mature specimen, with close-ups of flowers, fruits or bark. Unfortunately only a few of these are identified as to location. Amongst the photographs of specimen trees, those of Pinus koraiensis and Pterostyrax hispida, only show young examples which give no idea of how fully grown trees look. The Parrotia persica photograph would have been more interesting in its winter leafless state, and Magnolia heptapeta (denudata) when flowering. That of Picea omorika is hardly recognizable as the fastigiate type of tree we normally see in this species. Many of these photographs were evidently taken either at the Arnold Arboretum or the Morton Arboretum. Lists of arboreta and botanic gardens are added to each description telling where each plant may be seen; some of these are short and others quite lengthy.

The choice of trees is certainly open to some criticism, if those "seldom seen in the general landscape" or in "danger of disappearing from nurseries" is indeed the criteria. Such large and dominant trees as the bur oak and swamp white oak, deodar cedar, black alder, blue ash, cucumber tree, silver linden, bald cypress and western red cedar might well have been omitted. In place of them (and some others also) we would suggest the European flowering ash (Fraxinus ornus); Betula jacquemontii from the Himalayas; the oriental hawthorn, Crataegus laciniata (C. orientalis); Nothofagus dombeyi from Chile and Argentina; Hoheria lyallii or H. glabrata from New Zealand instead of the more tender H. populnea; Magnolia kobus 'Wada's Memory' and M. sargentiana var. robusta, both first-class spring flowering trees; the Himalayan spruce (Picea smithiana); the Santa Lucia fir from California (Abies bracteata); and several of the clones of Pyrus calleryana now available. The excellent genus of Sorbus (as well as Nothofagus) is particularly poorly represented in this book which could well have included the European whitebeam tree (S. aria); the native S. decora; the white-fruited S. cashmeriana, and S. hupehensis from western China, which bears masses of pink fruits all through the fall.

Useful appendices at the end of the work include (a) lists of arboreta, botanic gardens and parks, with addresses; (b) a directory of nursery sources, and (c) an index of the trees listed with their nursery sources added in the form of key letters. There are three for which no sources are known, namely Acer miyabei, Alectryon excelsus and Olmediella beshcheriana, and others for which there are only one or two sources shown, so that propagation of these rarities is obviously needed. Appendix (d) is a list of trees grouped by zones for hardiness, site requirements (shade, moisture, etc.), resistance to pests and diseases, flower color, fragrance, fall color, etc. These will probably not be found as useful as the information contained under each main entry, since they merely list zones in which the tree can be grown.

Taken as a whole this is a practical, well-produced volume, on heavy glossy paper with large print. It should well serve the purpose of bringing valid information on a wide selection of trees of all kinds to its readers, although the fairly high price may deter some from purchasing a copy.

Brian O. Mulligan
In the Arboretum . . .

In 1984, a $44,000 grant was received from the Institute of Museum Services, U.S. Department of Education, for developing an Interpretive program in the Washington Park Arboretum. A team has been busily working on this project with the first "fruits" about to be visible.

The consultant group of David Hancocks, former Director of the Woodland Park Zoo, William G. Hook, architect, and Dachen Dakya, designer, has been working closely with University staff, Director Harold Tukey, John Wott, Van Bobbitt, Jan Pirzio-Birolì, and Joyce Brewster. During weekly meetings, basic strategies for new maps, signs, brochures and tours have been discussed.

The group has been developing a current map of the Arboretum which will be reproduced in large colored, porcelain signs strategically placed throughout the Arboretum. This map will be the model for all future Arboretum signs and brochures. Complimentary signage for trails, parking lots, directions and collections will be installed.

In addition, the group has been developing a group of interpretive panels to be displayed in the lobby of the new Visitor's Center. Topics include plant names, soils, climate, and microclimate.

The design for new Arboretum brochures is now complete and the first brochure printed. It is a self-guided tour of 22 of the Arboretum's maples, based upon Daniel J. Hinkley's recently completed M.S. Thesis. Appropriate trail markers will soon be installed.

The group is planning to have their projects completed to coincide with the opening of the new Visitor's Center.

John A. Wott
Professor of Urban Horticulture

Professor Emeritus C. Frank Brockman

The passing of Professor Brockman in March, 1985 at the age of 82 years must be noted here with sincere regrets by all who knew him either professionally or personally or only through his writings through nearly four decades. Following eighteen years as a naturalist with the National Park Service in Yosemite and Mount Rainier Parks, he became a respected member of the faculty of the College of Forestry at the University of Washington from 1948 to 1968. He joined the editorial board of the Arboretum Bulletin in the fall of 1949 and remained a valued member until the spring issue of 1956.

His first contribution to the Bulletin was "Conifers of the Cascades" (Winter, 1949), his last a book review published Winter, 1980. During those 31 years he wrote 24 articles on the native trees of the western states, illustrating each with his own excellent photographs, usually showing foliage and fruits on a background of one-inch squares. Between the fall issue of 1979 and that of a year later he wrote five articles on the trees of the University of Washington campus which now serves as a guide to them. He was certainly a major contributor to the Bulletin.

Other publications which he authored include a Flora of Mount Rainier National Park, published by the National Park Service in 1947 (based on earlier mimeographed notes of 1938) and illustrated by many of his own photographs. Secondly, Trees of Mount Rainier National Park, published in paperback by the University of Washington Press in 1949 and again illustrated by many of his photographs. Thirdly, and most importantly, is Trees of North America, A Field Guide to the Major Native and Introduced Species North of Mexico, published by Golden Press, New York, 1968, in paperback. This well illustrated book includes nearly 600 species of trees.

His photographs are to be mounted and displayed as a permanent memorial to him in the College of Forest Resources. Contributions toward this objective can be sent to the Dean of the College.

Brian O. Mulligan
Washington Park Arboretum Bulletin

Summer 1985

Greenhouse Floral Gift

TO

DATE

1985

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Center for Urban Horticulture
Open House
October 4th and 5th, 1985

The Center for Urban Horticulture is holding its second annual open house at its headquarters site, 3501 N.E. 41st Street, Seattle, on the east edge of the University of Washington campus. Featured this year will be the Center’s newest programs in research and public education, the newly opened Elisabeth C. Miller Library as well as exhibits by various horticultural organizations in the Puget Sound area.

Hours are 10:00 AM to 5:00 PM Friday, October 4th and 9:00-12:00 noon Saturday, October 5th, 1985. For more information call 545-8033.