

The *Boxwood* Bulletin

A quarterly devoted to Man's oldest garden ornamental



Pleasant vista at Old Westbury includes pond, reflecting pool and boxwood. See story on page 3. (1982 photo by Robert Frackelton)

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Technical articles, news, history, lore, notes, and photographs concerning boxwood specimens, gardens or plantings are solicited for possible publication in *The Boxwood Bulletin*. Photographs should be suitable for reproduction and fully captioned. Suggestions regarding format and content are welcome. Material should be submitted to:

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Material to be returned to the sender must be submitted with a self-addressed envelope carrying suitable postage. Every effort will be made to protect submittals, but the Society cannot be responsible for loss or injury.

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Old Westbury Gardens

Mary A. Gamble

The speaker at the fifteenth annual meeting of the Boxwood Society of the Midwest (held on the evening of March 26, 1990 at the Ridgeway Center of the Missouri Botanic Garden, Saint Louis, Missouri) was Mr. Robert E. Bowden, Director of Horticulture at MBG. Bowden came to the Garden directly from Old Westbury Gardens in Old Westbury, Long Island, New York, where he had served as Director of Horticulture and Operations. His subject: "The Boxwoods of Old Westbury Gardens," but his talk ranged far beyond the boxwoods to touch upon the ramifications of the development and maintenance of a great garden. It was presented in four sections: a brief geologic history of the area where Old Westbury is located and the building of the garden; a showing of about 80 superb color slides of the estate and

to drive through New York City." By the close of his talk, which was extended well beyond the planned 40 minutes by the lively Q-and-A period, his listeners (most of whom have experienced New York's traffic) judged the trip would be more than worth the hassle.

Geologic History; Building of Garden

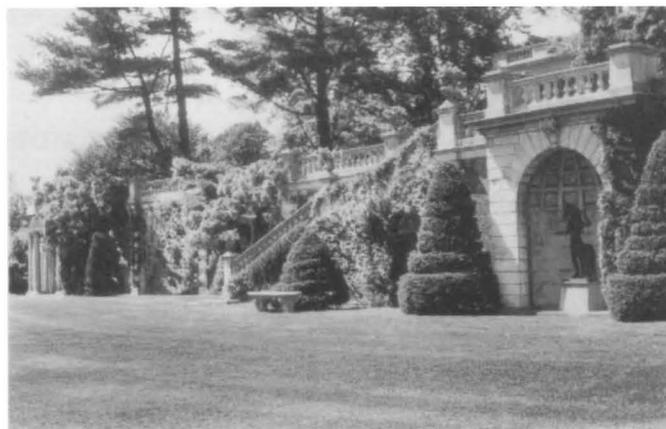
In the prehistoric Ice Age a glacier reached the boundaries of the area where the Old Westbury Gardens now stands. Its legacy: six feet of rich topsoil which turned the region into truck farms to supply the produce rows of nearby New York City. Shortly after the turn of the century Mr. John S. Phipps, a tycoon of the era, purchased 400 acres of this farm land. It was absolutely flat and treeless. Mr. Phipps' wife had been born in England

trees and shrubs. Two examples: full-grown shade trees were handled bare-rooted in a process in which each individual root was burlapped; an allee of 200-year *Buxus sempervirens* boxwoods were moved from Virginia. Grading changed the landscape from monotonous flat to pleasing slopes and valleys. Fountains introduced the sound of water. Expense was no object; instant gratification was the goal. In an incredibly brief time the gardens of Old Westbury were mature, and magnificent, recognized as one of the most beautiful in America. The Phipps family spent only six weeks a year at Old Westbury, three in the spring and three in the fall blooming seasons.

In later years estate and gardens deteriorated; but in mid-century both were restored with great care to their



The 100-acre Old Westbury Gardens complex is open to the public. It blooms with seasonal color from May through October. (Photos: Old Westbury Gardens)



Individual gardens are filled with examples of skilled gardening art, including topiary and, at right, 200-year old boxwoods from Virginia

garden on loan from Old Westbury Gardens for the occasion; an analysis of how to approach and then correct a horticultural problem; and a fascinating question-and-answer period in which he gave some refreshingly frank answers.

Bowden opened his talk with this ominous statement: "To get to Old Westbury Gardens it is first necessary

and, starting in 1905, the English architect George Crawley designed the plan which would transform the vegetable fields into a great estate replete with distinctive yet harmonious gardens which would bring back to Mrs. Phipps memories of her childhood.

The nature of the soil made it possible to transplant safely large specimen

original splendor. In 1958 the 100 acres which contain house and gardens were opened to the public under the auspices of the Old Westbury Gardens Foundation.

House and Gardens in Color

The "picture show" included details of the building of the house and gardens

as both progressed. There were interior views of the many great rooms of the house, and the many beds of the individual gardens which make up the whole. The two-acre Walled Garden is the "jewel in the crown," said Bowden. It is divided into more than 20 individual beds of about equal size. Each bed is planned and planted by the professional staff so that plants are harmonious in height and color and each plant receives the amount of sunlight and/or shade needed.

Statuary of different periods is placed effectively about the gardens; and there are many brilliant examples of garden seasons from Spring through Fall and the seasonal colors for stone, bricks, marble and iron work in the restoration.

The average gardener will find innumerable ideas for the small to medium garden in this great garden.

Consider the Total Environment

Bowden chose a problem with the boxwoods to emphasize that successful treatment depends not only upon addressing a single symptom but also upon making sure that the total environment is right for the plants concerned. When the boxwoods, which Old Westbury Gardens counts among its treasures, showed signs of distress, the first step was to evaluate every environmental factor before any corrective action was taken.

Bowden illustrated this portion of his talk with a series of three charts, which he had been given permission to reproduce.

The first task was a thoroughgoing analysis of the environment (Table 1).

To implement the recommendations, Dolomite limestone was used because it adds magnesium as well as calcium to the soil. The measurements are pounds of ground limestone, etc., per 1000 sq.ft. The limestone would bring the soil nearer to the neutral range preferred by boxwood. Here Bowden warned: "When you change the pH of soil, never change it more than 1 point a year. Plants cannot adjust to too drastic

① SITE

Environment - Sunny
 Drainage - Excellent
 Texture - Loamy
 Topography - Valley

SOIL TEST RESULTS

pH	4.7	Low
Phosphorous	37	Very High
Potassium	137	High
Magnesium	125	Medium
Calcium	1170	Medium

RECOMMENDATIONS

Lime	420	#/1000 Sq.Ft.
Nitrogen	1.0	
Phosphate	.05	
Potash	1.4	

change. When change is needed, make it slowly. Increase the soil fertility, if that is indicated, and if needed, improve general overall care."

Table 2 shows the results of a scientific analysis of the soil done at Cornell University in New York. The analysis revealed the presence of nematodes, which are roundworms or eelworms too small to be seen by the naked eye. Nematodes were found by two methods:

② NEMATODES IN 100 cc SOIL

Nematode	Sugar	
	Pie Pan	Flotation Centrifuge
Aphelenchus		120
Ring	21	
Spiral	34	
Lance	19	
Lesion	64	
Stunt	5	
Tylenchus	7	4

Table 3 shows methods of treatment for nematodes.

Bowden noted that the treatments had been effective. The nurtured boxwoods of Old Westbury Gardens now seem in good health as they grow ever more stately in their third century.

Narrow "Window of Opportunity"

"Inspect boxwood for presence of insects such as leaf miners and spider

③ ORGANOPHOSPHATES

Rapidly degraded in soil
 Cholinesterase inhibitor
 1. Nematicur®
 2. Disyston®
 3. Mocap®

CARBAMATES

Totally soluble in water
 Useful on many crops
 1. Furadan®
 2. Vydate®

mites. If there is evidence of either remember that there is a very narrow 'window of opportunity' for the use of chemical sprays. The period of time for effective use of a contact spray may be as brief a period as two to three days. The systemic sprays may be effective over a longer period but such sprays contribute to soil pollution. The total ecological effect must be considered," repeated Bowden.

He also pointed out the difficulty of making sure both upper and lower leaf surfaces of all leaves have been contacted in the case of leaf miners; and the difficulties presented by the rapid proliferation of spider mites. He stressed again the long-term benefits of basic good garden practices which keep plants healthy. He reminded all gardeners of the need to keep accurate garden records as a guide to both planning and action.

Sample Questions and Answers

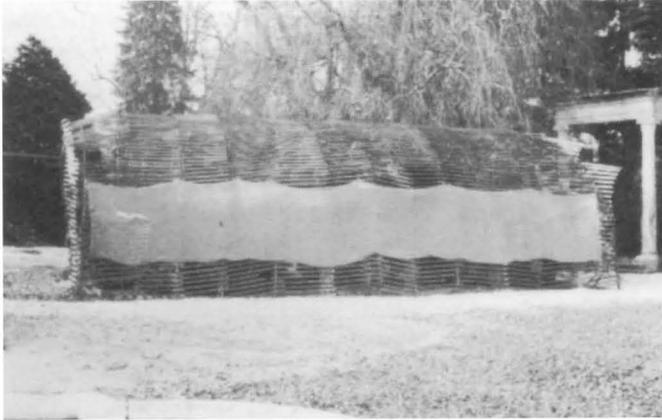
Q. What kind of grass is there at Old Westbury?

A. Crab.

When the delighted and sympathetic laughter had died down, Bowden amplified his one-word answer. He explained that bluegrass is sowed regularly, but loses out to the aggressive crabgrass. He then added, "When mowed regularly, it doesn't look bad."

Q. How often is the grass watered?

A. Not often. The water situation on Long Island is so critical that water cannot be used just to keep the grass green....When rainfall is scant, the grass browns.... and that's not a bad color.



It takes 5 to 6 weeks to erect burlap and snow fencing to give the boxwoods protection (while still admitting air) from winter winds and heavy snows common on Long Island. When snow comes early, garden crews start as early as 2 A.M., to brush it off gently. Note that neither fencing or burlap puts weight on boxwoods. (Photos: Old Westbury Gardens)

Q. Does Old Westbury grow all its own plants?

A. Yes. All bedding plants, all annuals and perennials, are grown in strictly functional greenhouses and in growing beds... These are not included in the tour.

Q. How large is the Old Westbury garden staff?

A. The regular staff numbers 15.

While I was at Old Westbury Gardens we initiated an intern program, limited to 12. In this program, which lasts from 15 to 20 weeks, young men and women interns learn about plants by working with them. They learn good gardening skills and practices while they work with the staff. It's a mutually helpful undertaking. Since I've been away from Old Westbury, I've

been happy to hear from several who completed the course and are now managing gardens on their own.

Mary Gamble is a founder and former President of The Boxwood Society of the Midwest and a former Vice-President of The American Boxwood Society.

Proper Plucking No, Not Chickens—Boxwoods

Stephen D. Southall

Plucking, the selected removal of small stems from boxwoods to facilitate air circulation, light penetration and inner growth of leaves, is an integral part of any preventative maintenance program for boxwoods. In addition to fostering the health of the parent plant, plucking provides a source of cuttings for propagation. This paper will focus first on propagation and the principles which are important in order to achieve quick and reliable rooting results. Secondly, it will concentrate on the process and benefits of plucking.

Propagation

There are two optimal times of the year to root *Buxus sempervirens* 'Suffruticosa'.. Late February / early

March after the major freezes of winter are over and before the new growth comes out is an excellent time. The other optimal rooting period is late June or early July after the new growth has matured. Our experiences of rooting at English Boxwoods of Virginia have been primarily during July. This timing is not based on a preference that July is better than February, but because we have more time in July than in February to do the rooting.

Cuttings can be taken from established plants at either of these times. Taking these cuttings accomplishes two purposes. It thins the parent plant, allowing light and air to circulate within it, and secondly, it obviously gives the beginnings of some fine new

plants. One reason to root in February is that the parent plant fills in very quickly, with new growth, any gaps created by the thinning process. If July is chosen as the thinning/rooting time, one has to wait almost nine months before the new growth appears. A small flush may occur in the fall, but this is typically not a significant growth period nor a desirable time to encourage new growth. New growth in the fall is very easily damaged by early frost and freezes. Although this damage does not hurt the plant, it affects its appearance until the spring growth covers it up.

The size of the cuttings which are taken is a topic which is open for debate. Some people root very small

cuttings averaging around 2 or 3 inches in length. There appears to be two reasons for their choice of the smaller cuttings. One is that they think that the smaller cuttings develop roots easier than the larger ones, and secondly, they think that the smaller cuttings develop into a more well rounded, global plant than the larger cuttings. My preference is to take cuttings which are approximately 4 to 6 inches in length. Again, there are two primary reasons for this choice. One is that I have found no significant difference between the large vs. small cuttings in terms of either the quality, the percentage, or the rate of rooting. Secondly, I prefer the larger ones because with a 6-inch cutting I have a two-year head start in growth over a 2- or 3-inch cutting. The roundness of a plant appears to me to be a function, not of the size cutting that one starts from, but of the direction and amount of sun that the plant receives. If the new plant is crowded very close with others, such as might be the case in a container growing situation, the plant will tend to grow up and will not broaden and round out. On the other hand, providing sufficient room around the plant for sun stimulates side growth and contributes to a well-rounded appearance.

These cuttings are placed in a shady, sandy, moist location. The amount of moisture and shade which is available to the rooting bed will determine how much watering and artificial shade needs to be provided. A low area in a woods is an ideal location especially if the cuttings are placed near a stream or area which stays continuously moist. Under these conditions minimal care of the cuttings would be necessary. After placing them into the ground, a light layer of pine needles, which still allows light to filter in, would probably be sufficient protection to allow them to root. The basic concept involved in this phase is that the plant can not lose water faster than it takes it in. Since it has no roots to take water in, shade, protection from wind, and constant moisture are very important. The

cuttings are placed in the ground no less than 1 inch deep and no more than 3 inches. If the ground is sufficiently soft for the cutting to be "stuck" in, packing the ground will probably not be necessary. On the other hand, if a hole has to be made with a nail for the plant, then one should pack the hole tight around the stem. This facilitates moisture transfer between the soil and the stem.

Not all of us have these moist, shaded, low-lying wooded areas with streams trickling through them. Approximating this ideal environment then is the best that can be done. Areas around the typical home which may be appropriate include a predominately shaded garden area or bed, or even under a deck or set of steps. In this environment, soil may need to be brought in or the cuttings could be placed in pots of an appropriate soil mix. The soil for rooting should be well drained and loose. Some suggest 1/3 sand, 1/3 peat moss, along with 1/3 of the soil that is already in the area. My test for an acceptable soil mix is determined by dampening the soil, then squeezing a handful of it. Upon opening your hand, the mix should somewhat fall apart. I am letting you interpret my use of the word "somewhat."

On a commercial basis, where the ideal conditions above do not exist, cuttings can be rooted in the direct sun of July and August. While the cuttings are being put in they are continuously kept moist, and are covered with shade cloth constantly. An automatic watering system mists the plants three to four times a day in the initial stages. This schedule is gradually reduced over time. Shade cloth supported by hoops, shades the plants from the direct rays of the sun.

Regardless of the location of the rooting beds, cuttings develop roots very quickly. In mid-summer, roots are often visible on a cutting two or three weeks after they have been placed in the beds. Within six weeks cuttings are often "difficult to pull up," which indicates that they do not need to be

pulled up, and you know that the roots are there. For optimal growth, cuttings should be removed from the rooting beds and placed in a more permanent location prior to their spring flush of growth. March is an excellent time to transplant while the cuttings are still dormant. They will then flush with the coming of spring. It is best to transplant either before the new growth flushes or after it has hardened off around July 1.

Plucking

In a preventive maintenance program for boxwoods, the plucking or thinning referred to above is a high priority. When carried out on a regular basis, this process promotes the health of a plant by allowing the sun to penetrate and air to circulate within the body of the plant. Plucking is accomplished by reaching into the plant and breaking out stems from 2 to 8 inches in length over the entire area of the plant. Obviously the size of the stems which are broken depends on the size of the plant. In plucking smaller plants up to 15 inches, smaller stems 2 to 4 inches should be chosen for breaking. When the plants are 15-24 inches then larger stems 4 to 6 inches can be broken, and with plants above 24 inches, the stems can be 4 to 8 inches without hurting the appearance of the plants. The process is similar to a barber or stylist thinning hair. The goal is to lighten and thin the plant creating small openings for sun and air to filter in.

Boxwoods which are grown in the direct sun have a greater need for thinning than those grown in partial shade. The sun-grown plants tend to develop very dense, thick foliage which prevents the light and air from entering the plant. Often when opening and observing the plants, one finds piles of dead leaves caught in the middle of the plant and aerial roots which have developed because of the moisture held by the dead leaves. Circulating air dries out the interior of the plant and does not allow dampness to remain. This dryness prevents the growth of any

aerial roots. The interior of plants should be hosed out with a strong stream of water periodically in order to clean out any accumulation of dead leaves and other debris. The cleanliness of the interior of plants is critical in the prevention of diseases which thrive in dampness.

Another characteristic of these plants grown in direct sun without any thinning is that the green leaves are only a couple inches deep on the plant. Because light can not penetrate the plant, the leaves can only grow on the outside. Plucking allows light to penetrate and leaves then develop deeper within the plant. A depth of 6 to 8 inches is not at all uncommon for a healthy plant and may even extend 12 inches deep on a boxwood which is 30 inches in height and diameter.

Plucking can be done at any time of the year without hurting the plant. However, as noted above, late winter/early spring has some advantages. If plucking is accidentally too heavy in places, the growth of spring will quickly cover up most mistakes. It is very difficult to describe how much to

thin a plant. One should thin evenly over the entire surface of the plant and continue to thin until the exterior texture of the plant is very loose. This looseness provides pathways for the light and air.

The shape of a plant can be modified over time through regular plucking. Often a boxwood may be growing over a walk or through a stair step railing. In these instances, one can pluck very heavily in the area that needs to be taken back. This does not mean that you take it completely back in one plucking leaving a bare-sided plant. One can pluck a plant two or three times a year while still leaving the boxwood looking fairly normal. The principal is the same as in one's checking account. If the rate of plucking is heavier than the rate of growth, the plant will diminish in size over time. A large scale massacre of a plant is therefore not necessary, simply consistent plucking in strategic locations will change a plant to your desired size and shape.

Hopefully, by this time it is obvious that one never "shears" boxwoods with

a hedge trimmer. It is often said that one should never say "never". However, I believe that with respect to this topic I can say "never use shears." Shearing violates all the principles which plucking attempts to accomplish. Only the outer layer of leaves is removed in shearing. The plant then is just as dense as it was before shearing. In addition, the shearing will contribute to new growth only on the outside of the plant which results in the plant having a greater outer density than prior to shearing. This greater density obviously inhibits light penetration and air circulation. Also, contrary to plucking which facilitates the inner growth of leaves, shearing only promotes outer growth. Shearing also destroys the natural appearance of boxwoods. It creates a very smooth, manicured look which is very different from the traditional textured exterior appearance of a boxwood.

Mr. Southall is a Director of The American Boxwood Society and is co-owner of English Boxwoods of Virginia.

Help Needed on Three Counts

Searching for Winter-Hardy Boxwoods

Mary A. Gamble

The Boxwood Study Group of the St. Louis Herb Society was started in 1969. Seven years later, in 1976, it became The Boxwood Society of the Midwest, dedicated to furthering the use of boxwood in Midwestern gardens and landscapes. To accomplish this, it was necessary first to persuade area gardeners that the entrenched idea "You can't grow boxwood here" was wrong. To that end we initiated, at the Missouri Botanical Garden in St. Louis, Missouri, a test program to find boxwoods which, with reasonable care, would, more often than not, survive in our "chancy" weather. As an educational

rather than a marketing body, our focus has been on convincing Midwestern gardeners and nurserymen to propagate named boxwoods from cuttings we have made available in necessarily limited quantities at modest costs. We have named nine of the boxwoods in order to give them an identity. In short, we have engaged in a long-range program to break down established resistance; to assemble and test scores of boxwoods; to teach propagation and care of boxwood; and, underlying to all, to increase appreciation of boxwood as the most distinctive and versatile of broadleaved evergreens. We have had

considerable success, as well as disappointments and failures. Our faith in *Buxus* remains firm, in spite of this most recent winter of 1989-90, which in some ways, has been the most unkindest of all.

We are convinced that future progress lies with a better understanding of the named boxwoods and their individual characteristics and the strengths and weaknesses of each. We believe there are three ways in which *The Boxwood Bulletin* of the American Boxwood Society—the respected national and international spokesman for *Buxus*—could help. It could

discourage the use of the general and meaningless terms “American” and “English” boxwood. It could lessen emphasis on ‘Suffruticosa’, a splendid boxwood which, all too often, is unreliably hardy in the Midwest. It could give greater emphasis to the Asian boxwoods, which have proved to be measurably hardier than their European homologues in the Midwest.

Consider the familiar question, “What is the difference between ‘American’ and ‘English’ boxwood?” The question is a natural one, but it is based on a false premise. There is no native North American boxwood. Boxwood, like most of us, was an immigrant. It was brought here in the mid-17th century, 1652 being the earliest recorded date. The English, Dutch, and French settlers brought in “slips” of favored boxwoods from their home gardens. Often it was called “English,” “Dutch,” or “French” in its new setting according to the settlers’ countries of origin. Boxwood has been in North America for almost 400 years, but in the plant world, it must have been found growing in the wild to be considered native.

The first boxwood to reach North America was a European native. We deny the full breadth and depth of its history when we limit it to “English.” Boxwood is as much a part of the garden scene in Ireland and Scotland as it is in England. The late Dr. Edgar Anderson believed that the Druids, a pagan people who revered trees, carried the boxwood with them when they crossed the English Channel from the continent. Some 20 years ago a British scientist proved by carbon dating that *Buxus* had been growing in England for at least thirty thousand years, the same length of time it is known to have grown on the continent.

With one exception, the boxwood of Europe belongs to a single species, *Buxus sempervirens*. (The exception is *Buxus balearica*, native to the Balearic Islands in the Mediterranean.)

Carolus Linnaeus, the great Swedish botanist, named the European species in

1753. In his *Species Plantarum*, published in that year, he listed two known boxwoods as: *Buxus suffruticosa*, a dwarf form, and *Buxus arborescens*, a tree form.

The ancient Greeks and Romans contributed the generic name, *Buxus*, rooted in the Greek and Latin terms for a small decorative box designed to contain jewels, cosmetics and the like. The descriptive specific name *sempervirens* recognized the plant’s dominant characteristic: its evergreen foliage. *Buxus sempervirens* has an aura of timelessness and stability, reflecting the centuries it has graced the gardens of Europe and the British Isles, and of our own country.

On count two, we do not mean to denigrate *Buxus sempervirens*. We admire it. We share the opinion that it is indeed a jewel among boxwoods. We wish we could grow it. Unhappily we cannot place it in our gardens with any confidence that it will endure. Given the perfect setting and a series of mild winters, it may thrive. But come the inevitable “terrible winter” and it either is killed or so heavily damaged that removal is the only recourse. Therefore, we must look for homologues, for boxwoods that will fill the same garden spaces as ‘Suffruticosa’. There are a surprising number. We suggest objective comparison of boxwoods similar to ‘Suffruticosa’ will reveal cultivars that are lesser ‘jewels’ historically, but more than equal for practical use.

The Boxwood Bulletin once published a photograph of the herbarium sheet on which Linnaeus had mounted his type specimen of *suffruticosa*. It shows clearly the small obovate leaves with some of the obtuse tips lightly retuse. Leaf color, of course, does not show, but we know it to be in the Green Group range as defined by the Royal Horticultural Society Colour Chart. To be precise, its leaves match that chart’s Green Group 138A for upper leaf surface and Green Group 138B for lower leaf surface. This is a medium green. Internodal length, affecting

density, is medium, is 7 to 9 mm.

Compare these physical details with those of just two homologous *Buxus sempervirens* cultivars: ‘Myrtifolia’, first mentioned in an English *Catalog of Trees and Shrubs* in 1782, and ‘Joy’, a century-old boxwood not named until 1984. They can be used wherever ‘Suffruticosa’ is used and they have the hardiness for the Midwest.



An 11-year old *Buxus sempervirens* ‘Joy’ in the ABS Memorial Garden (Photo: Robert Frackelton)

‘Myrtifolia’ has small- to medium-sized leaves which are an elegant elliptical to lanceolate in form. Its green is a deep green with a hint of yellow. Its internodal length is medium. In our experience the height seldom exceeds 3 1/2 feet. With ‘Joy’ leaves range from small to large and a uniformly lanceolate, giving it a tidy look. Internodal length is short, resulting in a great density. Its green is in the same group as that of ‘Suffruticosa’. On these points, these boxwoods compare favorably with ‘Suffruticosa’. Space doesn’t permit further comparisons. All we ask is that gardeners look at the possibilities in both the European and Asian boxwoods for substitutes for ‘Suffruticosa’ in situations where this great boxwood has little chance of long-time survival.

In the Midwest, survival is the name of the game, and that brings us to the Asian boxwoods. They are measurably hardier in this treacherous climate than their European counterparts. The first boxwood to make a real dent in the hard wall of resistance, or indifference, to boxwood, was Asian. It was the plant which the late Dr. Ernest H. Wilson brought from near Seoul, Korea, to the Arnold Arboretum in 1918. By happy circumstances, he was a friend of the late Mr. George Pring of the Missouri Botanical Garden (MBG). Both men had worked at the Royal Botanical Gardens, Kew. Because of that friendship, he sent one plant, labelled *B. microphylla koreana*, to the MBG. A large clone propagated from that plant soon appeared on the grounds and in area gardens. For a time in the 1940s the only boxwoods on the MBG grounds were Edgar Anderson's European Balkans and Wilson's Asian Koreans.

The boxwoods from Korea proved equal to Midwest weather. The late Mr. Paul Kohl, Garden Floriculturist, praised it highly. He once said, "In 40 years of working with Korean boxwood, I never knew it to die of winter damage." Today, this boxwood's botanical name has been changed to *B. sinica* var.

insularis, but it is still known horticulturally and popularly as *koreana* or Korean boxwood. It broke the jinx which had held boxwood back in the Midwest. It survived!

Buxus microphylla var. *japonica* had been in the western world since the mid-19th century, but it did not reach the MBG until the late 1930s. Mr. Kohl used it for the flower shows he designed for the MBG and soon it began to appear in local gardens.

Both the Korean and the Japanese boxwoods had what many gardeners considered a fault: they bronzed heavily in winter. Some gardeners objected; other accepted it as a mark of the changing seasons (which most Midwesterners like). In any event, the characteristic cheerful yellow-green of the foliage returned in earliest spring and, if there had been some winter damage, chances were good that it was superficial and easily handled.

The roster of Asian boxwoods grew rather quickly. In recent years, exciting new cultivars have been introduced. Some of these bronze lightly, some not at all; and several are in the range of greens close to those of the European boxwoods. Overall, they offer sizes from dwarf through intermediate to

large plants, so that virtually any garden design concept can be accommodated. There is also a small group of cultivars of intermediate species developed in Canada. These are unquestionably hardy. *Buxus* X 'Green Velvet' and *B.* X 'Green Gem' come to mind.

Space doesn't permit descriptions that do justice to these boxwoods individually. We have worked successfully with the following, either in the MBG nursery or in personal gardens: *Buxus sinica* var. *insularis* and *B. sinica* var. *insularis* 'Wintergreen'; *Buxus microphylla* var. *japonica* and its cultivars 'Morris Midget' and 'Green Beauty'; and the *B. microphylla* cultivars 'Compacta', 'Curly Locks', and 'Sunlight'. More information about each of these boxwoods of Asian ancestry, and others we have missed, surely would widen the horizon of *Buxus*.

The more we view "Man's oldest garden ornamental" (to borrow a phrase from *The Boxwood Bulletin*) as an individual plant, rather than *en masse*, the greater our understanding of each will be, and the more intelligently we can place them in our gardens. The individual approach lets the individual gardener make the choice which best satisfies his or her personal likes and needs.

CORRESPONDENCE



A farm near Lexington, Virginia, with a renovated 1700s log house where 170 *Buxus sempervirens* 'Suffruticosa' were planted around the foundation and to outline the parking area. They were dug with a backhoe from Brown's Mountain, Amherst County, Virginia because the ground was too rocky to dig by hand. A backhoe was also used to dig trenches to set them in for replanting. (1988 photo: John Cash)

Graduate Student to Redesign ABS Memorial Garden



THE UNIVERSITY OF VIRGINIA

School of Architecture
Campbell Hall
Charlottesville, Virginia 22903

May 2, 1990

Mrs. Robert Frackelton
President
American Boxwood Society
1714 Greenway Drive
Fredericksburg, VA 22401

Dear Mrs. Frackelton:

I wanted to take this opportunity to thank formally the Boxwood Society for so generously supporting the student internship for the design of the Boxwood Memorial Garden. We had a tremendous response within the landscape architecture division from many students who expressed interest in working on this unique and challenging project.

I am very happy to report that our top candidate in the selection process has accepted the position. Liz Sargent is a second-year graduate landscape architecture student. She brings to the project a degree in botany and professional office experience as well. She is a delightful person and one of our most enthusiastic and talented students. I look forward to working with her over this summer and am positive that she will do an excellent job. A copy of her resume is attached to tell you a little more about her background and experience.

Thank you again for your generosity in supporting this work. The Boxwood Memorial Garden is such a wonderful design challenge. We look forward to working with you in developing further the plans for the garden over the next summer months.

Sincerely,

Nancy Takahashi
Department of Landscape Architecture

NT/s



Courtyard of the White House of the Confederacy, Richmond, Va. Buxus sempervirens 'Suffruticosa' and a geometrical parterre, with Vinca minor groundcover and Liriope muscari edgings (1989 photo: Carter Frackelton)

Resumé: ELIZABETH A. SARGENT

WORK EXPERIENCE

6/89 - 8/89: Lila Fendrick, Garden Design and Landscape Architecture, Washington, D.C.

Landscape Architect, Consultant for residential design firm. Duties included: Design, drafting and rendering, planting designs, construction details, measured base plans, elevations and conferal with nurseries for residential clients in Washington, D.C.

10/87-5/88: Carroll R. Johnson & Associates, Cambridge, Mass.

Specifications and Supplies Manager for large Landscape Architecture firm. Specification work, plant lists, drafting and rendering, monthly job reports, lecture writing.

11/85-6/86: Horticulture Magazine, Boston, Mass.

Staff Assistant for editorial, advertising and photography

5/86-6/86: Arnold Arboretum, Boston, Mass.

Assistant for Herbarium Collection and Pressing Project.

1/85-6/86: Fournier Laboratories, Roxbury, Mass.

Executive Secretary to President of American liaison office of French pharmaceutical company. Investigation of U.S. markets for possible introduction of French products, management of clinical trials for lipid reduction agent, research.

EDUCATION

6/88-present: University of Virginia, Charlottesville, Va.

Masters Candidate in Landscape Architecture.

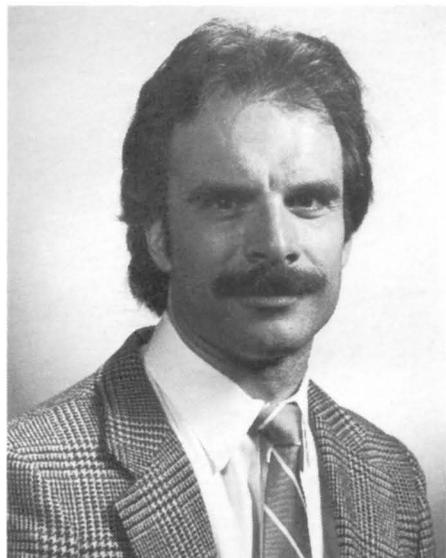
1979-84: Connecticut College, New London, Conn.

B.A. (Botany, American History), Dean's List

1975-79 Phillips Academy, Andover, Mass.

Winter 1979: Semester in Mexico.

Two New Members of ABS Board of Directors



Alex X. Niemiera

Newly elected as a Director of the American Boxwood Society, Alex X. Niemiera received B.S. degrees in biology and horticulture from Roanoke College and the University of Kentucky, respectively.

He earned his M.S. and Ph.D. degrees in horticulture at Virginia Tech in the area of soil-plant relationships of woody plants.

Alex then was a member of the faculty at Arizona State University for three years where he taught horticulture courses and conducted irrigation research of landscape plants.

In 1989 he joined the horticulture faculty at Virginia Tech, where he teaches landscape plant courses and conducts research on plant nutrition and irrigation of container-grown plants.



Mrs. Tyra Sexton

Tyra was born in Seoul, Korea and spent her early teens in Monrovia, Liberia. Her parents retired in 1975 and the family settled in Fredericksburg, Virginia. While studying Horticulture at Northern Virginia Community College Tyra met Steve Sexton of Fredericksburg, and they were married a year later.

Steve moved the family to a farm in Stafford, Va., where they raised a flock of 60 sheep. After the birth of their son Stephen in May 1983 (one lamb too many) they put aside farm life and moved the family to Fredericksburg.

Tyra is completing studies in Landcape Preservation and Design at George Washington University, with frequent trips to Harvard Graduate School of Design to hone her design skills. Tyra is the owner of a landscape design firm in Fredericksburg. She is on the Board of Directors for Historic Fredericksburg Foundation and an active member in the gardens at Kenmore. "As a child I always loved the smell of boxwood and brick," she says, and so began a love of boxwood and old gardens.

Spring Board Meeting

The ABS Board of Directors met at the home of President Mrs. Robert L. Frackelton in Fredericksburg, Virginia, on Monday, March 19, 1990. Present, in addition to the President, were First Vice President Lynn Batdorf, Treasurer Mrs. Katherine D. Ward, Secretary Mrs. Joan Butler, Directors Mr. William Gray, Cdr. Phillip Larson, Mr. Richard Mahone, Mr. Stephen Southall and Mr. Dale Taylor. Ex-officio Director Dr. Edward F. Connor, Director of Blandy Farm, the State Arboretum of Virginia, also attended.

The President called the meeting to order at 10 A.M. The minutes of the fall board meeting of September 25, 1989 were approved as published in the January 1990 issue of *The Boxwood Bulletin*, (Vol.29, No. 3, p. 56).

The Treasurer's Report was approved as presented. Balances were: checking account \$11,003.55; certificates of deposit \$28,815.06. The full report is available on request.

Tour: Mr. Mahone is working on a garden tour in the spring of 1991 in Gloucester and Matthews counties, with headquarters in Colonial Williamsburg. The preferred dates would be April 26, 27 and 28, 1991, if possible.

Annual Meeting: Mr. Stephen Southall was asked to speak for about 45 minutes and to answer questions following his talk. Dr. Edward Connor offered to present information on the planning of the new amphitheater and the necessary relocation of some plants in the Memorial Boxwood Garden. The meeting will conclude with the traditional boxwood plant auction.

Mr. Dale Taylor noted the beauty of the plant which has been known as Kingsville 2A and suggested that an opportunity existed to register a new named cultivar. Mrs. Frackelton offered "Quiet End" as a possibility; it was the name of Henry Hohman's home. It would be helpful to publicize

IN MEMORIAM

Mrs. Eustis Emmet
Life Member

this plant with a photograph of the specimen at the U.S. National Arboretum and a description of its characteristics of growth habit, leaf shape and color, as well as mature size.

Mr. Batdorf noted that between 1870 and 1940 much taxonomic work was done on methods of determining species in boxwood, especially by Mathou in 1940 and Hatusima in 1942. The primary distinguishing characteristic of species is the flower.

Budget: Mr. Taylor will circulate the 1990-91 budget to the Board for approval by April 30, so that it may be presented at the annual meeting. The *Buyers Guide* project was very successful; more than 2% of the 14,000 who received the mailing responded with listings for the Guide, and with financial support such as memberships and donations. An advertisement for the third edition of the *Guide* appeared in *Fine Gardening* magazine. Although its printing has been delayed, it will be available at the annual meeting. The Society now has 839 members.

Boxwood Bulletin: The April issue is being printed and will appear in time to announce the annual meeting on May 15-16.

Correspondence: A letter had been received from a Swedish man on behalf of the Estonian Horticulture Society, requesting a free membership and information. A packet of past issues of the *Bulletin* and a membership will be sent.

Handbook, Monograph and Registrar: Mr. Batdorf distributed copies of a new Hardiness Zone Map, the first since 1965. A discussion followed on ways of distinguishing boxwood cultivars one from another. A hi-tech method would be an asset in establishing the identification of plants. Some work on venation has been pursued by Dr. Charles Krause to provide "finger printing" by electron microscope. It was moved, seconded and approved unanimously to seek a proposal by the Research Committee involving Dr. Krause at the USDA Forest Laboratory in Delaware, Ohio.

Mr. Batdorf reported no further progress on the *Boxwood Handbook*. His work on the *Monograph for Buxus* is producing the need for changes in citations.

Memorial Garden: Cdr. Larson noted that the effects of three drought summers and bitter cold in December 1989 are still being observed; *B. sempervirens* 'Suffruticosa' and several young plants only recently set out in the garden show severe damage. Most other plants have survived well without additional water or special attention. These hard conditions serve as opportunities to test hardiness on varied sites.

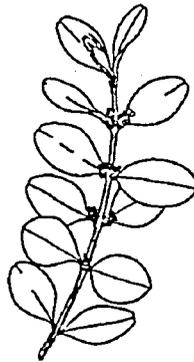
Some basic decisions are needed on how best to organize the boxwood collection for education and visual appeal: whether by species, by size or by landscape uses. Ease of pedestrian access to plants is important. Any display must be aesthetically pleasing. The present displays emphasize a collection of specimen plants of mature size, and this factor is important to gardeners.

After discussion, it was voted unanimously to support the State Arboretum of Virginia with a contribution of \$3,000 for a graduate student intern to work on final plans for rearranging the boxwood garden.

After the meeting was adjourned, the Board enjoyed a most delicious luncheon provided by the President.

Respectfully submitted,

Joan Butler, Secretary



Annual Meeting Minutes May 1990

Evening Program: Dr. Edward F. Connor addressed the plans for the amphitheater and the revised ABS Memorial Garden and presented Ms. Nancy Takahashi, Department of Landscape Architecture and Elizabeth Sargent, the graduate student who received the ABS grant to design the garden. (See page 10.)

A reception followed the presentation and a question-and-answer period. Refreshments were provided by Mr. Dale T. Taylor and Mrs. Robert L. Frackelton.

Annual Meeting: On May 16, 1990, the 30th annual meeting of the ABS was held in the library at the Blandy Experimental Farm of the University of Virginia, in Boyce, Virginia. The meeting was called to order by the President, Mrs. Robert L. Frackelton, at 11:15 am. Those attending had enjoyed a tour of the Boxwood Memorial Garden conducted by Cdr. Phillip D. Larson. Mrs. Frackelton expressed gratitude to the University, to Dr. Edward Connor, Director of Blandy Farm, and to his staff for welcoming the Society and its members to this fine facility, and Mrs. Becky McCoy and her friends for providing lunch for the group.

The minutes of the 29th annual meeting were approved as published in *The Boxwood Bulletin* (Vol.29, No. 1, p. 16). The Treasurer reported a balance of \$8,547.21 in the checking account and \$29,376.45 in two certificates of deposit. The full Treasurer's report is available on request.

Committee Reports; New Business

Boxwood Bulletin: The editor, John S. McCarthy, lives in St. Louis and was unable to be present.

Buyer's Guide: Mr. Dale Taylor reported that a large mailing to growers of boxwood had produced many new listings in the *Guide*, as well as new



Mr. Scot Butler, former Editor of The Boxwood Bulletin (Photos: Mrs. John Hart)

memberships, contributions and purchases. The new third edition is now available for \$8.00 from P.O. Box 85, Boyce, VA 22620.

Memorial Garden: Cdr. Phillip Larson related a brief history of boxwood plants at Blandy Farm: in the 1960s small plants given by J. T. Baldwin, Henry Hohman and others were lined out in the "Old Nursery" where they grew vigorously until transplanted in the late 1970s to the newly-designed Memorial Garden. There were 3 species, 1 variety and 42 cultivars. Now, in 1990, there are 5 species, 1 variety and 89 cultivars. In the future there will be additions of at least 3 more species, 2 varieties and 50 more cultivars. With the development of the new landscape plan, a new collections policy will be presented for the *Buxaceae* family. The committee continues to work on propagation to provide back-up plants and cuttings for distribution as well as plants for the ABS auction. New donations of named plants not now in the garden would be welcome.

Handbook: Mr. Batdorf was unable to attend the meeting. The text of the *Handbook* is being entered on computer

and will be edited and expanded.

Monograph: An article will appear in *The Boxwood Bulletin*.

Registrar: No report was given in Mr. Batdorf's absence.

Research: Mr. William Gray recalled the Society's \$500 annual support for two projects at Hampton Roads Agricultural Experiment Station in Virginia Beach under the direction of Dr. Tom Bankor: (1) a field study begun in 1982 has tested growth regulators, soil components, nutrients and specific cultivar evaluation. The original plots have become crowded by 8 years' growth and plants will be moved to create better spacing; (2) the possibility of applying tissue culture techniques to boxwood will be explored in 1990.

A cultivar evaluation and demonstration project is being undertaken at the Chicago Botanic Garden; cuttings from 10 cultivars of merit have been provided. A report will appear in *The Boxwood Bulletin* on success in propagating these cuttings.

State Arboretum of Virginia (The Orland E. White Arboretum at Blandy Experimental Farm): Dr. Edward

Connor thanked the members for the Society's agreement to provide funds for a detailed landscape plan for an expanded and partly relocated boxwood garden. During the summer it should be possible to produce an outline of the physical locations of specific cultivars, within certain design principles for the use of boxwood plants. The process of development of the new garden will follow several phases and will not begin until 1991 at the earliest.

Nominating Committee: Mr. Richard Mahone presented the following slate of officers and directors for 1990-91:

- | | |
|--|---|
| <i>President</i> | Mrs. Robert L. Frackelton |
| <i>1st Vice-Pres.</i> | Mr. Dale T. Taylor |
| <i>2nd Vice-Pres.</i> | Mrs. Malcolm Holekamp |
| <i>Secretary</i> | Mrs. Scot Butler |
| <i>Treasurer</i> | Mrs. Katherine D. Ward |
| <i>Registrar</i> | Mr. Lynn R. Batdorf |
| <i>Directors (three to serve until 1993)</i> | Mr. Lynn R. Batdorf
Dr. Alex X. Niemiera
Mrs. Tyra Sexton |



Mrs. John W. Boyd, Jr., wife of ABS Director John W. Boyd, Jr.

The proposed slate was unanimously elected.

The meeting was adjourned at 11:45 A.M. and was followed by an excellent buffet luncheon served in the dining room and eaten in the porches and in the library. The light rain had no effect on the pleasant opportunity to visit with old and new friends.

A brief meeting of the officers and directors of the ABS was held immediately following the close of the morning business session. Those present were: President Frackelton, 1st Vice President Dale T. Taylor, Secretary Butler, Treasurer Ward and Directors Boyd, Larson, Mahone, Sexton and Southall.

The Executive Board consists of three officers (Frackelton, Butler and Ward) plus two elected Directors (Mahone and Sexton). Mr. Richard Mahone was appointed as 1991 Nominating Committee Chairman.

General approval was expressed for

the fall Board meeting to be scheduled in September, perhaps in Staunton.

The afternoon session reconvened at 1:15 P.M.. A most informative and entertaining talk on "Propagation and Plucking" was given by Dr. Stephen Southall, co-owner of English Boxwoods of Virginia in Lynchburg. [The text of his remarks is printed on page 5 of this issue.]

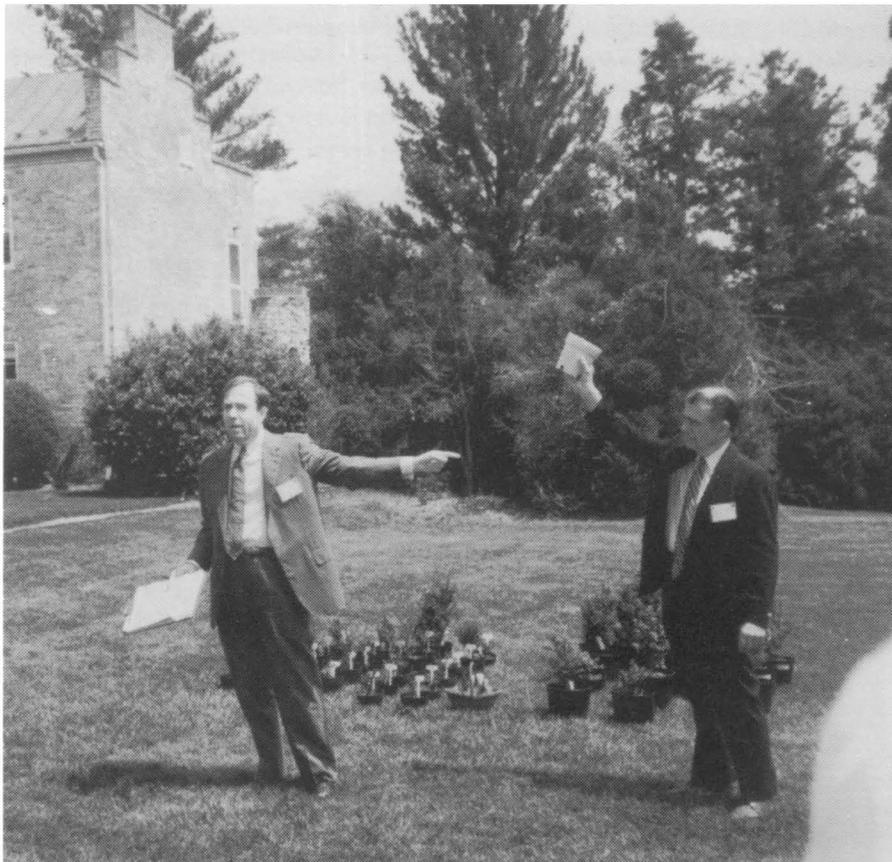
The rain had vanished and the annual boxwood plant auction, highlighted by spirited bidding under the eagle eyes of John Boyd and Dale Taylor, completed the day's events.

Respectfully submitted,

Joan Butler, Secretary

Annual Meeting Attendance List

Baden, Jeanne F.
Benoit, Mr. Milton
Bogess, Lucile
Bogess, Ralph C.
Boyd, III, John W.
Boyd, Jr. John W.
Boyd, Jr. Mrs. J. W.
Burton, Mrs. George
Butler, Mr. Scot
Butler, Mrs. Scot
Carter, Mr. Frank
Carter, Mrs. Frank
Cooper, Kaye
Culver, Mr. Robert J.
Culver, Mrs. Robert J.
deButts, Mrs. Harry A.
Dick, Mrs. Charles H.
Feil, Mr. Frank
Feil, Mrs. Frank
Frackelton, Mrs. R. L.
Gallagher, James
Gray, William A.
Griffith, Mrs. Frances
Hahn, Lee
Haldeman, Mrs. Paul
Halpin, Mrs. Gerald T.
Hart, Mr. John
Hart, Mrs. John
Hughey, Mrs. George
Larson, P. D.
Lyons, JoAnn
Mahone, Mr. Richard D.
Morrison, Dr. Graham
Otey, Mr. Charles
Plater, Mr. Richard C.
Plater, Mrs. Richard C.
Rodgers, Mrs. Antone
Saunders, Mr. Robert
Schenck, Mr. Robert E.
Sexton, Mrs. Tyra
Showalter, Mr. Joseph
Showalter, Mrs. Joseph
Smith, Jr. Mr. Howard W.
Smith, Jr. Mrs. Howard W.
Smith, Mr. Howard C.
Smith, Mrs. Howard C.
Solenherger, Mrs. Herbert
Southall, Steve
Sowder, Janet
Taylor, Dale T.
Ward, Mrs. Katherine D.
Waring, Mr. Dabney T.
Waring, Mrs. Dabney T.
Woolley, Rollin
Zapton, Steve



Boxwood auctioneers were First Vice-President Dale T. Taylor, left, and Director John W. Boyd, Jr.

The Seasonal Gardener

Practical tips for boxwood enthusiasts from Society members



Propagation:

ABS Director John W. Boyd, Jr., along with the late Dr. John T. Baldwin, Jr., advocates using "big cuttings" to get a head start on size (*The Seasonal Gardener* from *The Boxwood Bulletin*, July 1989, Vol. 29, No. 1). Mr. William N. Mays of Sunnyside Boxwood Farms also starts with larger cuttings.

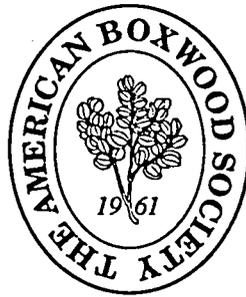
Some notes from ABS Director Richard D. Mahone: Cuttings may be taken from August to October depending upon the geographic location—at least 30 days before the first frost. Cuttings should be from terminal stems, not from laterals. Four to seven inches is a good length. Rooting hormones may hasten root growth. Media may be half sand and half organic or one third each of perlite, compost and sand. Keep misted, but not overly wet. Locate in some shade, such as the north side of a building. Winter care differs. Some have good luck just leaving the cuttings in the open ground (in shade), some use cold frames or winter the cuttings over in a greenhouse.

Mr. Dale T. Taylor, 1st Vice President of the ABS, gave a program at the Annual Meeting in 1987, followed by an article in *The Boxwood Bulletin*, October 1987, Vol. 27, No. 2. He said the three most important things to remember are 1) attitude - have fun, enjoy what you are doing; 2) attitude - plan properly and research by reading and learning the experiences of others; and 3) attitude - experiment with different methods, times, culture, etc. and compare. His most successful time has been July and

August. To transport cuttings, keep them cool and do not let them dry out. He uses a Styrofoam cooler. Keep good records. Moisture and Medium: He builds a humidity chamber using a plastic tray and small plastic pots for each cutting, bent coat hangers for a frame and a plastic film covering, such as, a bag from the cleaners.

Mr. Jack Kegley, an attorney who has great admiration for *Buxus sempervirens* 'Suffruticosa', shared some of his experiences (*The Boxwood Bulletin*, April 1988, Vol. 27, No. 4). He found the success rate using rooting hormones or not did not differ greatly. In shade versus sun the rooting rate for the latter dropped to 10%. Uncovered and watered three times a week, cuttings in rototilled soil and rototilled with peat moss (both with shade), produced 80% and 20% rooting, respectively, so peat moss was eliminated. The following spring the rooted cuttings are transplanted to full sun in a grid pattern on 6-inch centers (using wire mesh for spacing). An experiment rooting in the summer and transplanting in the fall was disastrous because the frost action heaved about 95% of the cuttings out of the ground. Also, waiting a second year to transplant to full sun, resulted in about a 50% loss. His summary: put 6- to 8-inch clippings in friable soil in July and August, in a shady place, water several times a week and 80% should have roots within six weeks.

For more propagation notes, see page 5 of this *Bulletin* for the text of Dr. Stephen Southall's talk, "Proper Plucking: No, Not Chickens—Boxwoods."



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