Phyllodoce empetriformis

NORTHWEST
ORNAMENTAL
HORTICULTURAL
SOCIETY

NEWSLETTER

Vol. 2 - No. 4 Winter 1975

PHYLLODOCE EMPETRIFORMIS

(The Plant Behind the Name)

Alfred Evans, Royal Botanic Garden
Edinburgh, Scotland

In a paper read at a meeting of the Linnean Society in London in 1810, Professor Swartz of Stockholm made the case for reclassifying the dwarf ericaceous shrub *Andromeda caerulea,* a Linnean determination, *Menziesia caerulea.* This was accepted at the time and in the *Transactions* of that society publishing this, a note was added by the President, Sir James Edward Smith drawing attention to another sub-shrub recently collected in North America by Archibald Menzies and this he described under the specific name *Menziesia empetriformis.* He drew attention to the fact that the corolla of this new plant was bell-shaped and was quite different to that prevailing in *Menziesia caerulea* where the mouth was pronouncedly restricted. This he observed from dried herbarium material, the leaves being not quite typical in the pressed state.

The *Empetrum*-leaved *Menziesia,* with the ending changed to read *empetrifolia,* was made the subject for plate 3176 in the Botanical Magazine in 1832. Here we find the information that Mr. T. Drummond, naturalist on Franklin's 2nd Arctic voyage and later Curator of Dublin Botanic Garden, on his return from an expedition to North America where he was presumed to have collected in the Rocky Mountains, sent seeds of this sub-shrum to the Royal Botanic Garden, Edinburgh. Apparently it germinated well, eventually flowering for the first time in 1831, and no doubt it has been in cultivation ever since. Unfortunately, while there can be no doubts about the longevity on this species, no one would make the plea that original plants were still in existence - the incompleteness of the plant records deny us this proof - but some of the original plants raised from seed collected by Clarence Elliott while on an expedition to N. W. America in 1931 (45 years ago) are still alive and in vigorous health. They carry his identification symbol and number C.E. 767 and his field entry states "A very beautiful heath-like shrub with large pink bells. Height 12-18 inches. Found at 6-7,000 ft. on Mount Baker, Washington. Fine acid soil and in a wet position". Its flowering season is

Illustration: *Phyllodoce empetriformis* by Jeanne R. Janish from "Vascular Plants of the Pacific Northwest" by C. Leo Hitchcock, Arthur Conquist, Marion Ownvey, J. W. Thompson, Part 4, Page 19. Reprinted by permission of the University of Washington Press.

given as June to August but at lower elevations in Edinburgh it lasts from April to May.

The change from *Menziesia* to *Phyllodoce* was made by Salisbury in 1834 so once more the arrangement of certain characters was to warrant the change in this plant's close affinities. This status seems to have been accepted generally,for this generic identity was acknowledged by D. Don in 1834, the same year, and in the Edinburgh *New Philosophical Journal* so, for a time, our plant was known as *Phyllodoce empetriformis*. David Don was Librarian of the Linnean Society while his father, G. Don, was Principal Gardener of the Royal Botanic Garden, Edinburgh at the beginning of the 19th century. He draws attention to the fact that *Menziesia empetriformis* of another author is synonymous with *Bryanthus stelleri*. The generic name *Bryanthus* is next brought to light by Asa Gray in his *Botanical Contributions of the American Academy of Arts and Sciences*, June 1867, where he says "It becomes necessary to combine *Phyllodoce* with the far earlier *Bryanthus*". This may have lasted for a time but eventually *Phyllodoce* came to be accepted as the rightful generic name for up to seven species.

Phyllodoce empetriformis, or whatever its name may finally be, is one of the most decorative, sub-shrubby, ericaceous species for the rock garden, producing numerous flowers annually. It is easy to grow, flourishing in an open peaty mixture where the soil remains moist at all times. While tolerant of a little shade in dry areas it is only in the more open sites that the flowers are produced in quantity. These are deep pink and the open bell-shaped corollas, carried in compact heads, make it an easy plant to identify. Eventually it may reach 12 inches in height.

Vegatative propagation is easy and may be carried out by inserting cuttings in a sandy peaty mixture in a north facing frame in July. Where only a few plants are required, shoots pegged out and covered with compost will root readily while old woody plants, buried up to their necks so that the soil mixture surrounds the young growths, will provide a greater number of young plants in a year's time. Seeds will produce larger quantities and if sown thinly and barely covered should germinate satisfactorily if placed in either a cold frame or a warm greenhouse. This is a slower process and is only necessary where numerous plants are required.

Members of *Ericaceae* are found all over the world, some in cold sub-arctic areas while others are native to tropical countries. Some genera and species overlap in the wild but in many instances their well-defined stations are continents apart. *Phyllodoce empetriformis* is listed as being a N. W. American native species and if left in its natural habitat would never come into close contact with the eastern European monotypic genus *Rhodothamnus chamaecistus*. This latter plant is found in the Dolomites on limestone formations and while it will grow in peaty soil it appears to prefer limy conditions. The tiny foliage is extremely glandular and the pink corollas are wide open. At one time it was included in *Rhododendron*.

The enthusiasm for cultivating dwarf ericaceous plants was manifest in the number of nurserymen engaged in producing plants for sale. Being naturally observant people a chance seedling was noticed in Cunningham and Fraser's nursery in Edinburgh around 1845. It was grown on and subsequently identified as being a hybrid between *Phyllodoce* and *Rhodothamnus*. Botanical examination further suggested that the species involved was *P. empetriformis*. X *Phyllothamnus* was the compound name applied to this bigeneric hybrid and because the

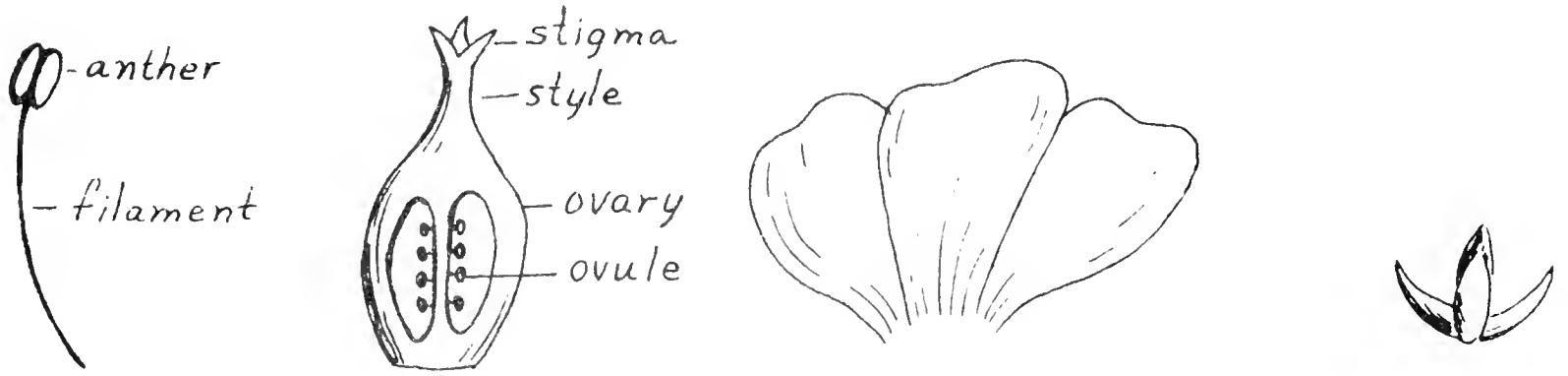
growth was so strictly upright, *erectus* was the specific name chosen to describe it. The plant bears *Phyllodoce*-like foliage and yet carries the wide open flowers characteristic of *Rhodothamnus*.

Edinburgh seems to have been involved in the introduction and hybridisation of *Phyllodoce empetriformis*, albeit the latter unintentionally, and it is gratifying to end by stating that it is a plant which is trouble free and continues to flower profusely in the Royal Botanic Garden.

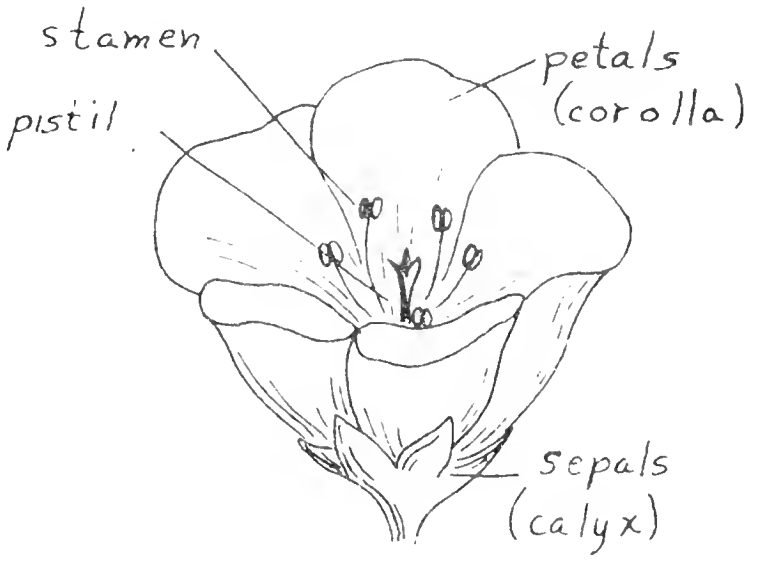
Phyllodoce empetriformis

BOTANY FOR GARDENERS

Mareen S. Kruckeberg, Seattle, Washington



Stamen - male	Pistil - female	Petals	Sepals
contains pollen (sperm)	includes ovary contains ovule (egg)	attract insects for pollinating	protect young flowers
The two essential organs. If both are present the flower is perfect. If either is lacking the flower is imperfect.		Parts around the essential organs. One or both can be lacking.	



All parts come in various sizes, shapes and colors.

VOCATIONAL GARDENING AT THE MONROE REFORMATORY

Ed Hume, Tacoma, Washington

It is wonderful to see how the addition of shrubs and flowers can change a drab environment into a pleasant and interesting place in which to live and work. In the past five years, a beautification project at the Washington State Reformatory in Monroe has accomplished this and much more.

I remember visiting the Reformatory as a guest of the State Prison System prior to the start of their vocational horticulture project and the courtyard inside the wall was a barren, mostly dirt area which could be best described as a wasteland. In the nearly five years that have passed since the training program began, the grounds have blossomed into a magnificent garden with well-kept lawns, flowering annuals and neatly-trimmed shrubs.

What a transformation this has been ... and the work has been done, with a great deal of enthusiasm, by the inmates, under the supervision of brothers Jerry and "Cactus" Kluin and with the assistance of Martin Swanson and the vocational-education staff. The success of the program is a direct result of the combined efforts of this staff, management at the prison, members of the industry and the inmates themselves.

It has been my pleasure to work with all parties concerned, in the estabment and development of this on-the-job training project. Representatives of the nursery, landscape, floral, landscape design and spray application industries were enlisted to help and they have devoted countless hours to design of the program, classroom instruction and planning of the projects to be undertaken. The accomplishments have been more than any of us could have imagined.

Under the program, the inmates have learned how to sod new areas of lawn, compost, properly mow and maintain the lawns. They have prepared new shrub and flower beds, fertilized, weeded and completely cared for the new plantings. Working under all kinds of discouraging conditions, such as poor soil, bad drainage, early cool weather and limited equipment, the inmates have done an outstanding job of improving the environment inside the walls of the Reformatory.

In the classroom, under the guidance of supervising vocational teacher Richard Moore and with the help of weekly morning sessions conducted by the Industry Advisory Committee, the men are learning about lawn and grounds maintenance, propagation of plants, planting procedures, water gardening, insect and disease-control, landscape design, floral design, houseplant care, plant identification and many other related subjects.

At the classroom sessions I have conducted, we have discussed such things as how to diagnose insect problems, garden store management, landscape design, plant identification and bonsai techniques. The enthusiasm of the students and the quality of the questions they ask have vastly improved since the early stages of the program.

The pride of accomplishment we have been witness to is almost unbelievable. A weed or a dead flower in a flower bed is quickly removed, before it spoils the appearance of the area. It is not uncommon to find a few cuttings, placed in styrofoam cups and covered with saran-wrap, in among the flowers and shrubs. The men are eager to practice what they have learned.

On the inside, each inmate is responsible for a section of lawn and a portion of a flower bed. Whenever a problem arises, an answer is quickly sought and corrective steps are immediately taken. All participants in the vocational horticultural program take great pride in their individual areas and the neatly-groomed lawns and colorful flower beds are the pleasant result.

The advisory committee helped plan a landscape planting inside the walls, which included a drainage pool. A park-like area has emerged and the many different types of plants growing here can also serve as a miniature arboretum for teaching plant identification. Height restrictions, location and the drainage concerns made this an especially interesting project.

Another accomplishment is the excellent rose garden. It features 1250 plants and the men who care for this garden have won countless awards and ribbons at rose shows throughout the Northwest. The superb selection of varieties and the excellent care this garden receives is in great part due to the efforts of members of the Evergreen Rose Society. Their hundreds of hours of instruction, guidance and manual labor have been priceless to the inmates and staff at Monroe.

Outside the walls, another stage of training takes place. Under the supervision of "Cactus" Kluin, the trustees learn grounds maintenance, machinery repair, tree-topping, fertilization, weed control, planting procedures, greenhouse management and everything related to the maintenance of 110-acres of grounds, including two and one-half acres of flower and shrub beds.

Maintenance of mowers, tractors, fertilizer spreaders and other equipment is mostly done by the inmates, as an on-the-job training project. The equipment used on the grounds is either donated or surplus.

The annuals, shrubs and new sod used to landscape the courtyard inside the walls are all grown outside by the trustees. Recently, the greenhouse facilities were renovated to accommodate more space for starting annuals and other flowers.

As you can see, the teaching program in horticulture and floriculture is really a two-part effort; phase one is carried on while the inmates are inside and phase two is completed once they become trustees and are permitted to work on the grounds outside. They are especially fortunate at Monroe Reformatory because the Kluin brothers are able to work together with the inmates and can carry out a complete training program, inside and outside the walls.

Part of the horticultural program is being transferred to Firlands, in Seattle. It is hoped that the new facility will be operational by June 1st, 1976. The reason for some question about the target date is a citizen's lawsuit that is currently pending.

The program at Firlands will be minimal-security and will involve a complete landscaping of the grounds by the vocational horticulture students. In other words, the inmates (or residents, as they prefer to be called) are planning to start a new project, similar to the one begun at Monroe five years ago. The Evergreen Rose Society, under the leadership of Edith Scheur, has already arranged for approximately 1,000 rose bushes to be used for a rose garden there. The classroom subject matter will also be expanded at this new facility.

The program at Monroe has become a model for what can be done by a well-planned vocational training program. Across the nation, the success of graduates of such programs at penal institutions has averaged about sixty percent, while the horticultural program here has achieved a remarkable ninety percent success.

If you want to compare dollar figures, you find an even more astonishing record for the program at Monroe. It is almost one-hundred percent self-sustaining! In other words, tax dollars are not needed to support it. As an example, the horticultural instructor spent more money for supplies in June 1975 than was spent on the remainder of the vocational program at the prison put together; yet, all the money came from their own "working fund" and did not involve any tax dollars. This is possible because the inmates are taught how to grow, produce and arrange flowers of all types; then they sell them for Reformatory functions or personal weddings, birthdays and other special occasions. The money received is channeled back into additional educational projects. It's the best deal the taxpayer could ever hope to get!

Under the guidance of the teachers and with the assistance of the rest of the staff, the program has continually had a very good image and because of its excellent success has received the full cooperation of the administration at Monroe. Many new projects are currently in the planning stage. The many outstanding accomplishments to date are only the beginning of this ambitious effort.

As the program continues at Monroe, much outside help will be needed to maintain the high standards that have been built into it. This is where you can help. Instructional assistance, donations of plant material and community support are all needed to keep this worthwhile program functioning effectively. Once you have participated in the program, I know you'll agree it has been time well-spent, not only for the improvement of the community, but for the rehabilitation of people who really need our help.

Indeed, the project merits attention throughout the penal system of the United States, as an example of what can be accomplished when a coordinated program is carried out by people dedicated to solving a problem. Practical training and on-the-job experience prepare the inmates for positions in the field when they are released from confinement and, as an added bonus, the drastic change they have made in their environment by their own efforts cannot help but have an effect on the other inmates. It may even plant the seed that will start others down the road to rehabilitation.

FOOD FOR THOUGHT

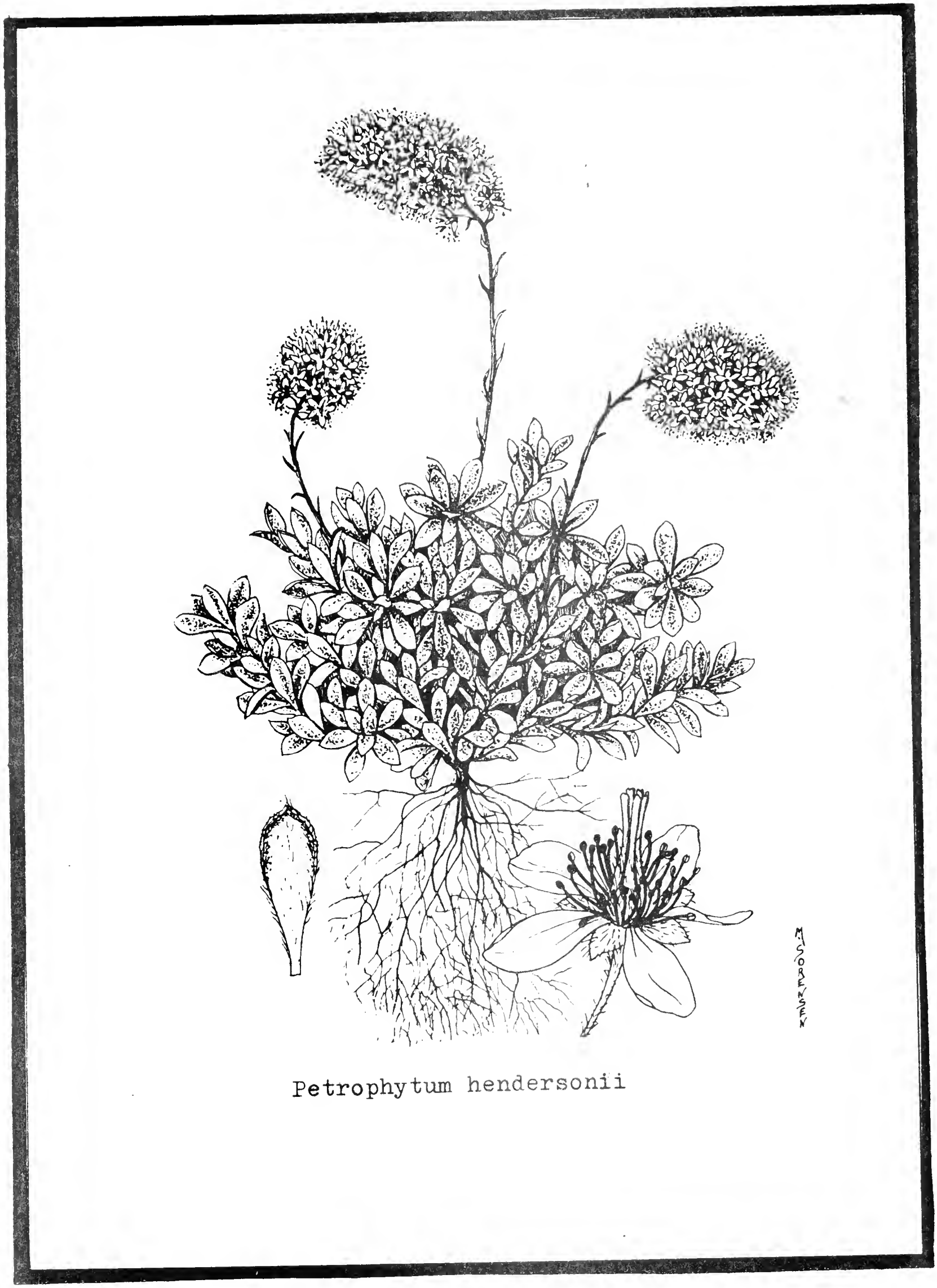
Sallie D. Allen, Seattle, Washington

One of the joys of exploring native plant areas is that there is always something new to discover, new to be learned and new to question. So it was when our *Ericaceae* Study Group revisited our *sphagnum* bog in early October to note the seasonal changes, fall color and the fruits of the *Kalmia, Ledum, Gaultheria* and vacciniums. Our discovery, though unrelated to our primary study, that of native members of the *Ericaceae* family, was none-the-less tremendously interesting to us and raised a number of unresolved questions.

Toward the outer edge of the bog were several conifers, perhaps 20 feet in height, that intellectually we knew were hemlock *(Tsuga heterophylla)*. However, the extremely stiff, open habit of growth and the yellowish-green, very short needles, in some instances only ¼ inch in length, caused us to stop and look a little closer. We discovered a very dward mistletoe*, growing on the branches; the typical graceful, deep colored hemlocks were close by but without the mistletoe.

If cuttings taken from the infested trees, rooted, would the resulting propagations remain short needled? Should cuttings with the mistletoe on them be attempted? By so doing would there be a possibility of introducing this parasitic plant into the home garden where *Tsuga heterophylla* grows naturally? And if so would it prove detrimental to the varying *Tsuga* species and forms or other conifers growing in the garden?

* *Arceuthobium campylopodum* forma *tsugensis*.



Petrophytum hendersonii

PETROPHYTUM

Bob Woodward, Vancouver, British Columbia

Petrophytums are the alpine gardener's kind of plant. They have all the necessary attributes: rarity, architectonic virtue, interesting inflorescence, a degree of hesitancy as cultivatable items. There are three species. The difficulty is sorting them. We have grown all three and observed two of them quite extensively in the wild. But we cannot always distinguish them. In any case one should grow any *Petrophytum* one can get one's hands (green thumbs) on. Whatever it is called.

I first saw *Petrophytum hendersonii* cascading among the rocks ... I should really say billowing ... high on Mt. Angeles in the Olympic Mountains. It was an enchanting sight. The petrophytums are, of course, rosaceous plants with a close affinity to the spiraeas. They do not have brilliant coloring; the petals are an off-white hue. But it is their habit which is exciting: densely packed caespitose shrublets, hard to the touch, glabrous to quite pronouncedly sericeous, gracefully racemose in inflorescence.

Petrophytum caespitosum is the most widespread. We have found it almost always in rocky fissures, in Montana, Idaho, much farther south. Sometimes it is a consistent greeney hue; more excitingly it has a bluish cast. In Idaho it seems to be more hairy. It makes the tightest cushion of the three species but it is difficult to maintain this compactness. Petrophytums are plants which must be starved.

Petrophytum cinerascens is the rarest, known from a few stations in Washington in the Wenatchee mountains. Friends in Britain ask how to distinguish it from *P. caespitosum*. The differences are slight. *P. cinerascens* in our experience is usually a laxer plant and the leaves are 3-nerved rather than 1-nerved, as is *P. caespitosum*.

Petrophytum hendersonii is an endemic of the Olympic Mountains. It chooses rocky outcroppings, occasionally talus slopes to inhabit. We have found it the easiest to cultivate but it does not always bloom. Like all petrophytums winter wet often induces browning off. Some protection is advisable.

The genus is an easy one to propagate; seed is usually plentiful and broken bits of plants will root easily. All three species gain from less rather than more water at all times.

If you are appreciative of the subtle, the compact, the delicate ... the qualities of what the forthcoming Interim International Rock Garden Conference labels 'polsters' ... then you should grow all the petrophytums.

Illustration: *Petrophytum hendersonii* by M. Sorensen from the American Rock Garden Society Bulletin, Vol. 5, No. 3, May-June 1947, page 46. Reprinted by permission of the American Rock Garden Society.

WESTERN AMERICAN NATIVES IN NEW ZEALAND

James R. Le Comte, Ashburton, New Zealand

A very wide range of the trees and shrubs of North America are grown in New Zealand, and they flourish here. The temperate climate is such that trees from the colder parts of Canada grow side by side with the Mexican pine. Because they grow faster and are more colorful than New Zealand natives, the shrubs of western America are widely used in home gardens and in landscaping.

The most noticeable features of the New Zealand landscape (especially near Canterbury) are the plantations of *Pinus radiata* (Monterey Pine) but people who have seen this species at Monterey could be excused for not recognizing it here, because in ideal situations it will grow 3 feet per year, and be ready for milling in 20 to 25 years. The lumber is treated and is the main framing material used in the building industry in New Zealand.

Pseudotsuga menziessi

Not all plantings are for future milling; *Pinus radiata* is widely used as farm shelter belts; often trimmed as a hedge of 15 to 20 feet high (special machines have been developed for this task), but seldom, if ever, used as an ornamental, mainly because it is so commonly used otherwise.

Most of the pines of the Western United States and Canada are grown either for lumber or as ornamentals and are greatly valued, the more unusual or rarer species being eagerly sought after. Another valued lumber tree is *Pseudotsuga menziesii* but as it grows much faster in New Zealand than in its native habitat, consequently it is softer and not so strong and durable. It too is often planted as an ornamental. Unfortunately, Agriculture Department regulations forbid the importing of conifers and so many of the choice ornamental cultivars are denied to the enthusiast, although somehow or other some rare varieties sometimes appear in gardens. If free access of material were permitted I can visualize the wealth of dwarf *Picea*, *Pinus* and *Tsuga* etc. that gardeners would import and grow with great delight.

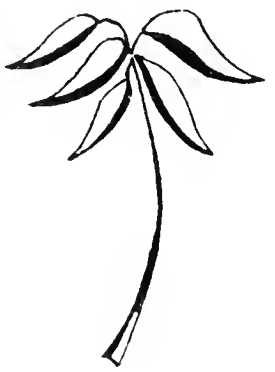
Many species of maples are grown and the winter in the South Island of New Zealand is sufficiently cold to bring out the glorious coloring of the autumn foliage of these lovely trees which are so often grown in association with rhododendrons. The list of western American shrubs grown in New Zealand would be a very large one and cannot be gone into in detail, but one must mention *Ceanothus* (California lilac) for these amiable and lovely shrubs grow well anywhere and are seen in many, many gardens.

Apart from dwarf conifers, my own particular interest is in very dwarf shrubs, alpine plants and miniature bulbs. What a wealth of wonderful and beautiful material western America provides for us in this field, most of which was unknown to New Zealand gardeners until after the great upsurge of interest in rock gardening during the sixties and seventies and ever-increasing now. The establishment of hundreds of pen-friendships between people who are smitten with the 'Bug' has caused much choice plant material and great quantities of seed to be exchanged, with resulting enrichment of New Zealand gardens and (it is hoped) of American gardens also.

A few fortunate New Zealand rock gardeners grow *Kalmiopsis leachiana* and in our garden it exhibits a few flowers in autumn, through the winter and a main prolific flowering in Spring. The American cassiopes thrive and gaultherias romp once they are established. *Gaylussacia brachycera* is doing very nicely and, *Phyllodoce*, for long a genus one only read of, are flourishing so well that we have at last been able to offer them in the nursery trade. The dainty and beautiful *Anemonella thalictroides* Schoaf's Double Pink blooms for up to ten weeks in the Spring and is slowly increasing. What a lucky and wonderful find that was!

Fritillaries and erythroniums delight us as do *Calochortus* and *Brodiaea*, not to mention the many other charming American bulbs.

There must be a great number of species in the western American mountains that have not yet found their way across the Pacific but the warmth and spontaneous generosity of American gardeners will eventually overcome that. From large trees right down to the tiniest of creeping plants, Western North America has provided us with much that is stately and beautiful in our gardens.



Tell me and I forget
Show me and I remember
Involve me and I understand
Let me teach and my understanding grows.

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

Office of the President

October 21, 1975

Mrs. Rodney B. Allen, President
Northwest Ornamental Horticultural Society
18540 26th N.E.
Seattle, Washington 98155

Dear Mrs. Allen:

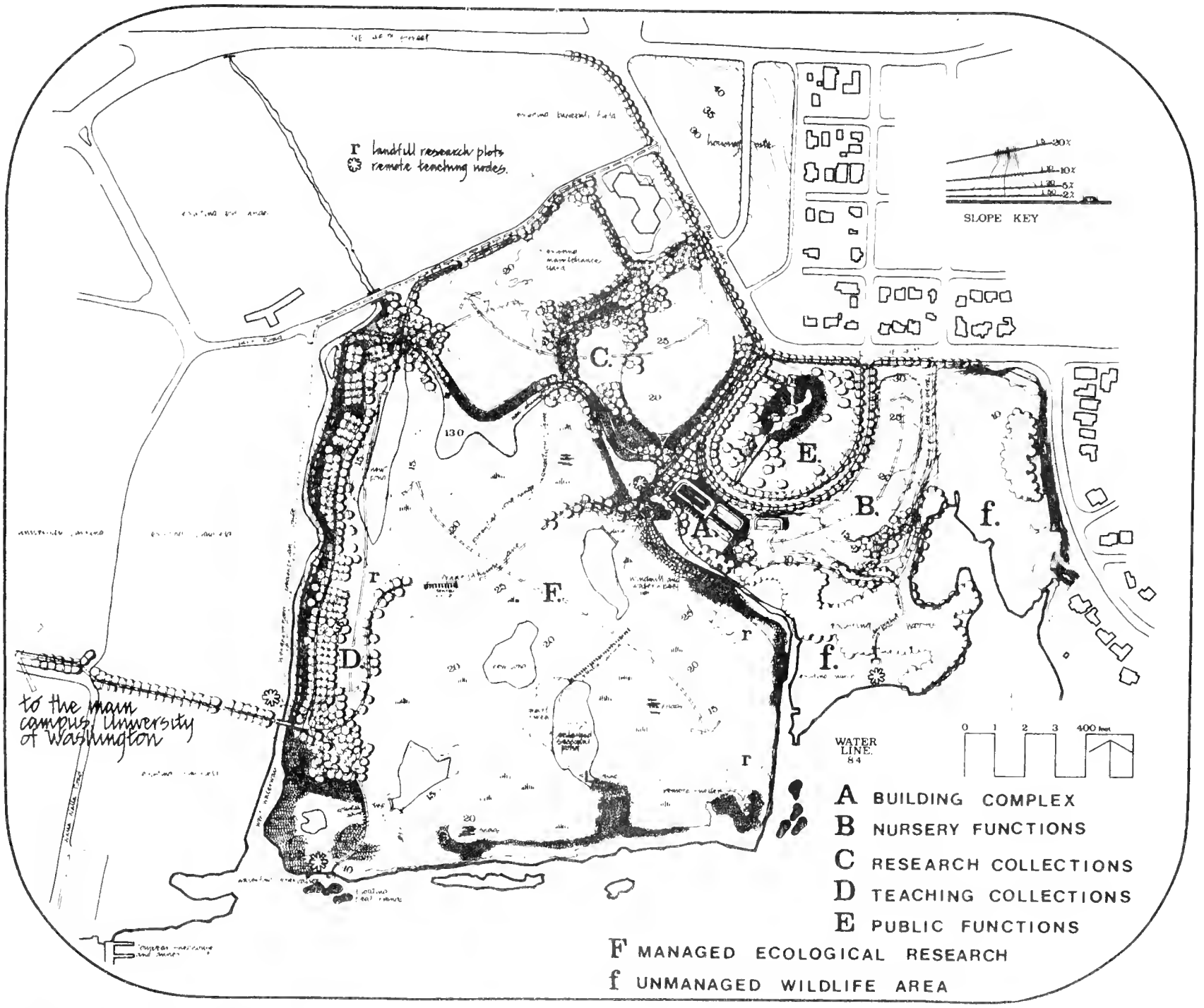
At the meeting of the Board of Regents of the University of Washington on February 28, 1975, the Board accepted a gift of $35,000 from the Northwest Ornamental Horticultural Society. The funds were given the University to assist it in making a study of east campus property of the University for development as part of the University's arboreta program.

As a consequence of this generous gift, the University has been able to retain the firm of Jones & Jones Landscape Architects to make the study of the area and prepare a general development plan for a Union Bay Aboretum. The firm has completed its study and it has been a very thorough analysis of the area and its potential for a variety of uses. The University is now reviewing this plan and expects it to serve as a guide to our future development of the east campus portion of the University.

The University wishes to express its appreciation again to the Northwest Ornamental Horticultural Society for assisting the University in the development of our arboretum program.

Sincerely yours,

John R. Hogness
President



PROGRESS REPORT:

Union Bay Teaching and Research Arboretum

The preliminary Concept Plan for the Union Bay Teaching and Research Arboretum was extremely well received at a public presentation on November 18. Final review by the University of Washington is taking place and Jones & Jones, Landscape Architects and Architects, will have the final report completed by February.

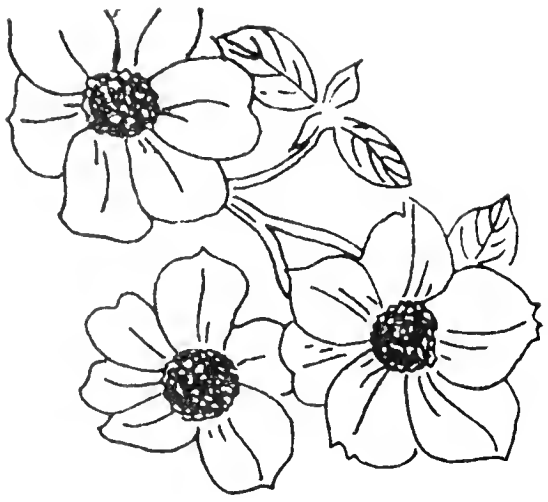
It has become increasingly more apparent that the "old Montlake Dump" is a site of regional importance to the University and to the public, not so much as an arboretum, but rather as a "laboratory on a landfill". No other city has such an asset, owned by a University, for conducting environmental research on the "Urban Wilderness". Field and laboratory studies are possible concerning woody plant propagation; plant survival under conditions of gas, polluted groundwater, and active subsidence (as well as hardiness of introduced species); soil modification to control succession or allow reclamation and regeneration of "urban wastelands"; landfill dynamics and water quality studies; habitat creation or enhancement in concert with zoological research. This unique site can provide solutions to problems we are already forced to meet head-on everywhere. This opportunity to foster research and monitor change over the years is not only feasible, but a truly exciting prospect. ———————— Grant R. Jones, Principal, JONES & JONES

UNIVERSITY OF WASHINGTON ARBORETUM IN WASHINGTON PARK

REPORT

November 1, 1974 to October 31, 1975

Joseph A. Witt - Seattle, Washington



"The Arboretum", as it continues to be called, remains very much in the same hiatus that has plagued its development for the past four years. There has been some improvement in staffing and in general maintenance because of the reaffirmation of the original agreement between the City of Seattle and the University concerning the operations and care of the Arboretum. In January, Seattle Parks and Recreation Department assigned a staff of five men to the Arboretum to be responsible for maintenance of the turf, trails and roads, general cleanup and to assist the University staff in certain other routine maintenance chores. During the summer months numerous temporary employees were added to their staff. As a result, several areas which had not been touched for many years received a cleaning and the grounds were in relatively good condition by the end of the summer. The University staff of eight plus several part-time and temporary people were able to concentrate on the care of the plant collections since they were relieved of more routine chores. Several new areas for plantings were developed and some long-delayed pruning was done.

A group of about 250 plants from the nursery was sent to the Bloedel reserve which eventually will be incorporated into the landscape plantings there. These represent unusual species surplus to the Arboretum's needs and which were rapidly becoming too large to be grown in the nursery much longer. Tentative plans are being formed to use similar surplus specimens in the Union Bay Arboretum, largely on an experimental basis.

Despite a high degree of cooperation between the Park and University staffs at a subordinate level there are still major problems when dealing with several larger aspects of the Arboretum's operations and functions. Largely, they have to do with areas responsibility and with basic concepts of the rationale for the Arboretum's existence. These frustrating situations develop partially as result of the joint operation by two large and bureaucratic institutions and partially because of political pressures from community groups. The latter see the Arboretum as merely another city park, not the unique education facility it is, or find it a convenient whipping boy at which to strike at the University for real or imagined injuries. The active planning now being carried out for the Union Bay Arboretum seems to offer the greatest hope for the eventual survival of Washington Park Arboretum. This is perhaps the brightest spot in the dark past year.

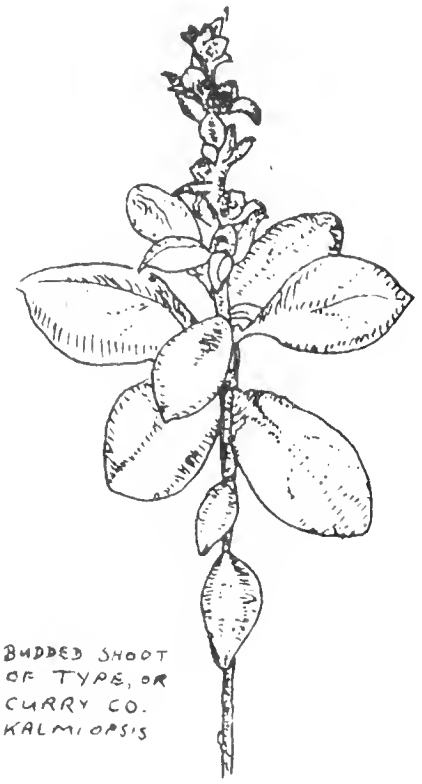
IRIS TENAX

Roy Davidson, Bellevue, Washington

Iris tenax, the 'Oregon Blue Flag' was found throughout the Willamette Valley when early settlers first came. It is said the name *tenax* was given in reference to the tough durable cordage Indians made from its leaves, then fashioned into nets and snares. The northernmost of its alliance of western American irises (the California *Apogons)* occur from the San Bernadino Mountains, the Sierra Nevada foothills and the Coast Ranges northward into southwestern Washington, originally, as far as the deep gravel prairies of southern Puget Sound. Now depleted by agricultural pursuits, they are the constant associates of the coniferous forests, though not in the deep shade, but in sun-filled openings between the trees. On open slopes and dryish meadowlands from the northern Umpqua River *Iris tenax* forms tussocks of grassy foliage abloom with its May flowers from white (occasionally) to orchid-pink (commonly) and deeper shades of blue-violet and royal purple, many with contrasting patterns. There are also yellows (once called *Iris gormanii)* and where this has mixed through interbreeding the most delightful pastel tints may be found. This is a plant easily grown in a warm loamy soil, not only for the pretty flowers, but the foliage clumps add airy grace to the foreground of shrubbery and woodland.

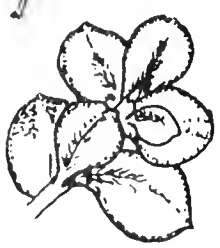
Iris tenax

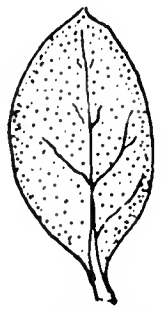
Illustration:
Mareen S. Kruckeberg



BUDDED SHOOT OF TYPE, OR CURRY CO. KALMIOPSIS

SMALL-LEAVED FORMS FROM E. OREGON





UNDER SIDE OF LEAF SHOWING GLISTENING GLANDS

FLOWERING SHOOT OF UMPQUA VALLEY KALMIOPSIS

BUDDED SHOOTS AND SEED CAPSULES

KALMIOPSIS LEACHIANA

Kalmiopsis leachiana

Illustrations: Barry N. Starling

KALMIOPSIS LEACHIANA

Barry N. Starling, Epping Upland, England

Of all the choice dwarf shrubs which are members of the family *Ericaceae, Kalmiopsis leachiana* has given me the most pleasure. My first plant was prized out of a reluctant nurseryman thirteen years ago, as a rooted cutting at a price which warranted a bold-plated pot for this inch-high treasure. Time has proved that this indeed, was one of the best investments I ever made for the tiny plant soon settled down to make a neat little shrublet bedecked, the following spring, with pink saucers, and after five years had achieved four inches in height by six inches across.

Towards the end of the summer each shiny, elliptic leaf towards the tip of the stiff, upright, thin green stems, has in its axil a small round bud. From early in the new year the more precocious of these open up until, by early April the shrub is completely concealed by the mass of delicate blossoms. The flowers last for several weeks until finally the new growth emerges to conceal their fading beauty.

My original plant was one of the short, bushy forms which come from the Umpqua River Valley habitat in southern Oregon, and are usually no more than six inches high,adapting more readily to cultivation than the type species which is a taller growing, open shrub with a longer, racemose flower spike up to 15 inches. This latter plant was the first form of *Kalmiopsis* to be discovered, found as recently as 1930 in an area of Curry County, southwest Oregon, now designated the "*Kalmiopsis* Wilderness". Its blooms are slightly smaller and of a deeper, carmine pink and the plant has proved less gardenworthy than the more recently discovered Umpqua plants.

Several stands are known to exist in southern Oregon and there is considerable variation of intensity of flower color and shape of leaf within the stands. Tiny leaved forms with the largest leaves no more than ½ inch in length exist while the largest leaves of other forms are over 1¼ inches long. Leaf shape varies from narrowly elliptic to almost orbicular with just a suspicion of a pointed tip, and from oblanceolate to obovate. Named forms exist in cultivation and it is probably the one named after Marcel Le Piniec which is most widely grown and best known. This is a good clear pink with no trace of the magenta which appears in flowers of some forms. Numerous plants are raised from seed collected in the wild and as can be expected these show the same sort of variations as their wild parents.

For one familiar with the compact, upright little bushes of cultivation, it comes as considerable surprise to see the cliffs and boulders of the south facing Umpqua Valley wall draped and festooned with curtains of *Kalmiopsis,* apparently rooted into sheer igneous rocks. Here the plants are more sparsely leaved than in cultivation, with a sprinkling of older leaves of bright scarlet among the deep green. Flowering commences regularly in mid-May -- considerably later than in cultivation -- and a long search in the second week of July eventually revealed what must have positively been the last fragile corolla of the season. Tall firs rising from just below the *Kalmiopsis* belt offer slight and dappled shade from the burning sun but the whole impression is of aridity, and that the plant can stand considerably more drought than most members of the family *Ericaceae* is borne out by its performance in cultivation. Here in southeast England, where most of the 20 inches of annual rainfall comes in the fall and winter seasons, *Kalmiopsis*

leachiana thrives without irrigation whereas continual watering during late spring and summer is essential for other members of the family.

Kalmiopsis leachiana can be grown in pots or in the rock or peat garden in well-drained peaty, gritty soil and benefits from a top-dressing of leaf-soil worked into the crown of the plant after flowering. If the plant is grown in a pot it is best to plunge the pot in the open during summer, in a position of good light but with some shade from the sun during the hottest part of the day. In cold climates it is wise to bring the plant into an alpine house before it is likely to be subjected to 10° F. or more of frost. This is purely to protect the more advanced flower buds, but if this shrub is brought into a warmer atmosphere too early in the winter, flowering will be spasmodic over about four months but never very prolific at one time.

Propagation can be achieved by taking cuttings 1 to 1½ long from July to October when new growth is ripening. Early cuttings will root within a month and can be potted on immediately and if kept close, that is in humid conditions, will produce two or three shoots before the end of summer It is advisable to pinch out the center of newly rooted plantlets to produce a bushy habit. Late cuttings may not root until the following spring. A good rooting medium is simply two parts washed sharp sand to one part peat and the cuttings should be kept in a close frame or propagator until rooted and then gradually allowed more air. After potting it is beneficial to replace the frame lid over newly potted rooted cuttings until the tip can be seen to be growing. Seed will germinate fairly readily sown directly on top of peat in close conditions, but patience is needed to rear the tiny seedlings which are best left in the pot in which they are sown for the first year. For this reason thin sowing is recommended. With good cultivation some will flower in the third year but it can easily be four or five years before all have shown their colors. Collected seed from wild plants is frequently offered in the American Rock Garden Society's seed list, and this will illustrate, as it grows, the variation within this species as well as holding you in suspense while you dream of flowering the first pure white, or bright red! In my experience, a single plant in cultivation has failed to set seed, suggesting self-incompatibility. once several plants were established growing in close proximity, plenty of good seed was produced, even on the previously non-productive plant.

Kalmiopsis leachiana can be readily distinguished from *Kalmia* or other closely related genera, by the presence of hundreds of tiny glistening dots on the undersurface of the leaf. These are glands which, while providing a distinguishing feature of the genus for the botanist, are easily seen with the naked and untrained eye.

****

1975 IN REVIEW

The Northwest Ornamental Horticultural Society began the year with optimism and enthusiasm, a spirit that prevailed throughout the entire years programs and activities. The membership has grown markedly during that time including many energetic, participating young people, an extremely healthy development for our organization. For those who have recently joined and members who have not taken full advantage of the programs, activities and services provided by the NOHS, the following review is written.

A project of great interest to the NOHS Board of Directors got underway in February when the Board of Regents of the University of Washington officially accepted our contribution of $35,000 toward the initial site plan and environmental impact statement for the Union Bay Teaching and Research Arboretum. Also accepted by the Regents was the recommendation that the Landscape Architectural firm of Jones & Jones be commissioned to develop the master plan. This challenging project which had been under continuous discussion for over a year, had begun!

The years theme "Meet the Natives" started with an outstanding lecture series in February and March, open to the public and with no admission fee. Horticultural displays of live plant material accompanied the superb slide-lectures given by three of our most knowledgeable members, Jean Witt, Margaret Mulligan and Frances Roberson. It is gratifying to see the development of interest in knowing and growing our beautiful native flora. At the third and final lecture the 20 minute slide-tape program on the Union Bay development was shown, a presentation sponsored and financed by the NOHS contribution of $500 for this purpose.

On April 8th the NOHS co-sponsored with the U. of W. Department of Architecture and Urban Planning, the Charles A. Lewis lecture "Human Response to Plants: A Man-Environment Relationship." It was open to the public at no charge. Mr. Lewis is associated with the Morton Arboretum as Horticulturist and is coordinator of the American Horticultural Society People-Plant program. He is an enthusiastic supporter of horticultural therapy based on the concept that people respond to plants and benefit from their presence. Horticultural therapy has been part of successful treatment for persons who are mentally ill, retarded, physically handicapped, in prison or chronically ill. Mr. Lewis is an inspiring speaker, creating within his audience the feeling that we all need to do more in the field of service, in teaching, sharing and ... getting involved. His unique teaching ability is beautifully illustrated in an article in a recent Morton Arboretum QUARTERLY where he introduces the Arboretum to a group of teen-aged boys born and raised in an urban environment. He is able to identify with them by asking question ... listening and learning from them and drawing a parallel between "their city" and "Nature City" within the Arboretum

In April too was the Members Only, Bring and Buy Plant Sale and tour of the MSK Native Plant Nursery. This is an opportunity for every member to participate in the NOHS, by sharing treasured plant material and contributing in two ways: By BRINGING and BUYING. The tour of the MSK Nursery and the large, interesting garden of Dr. and Mrs. A. R. Kruckeberg is always a memorable experience as you see extensive collections of natives and unusual plants seldom seen elsewhere.

On the 18th of April a no-host dinner was held in honor of Dr. Richard A. Howard, Director of the Arnold Arboretum, who was in Seattle as a consultant on the Union Bay Arboretum development. Mr. Grant Jones, principal of Jones & Jones Landscape Architectural firm, made a presentation on the Union Bay project and informal discussion followed. Pertinent comments were made by Dr. Howard, a strong supporter of all aspects of the University of Washington Arboretum program, and of our organization.

Extremely popular among the NOHS activities is the annual spring garden tour, members free, non-members, $2.00. Selected were three outstanding gardens each incorporating collections of native plant material, alpines,

rock garden plants , rhododendrons and evergreens of all kinds. The gardens are creations of the owners who maintain them with a minimum of outside help; each garden truly a gem, reflecting the interests and personality of the owner. Mr. and Mrs. Perry Johanson, an architect and an artist, are knowledgeable gardeners; Mr. and Mrs. Robert Putnam and Mr. E. Leroy Davidson are well-known horticulturists and plant collectors; all have successfully utilized their talents resulting in three totally distinctive gardens, each of tremendous interest.

Sponsored by the NOHS was the lecture by Mr. H. H. Davidian, of the Royal Botanic Garden, Edinburgh, Scotland; the subject "Rhododendrons". He is the undisputed dean of *Rhododendron* taxonomists and a recognized authority on species *Rhododendron*. Mr. Davidian, a charming speaker, is a true plantsman, interested in all plant material and its cultivation. The May 20th lecture was open to the public at the cost of $2.00, to members - $1.00.

The Annual June Fern Sale has become well-known to gardeners all over the Northwest. Nowhere is it possible to see such a large, diversified collection of ferns for indoor cultivation, outdoor, large and small, for sun or shade, many never before offered for sale anywhere. With the growing interest in ferns, there is also a growing concern for conservation of our native species which are becoming scarce in their native habitats due to over collecting. For the first time many of the most desirable natives are being raised from spores and offered in this sale; therefore there is no longer a need to collect from the wild.

The NOHS is intensely interested in the overall Arboretum program, which includes the College of Forest Resources' teaching and research facility, Pack Forest near Eatonville. For details of the July field trip to Pack Forest see Vol. 2, No. 3, page 32-33, of the NEWSLETTER, "A Day In Pack Forest" by Peg Wilton.

An inspiring lecture on September 17th was given by Dr. Henry M. Cathey, Chief of Ornamentals Laboratory, U. S. Dept. of Agriculture, Beltsville, Maryland, and President of the American Horticultural Society. His subject, "American Horticultural Society: Not For Gardeners Only" encompassed all aspects of the programs, publications and people working to bring horticulture alive throughout the United States. It included new gardening information, new plants and projects to do with children,retirees and the disadvantaged. The lecture was open to the public at no charge.

The NOHS ANNUAL PLANT SALE, September 23rd and 24th, was held at the University of Washington Arboretum in Washington Park this year. Due to increased public interest in ferns and houseplants, these departments were greatly expanded over previous years. Each section had the finest of plant material, much of which was new and unusual, including many interesting natives offered for the first time.

The years program ended with the ANNUAL DINNER MEETING, October 30th at the University Towers Hotel. Mr. Grant Jones gave a brief progress report on the Union Bay Teaching and Research Arboretum, a printed copy of which was available to all who attended. Following dinner, the slate of officers and the nominees for the Board of Trustees for 1976 as presented by the chairman of the nominating committee, were unanimously accepted. The speaker for the evening was Dr. Keith Wade from the University of British Columbia, who spent two years in New Guinea researching the flora for his doctorate. His slides of plants, insects, birds, animals and people were works of art

and illustrated his keen interest in everything within that unique environment.

During this extremely interesting and busy year, the NOHS Study Groups actively continued with their specialized fields of interest. Further membership participation is encouraged in those already established: Northwest Natives, Botanical Drawing, Ferns, Alpines, Rhododendron and *Ericaceae*. A Houseplant group is beginning and others will be organized as interests are expressed.

Individuals in the NOHS have been actively involved in such projects as the relandscaping of the grounds around the newly renovated Governor's Mansion at Olympia. As a group we are working in an advisory capacity to the native plant garden on the State Capitol grounds, with some members contributing actual plant material for that purpose. Others have become involved with a teaching program for elementary school children, the Monroe Reformatory program as described herein, and other service programs.

The successful year has been due to a willing, hard-working Board of Directors and strong membership participation in all aspects of the NOHS activities. Our quarterly Newsletter grows with growing contributions from within our membership; so the Northwest Ornamental Horticultural Society will grow with the sharing of interests and talents of all who become involved.

We look forward with great anticipation to a richly productive 1976, with expanded services and programs to stimulate the interest of one and all. Those who have heard about it are extremely excited about Betty Miller's imaginative plan of a "Horticultural Festival" to be featured during Seattle's Bicentennial activities the first week in June 1976. You will be hearing a great deal more about it and will want to take active part in this innovative project.

Sallie D. Allen

NORTHWEST ORNAMENTAL HORTICULTURAL SOCIETY

Officers for 1976

President	Mrs. Pendleton Miller
1st Vice-President	Dr. Dixie Lee Ray
2nd Vice-President	Mrs. W. Bruce Jones
Recording Secretary	Mrs. William Y. Baker
Corresponding Secretary . .	Mrs. J. Wendell Trosper
Treasurer	Mrs. Armorel Kamins

New Members of the Board of Trustees

Mrs. Albert Brauss	Mr. Marshall Major
Mrs. Chapin Henry	Mrs. Roger De Roux
Mrs. Stephen H. Herron	Mrs. Jack Shunk
Mrs. Garrett Horder	Mrs. Leonard Wilcox
Mrs. Hugh H. Hotson	Mrs. Russell M. Young
Mrs. Marshall Major	

* * * * *
* * * *
* * *
* *
*

First Interim International Rock Garden Plant Conference

July 18 - 25, 1976

Co-sponsored by:

The American Rock Garden Society

The Rock Garden Club of British Columbia

Theme: ALPINES OF THE AMERICAS

First Interim International Rock Garden Plant Conference

Anyone interested in information on the First Interim International Plant Conference to be held in Seattle, Washington and Vancouver, British Columbia, July 18 - 25, 1976 write to:

Mrs. C. Roger Bennett
17015 - 26th Ave. N.E.
Seattle, Washington 98155

Registration forms and pre- and post-Conference Field Trip information are now available. The program includes: a field trip to Mt. Rainier, garden tours, lectures by speakers from across the country, Canada and overseas, educational displays and a "how to do it" garden fair.

This is the first such Conference to be held outside of Great Britain where traditionally they occur every ten years. Many visitors are expected from all over the world. It is not necessary to be a member of any Rock Garden Society to fully participate.

WELCOME NEW MEMBERS

BENDER, Mrs. John (Pat)	4123 N.E. 186th Seattle 98155	364-1561
BURNETT, Mrs. Bud J. (Adele)	#144, 2501 Canterbury Lane E. Seattle 98112	322-1632
DOUGLAS, Mrs. David (Martha)	322 S. Dunham Arlington 98223	435-4980
DWYER, Mrs. William (Dorothy)	P. O. Box 783 Puyallup 98371	
EASTON, Mrs. E. E. (Maud)	6101 Ravenna Ave. N.E. Seattle 98115	525-6457
ELGIN, William R.	149 - 7th Ave. W. Kirkland 98033	822-3828
FISHER, Mrs. John R. (Shirlee W.)	17812 S.E. 60th Issaquah 98027	746-2550
KNIGHT, Mrs. James P.	7542 - 146th Ave. N.E. Redmond 98052	
LARSON, Mrs. Charles (Charlotte)	2848 S.W. 300th Place Federal Way 98003	838-0188
LEE, Mrs. David R. (Ethel)	2815 Boylston Ave. E. Seattle 98102	
LETTUNICH, Mr. & Mrs. Lewis, Jr. (Maureen)	1226 Amrsti Road Watsonville, CA 95076	
LUNDQUIST, Miss Florence L.	5639 - 35th S.W. Seattle 99126	935-0761
McLAUGHLIN, Ms. Suzanne	6223 Palatine Ave. N. Seattle 98103	
MATHESON, Mrs. Jerry (Evie)	12450 Fiori Lane Sebastopol, CA 95472	
MULLARKY, Mrs. Robt. E. (Katherine)	2649 Shoreland Drive S. Seattle 98144	722-2020
MUNGER, Georgia	Route 3, Box 109 Olympia 98506	352-5182
PEARCE, Mr. F. Owen	2037 Ptarmigan Drive, #4 Walnut Creek, CA 94595	254-2470
PIRZIO-BIROLI, Mrs. Giacomo	4204 W. Mercer Way Mercer Island 98040	232-0338
PONIER, Mrs. John Jr. (Alice A.)	8300 S.E. 3rd St. Mercer Island 98040	232-4382
READ, Mrs. Robert D.	902 S. 3rd Tacoma 98405	588-9228
STEWART, Mrs. Doris	13517 Burke Ave. N. Seattle 98133	362-7961
TRITSCHLER, Miss Frances M.	13351 - 32nd Ave. S. Seattle 98168	
WALKER, Mrs. Herbert (Delitha)	25205 - 8th Place S. Kent 98031	
WEINSTEIN, Boris	4410 - 54th Ave. N.E. Seattle 98105	525-9246

Mrs. Arthur Kruckeberg
20066 - 15th NW
Seattle, WA 98177

TIMELY MATERIAL
PLEASE EXPEDITE

NON-PROFIT

NORTHWEST ORNAMENTAL HORTICULTURAL SOCIETY
UNIVERSITY OF WASHINGTON ARBORETUM, A.R. 10
SEATTLE, WASHINGTON 98195

BULK RATE
U. S. POSTAGE
PAID
BELLEVUE, WA.
PERMIT NO. 149

For information on Membership, write to:

Membership Chairman
Northwest Ornamental Horticultural Society
University of Washington Arboretum, AR 10
Seattle, Washington 98195