A quarterly devoted to Man's oldest garden ornamental



An allée of eight 35-year-old Buxus sempervirens 'Pyramidalis' frames the entrance to the Boxwood Collection at the U. S. National Arboretum. They stand fifteen feet high and are six feet wide at the base. (Story on page 68)

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April 1988 Volume 27, Number 4

American Boxwood Society

The American Boxwood Society is a not-for-profit organization founded in 1961 and devoted to the appreciation, scientific understanding and propagation of the genus *Buxus* L. There are more than 700 members in the United States and nine foreign countries.

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Non-member subscriptions for groups and institutions such as botanic gardens and libraries are \$15 by the calendar year.

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Back issues of The Boxwood Bulletin	\$ 4
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International Registration List of Cultivated Buxus L.	\$ 3
Index to The Boxwood Bulletin 1961-1986	\$ 10

Contributions:

Gifts to the Society are tax-deductible and may be undesignated or applied to:

Boxwood Memorial Garden Fund Boxwood Handbook Fund Boxwood Research Fund Boxwood Monograph Fund

Correspondence:

For address changes, memberships, dues, contributions, or to order back issues or publications, write:

> Treasurer, American Boxwood Society P.O. Box 85, Boyce, Va. 22620

For general information about the Society, advice concerning boxwood problems or cultivar selection, write to the American Boxwood Society at the same address. You are also welcome to write directly to the President:

> Mrs. Robert L. Frackelton 1714 Greenway Drive Fredericksbug, Va. 22401

Call for Papers:

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 also welcome. Material should be submitted to:

Chairman, Bulletin Committee 1714 Greenway Drive Fredericksburg, Va. 22401

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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Society to Hold 28th Annual Meeting at Boyce, Va.

Tuesday and Wednesday, May 17-18

28th Annual Meeting of the American Boxwood Society
Blandy Experimental Farm of the University of Virginia, Boyce, Virginia

IVIAV I/LIZOO (IUCSUAV)	May	17,	1988	(Tuesday)
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8:00 P.M. Illustrated lecture - Richard D. Mahone, Blandy Farm Library, followed by a champagne reception

May 18, 1988 (Wednesday)

9:00 A.M. Registration. If you pre-register, please pick up

your name tag at the Registration Table

9:30 A.M. Guided tour of the Memorial Garden

10:00 A.M. Coffee, Dining Room

11:00 A.M. Annual Business Meeting, Library

12:00 Noon Lunch (by reservation or bring-your-own)

1:00 P.M. Educational Program:

"Diseases of Boxwood" - Dr. Wirt H. Wills Display of Lewis & Valentine memorabilia,

courtesy of Hewlett Lewis

"Botanic Gardens and a Nursery in Great Britain" -

Lynn R. Batdorf

2:15 P.M. Third annual auction of named Buxus cultivars -

John W. Boyd and Dale T. Taylor

Program Notes

Mr. Mahone was in Australia and New Zealand from December 1986 through January 1987. His interest in plants is recorded on film.

Mr. Batdorf was in England in October and November 1986, where he studied herbarium specimens and living collections at Kew and Edinburgh.

Dr. Wills, of the Department of Plant Pathology and Physiology, VPI&SU, Blacksburg, Va., has long been a specialist on the diseases of boxwood.

Those who have attended previous ABS boxwood auctions are aware of the expertise of Mr. Boyd and Mr. Taylor as auctioneer and tabulator. Some of the plants which have been donated are: *Buxus microphylla*

'Compacta', 'Henry Hohman', 'John Baldwin', var. *japonica*; *Buxus sempervirens* 'Agram', 'Angustifolia', 'Aurea Maculata' (='Aureo-variegata'), 'Belleville', 'Butterworth', 'Edgar Anderson', 'Fortunei Rotundifolia', 'Graham Blandy', 'Handsworthiensis', 'Henry Shaw', 'Inglis', 'Joe Gable', 'Joy', 'Latifolia', 'Myrtifolia', 'Northland', 'Pullman', 'Pyramidalis Hardwickensis', 'Salicifolia', 'Ste.
Genevieve', 'Suffruticosa', 'Vardar Valley', 'Varifolia', 'Woodland', and *Buxus* X 'Green Mountain'.

Registration and Lunch

A \$3.00 registration fee will be charged to help defray the cost of refreshments and other expenses of the meeting.

You may reserve lunch in advance (\$4.50) or bring your own. Those wishing to reserve lunch, please send your check payable to the American Boxwood Society, in the amount of \$7.50 (lunch and registration) to Mrs. Robert L. Frackelton, 1714 Greenway Drive, Fredericksburg, Va. 22401. Please use a copy or facsimile of the Advance Registration Form provided on Page 82. All lunch reservations MUST be received by Tuesday, May 10, 1988.

Directions to Blandy Farm

Blandy Farm is on Route 50 near Boyce, Va. Driving west on Route 50, the entrance is on your left about four miles beyond the Shenandoah River bridge. Driving east on Route 50 from Winchester and I-81, the entrance is on your right about 1.5 miles beyond the junction with Route 340. The entrance is marked from both directions by a highway sign: "Virginia State Arboretum."

DUES REMINDER

We wish to remind individual, family, contributing, and sustaining members that dues for the membership year May 1988 through April,1989 are now payable. Prompt payment saves the Society time and expense. Please use the enclosed envelope.

Note also that a renewal envelope must be included in this issue, even for Life Members, Patrons and pre-paid members. In addition to renewal, it may be used to make a tax-deductible contribution to one of the Society's special funds or to order a gift membership for a friend.

Boxwood Tour at the U.S. National Arboretum

Lynn R. Batdorf

[NOTE: On Wednesday, April 22, 1987, Lynn R. Batdorf, Curator of the U. S. National Arboretum Boxwood, Perennial, and Aquatic collections, conducted a tour of the Boxwood Collection at the Arboretum, and discussed cultural practices, pruning, diseases, and insect problems of boxwood. About 30 individuals, with a wide variety of interests, attended. The following is an excerpt from the information presented during the tour.]

History and Distribution

Perhaps it is best to start by briefly mentioning the history and distribution of boxwood. Leaf fossils of boxwood from the Pliocene Ice Age have been recovered in more than 20 separate locations throughout Europe. Up to the 18th century, boxwood was an important economic crop. Early Greeks and Romans used the wood for writing tablets, flutes and spinning tops. They were especially skilled at producing carved ornaments, furniture inlays and veneers. In 1957, on the discovery of the tomb of King Midas, an 8th century table made of boxwood with juniper inlay and a walnut top was recovered nearly intact. The first planting in North America is thought to have been by Nathan Sylvester, who built a manor on a Long Island plantation in 1652, and soon thereafter planted Buxus sempervirens. Today, boxwood uses are nearly always ornamental.

All species originated overseas. Some of the best known are Buxus harlandii, Buxus microphylla, var. japonica, and Buxus microphylla var. insularis, which are native to Asia, and Buxus sempervirens from western Europe. Buxus balearica is from the three Balearic Islands off the east coast of Spain. Buxus wallichiana grows wild in the Himalayas. Approximately 90 other, more obscure, species are

native to western Europe, the Mediterranean basin, central and east Asia, North Africa, the Philippine Islands, Central America and the West Indies.

Transplanting

One secret to the successful planting or transplanting of boxwood is timing. October and November are the best months to move boxwoods, because the plant is nearly dormant and the leaves have a lower requirement for water and minerals. During a move, many of the life-providing root hairs are cut or destroyed, even when the best root ball is made. The roots, reduced in number, are shocked and need time to recover. Since the root hairs will grow in the cooler soil temperatures of fall and winter, moving a plant in the fall gives the roots time to re-establish themselves. By spring they will be better able to supply the demanding foliage with the water and minerals they so vitally need.

The roots seldom grow very deep

in relation to the total plant, but they do spread a great deal. In digging the root ball, width is therefore more critical than depth. The root ball ought to be at least as wide as the drip line. The depth of the ball should usually be about one-fourth the height of the plant.

Winter protection is usually necessary the first and second years after planting. Soil moisture should be watched very carefully the first 12 to 18 months after moving.

Watering

There are many formulas for the amount of water a boxwood plant needs. Unfortunately there are many variables involved, including size, soil type, rainfall, temperature, humidity, slope of the soil, wind, sunlight, type and thickness of mulch, and time since moving. When watering is necessary, soaker hoses and regular lawn watering devices are ideal. These will encourage the roots to grow deep into the soil. Hand watering with a hose is usually



Batdorf discusses pruning techniques with the tour group, using Buxus sempervirens 'Memorial' as an example. (Photos: Robert Frackelton)

insufficient, and will encourage the roots to remain near the surface, making them more susceptible to drying out and to winter injury.

It is necessary to understand that for most plants, 95 to 97% of all water taken up by the roots is lost to the atmosphere through the stomates on the underside of the leaves. An additional 1 to 3% is lost through the cuticle layer of the leaf, so that typically, only 1 to 2% of all water uptake is ever utilized by the plant. With this in mind, perhaps the best guide to watering is watching the soil. The soil should be relatively moist from the surface to 12-18 inches below the surface year-round. To become sensitive to soil moisture begin by digging several holes 12 inches deep and wide enough to observe soil moisture. Make these holes in various spots throughout the garden at different times of the year to see how far down moisture is penetrating. Through time and observation, an appropriate watering schedule can be developed.

Pruning

Usually pruning is necessary only on Buxus sempervirens 'Suffruticosa.' It is done primarily to open the center of the plant to air and sunlight. Pruning is particularly critical in maintaining a healthy Truedwarf Boxwood because the foliage typically grows on the outermost branches and seldom penetrates more than 6-10 inches. To correct this problem, remove about 40-50 branches on a 4-foot plant. The branches should be 6 to 8 inches long and randomly pruned from the top two-thirds of the plant. This will reduce leaf density, improve circulation through the plant, and improve disease resistance. An ideal time to prune is early December when the clippings can be saved and used for Christmas decorations. However, pruning should not be done in mid to late summer. This will encourage a secondary flush of growth which will not have a chance to harden off before winter arrives.

The use of shears or hedge trimmers is not recommended. It encour-

ages dense, multiple-tip branching. Additionally, it cuts many leaves in half, placing the plant under unnecessary stress. While a geometrically designed boxwood in the shape of a ball or a glass top smooth hedge may appear to be more attractive, the boxwood is not at its best. If the site or personal preference requires a topiary specimen, holly, arborvitae and juniper are better choices.

Propagation

There are several methods of propagation from which to choose. The choice should be dictated entirely by the desired results. It is quicker to produce a plant from layering or cutting than from seed. Cuttings and layering will produce plants that are identical to the parent; seedlings will produce varied progeny.

The best time to take cuttings is in August. The cutting should be taken from the current year's wood. This cutting has a chance to harden off, which will keep it from wilting before it develops its own root system. Taken later, the cutting becomes difficult to callus as it matures. After taking cuttings, put them in a coarse, light soil mix. They should be watered and misted frequently with a spray bottle. The plants can be planted out in a protected area the following spring.

Layering is a relatively simple procedure. Select a branch near the ground. Put a heavy object over the branch to keep it in contact with the soil (not the mulch). If done in the spring, a new plant will have developed by fall. Roots will have grown from the stem into the soil. All that remains to be done is to cut the stem off the parent and to replant the new plant.

Boxwood seeds will germinate very readily if given a cold stratification of 40° F. for ten weeks. Seedlings that germinate in the spring can be planted out in protected areas the next spring.

Fertilizer and Soil

The hydrogen ion concentration, or pH, of the soil has a strong influence on soil nutrient availability. As the pH decreases, more amino groups become

positively charged. Conversely, as the pH increases, more carboxyl groups become negatively charged. Each protein and nutrient has a pH value at which it is most active. Most are active at pH values not too far from neutral (pH 7).

Before using any fertilizer, an analysis of the soil should be obtained. One can use the local extension agent or purchase one of the many inexpensive home soil testing kits. As a general rule, the soil pH ought to be between 6.2 and 7.2 If the pH is below that, add lime; if it is higher, add sulphur. Once the pH has been adjusted, add fertilizer if necessary in quantities shown by the soil test results.

If fertilizing is necessary, best results are achieved by application in early March. It should be applied around the dripline where the most active root hairs are located. Most fertilizers are labelled with three numbers, such as 10-6-4, which indicates a nutrient content of 10% nitrate, 6% phosphate and 4% potash. (The remaining 80% is inert materials, usually clay particles.) These macronutrients are three of the six elements required for plant growth. These six, in order of decreasing amount, are: nitrogen, potassium, calcium, magnesium, phosphorous and sulphur. Hydrogen, oxygen and carbon are also required, but are found in soil air, and not in the soil itself or in fertilizer.

A boxwood deficient in nitrogen will be stunted with chlorosis (yellowing of the leaves) or loss of leaves. In severe cases the entire plant will be affected; however, older leaves are affected the most. A very dark green and stunted plant with later flowering is evidence of a phosphorous deficiency. Not enough potassium will cause mottled chlorosis, spots of dead tissues, especially at the tips and margins. The older leaves are affected most. The stems will be weaker and the roots are more susceptible to disease.

The soil structure is an important quality in designing a maintenance program for boxwood. Ideally, a loamy

soil which has nearly equal proportions of sand, silt and clay is the best. Any soil improvements toward a loamy soil will benefit the plant. Many soils are heavy with clay, allowing little or no space for soil air and soil water. Under these conditions, the soil will dry out quickly and become hard, inhibiting root growth. Gypsum or organic matter added to the soil will enlarge the pore space for proper root development.

Mulch

Maintain a 1- to 2-inch depth of shredded hardwood bark mulch. In addition to its decorative appeal, the mulch retains soil moisture and inhibits weed growth.

Stress and Winter Damage

Branches that appear dead from a winter injury may not be dead. To distinguish between live and dead

cracks as it cools and contracts.

Foliage bronzing, which typically occurs in late fall and early spring, usually indicates a culturally stressed plant. It is an early warning signal that some of the plant's cultural requirements are not being met. Its causes are many and each site must be evaluated to determine a correct treatment.

Mechanical damage by a snow fall can often be difficult to detect. In a heavy snow, some branches may be obviously broken from the weight, but more often snow causes only hairline fractures and splits in the bark and vascular cambium. The branch will stay green through the spring, but as the summer heat approaches, the vascular cambium is not able to meet the increased demands of the leaves and the branch dies.



Boxwood at the U. S. National Arboretum. Left to right: Buxus sempervirens 'Elegantissima', B. sempervirens 'Myrtifolia', B. microphylla var. insularis, B. sempervirens 'Myrtifolia' and B. microphylla var. japonica 'Morris Dwarf'

branches, scratch off the bark with a thumbnail, exposing the vascular cambium. If it is green, the branch is alive; if brown, it is dead. Boxwoods with a southern exposure typically exhibit more winter damage. When exposed to bright winter sun, the bark is rapidly warmed. As night approaches, the bark cools and contracts, while the underlying xylem wood remains unchanged. The bark then splits and

A heavy amount of fruiting is also an indication of a stressed plant. While some leaf drop is normal and expected, an above normal amount of leaf drop indicates the plant is stressed.

Insects

The most prevalent insect which attacks *Buxus sempervirens* and its cultivars (except 'Suffruticosa') is the boxwood psyllid (*Psylla buxi*). This insect feeds at the same time boxwood

produces its new leaves. The psyllid's piercing-sucking mouth parts remove everything they can between the upper and lower epidermis. The leaves then become distorted and cupped. This permanent condition of the plant is not only unsightly, but will greatly reduce the vigor of the plant. Effective control can be obtained by using Malathion® or insecticidal soaps. Make an initial application as the new growth emerges in April and follow up with a second application three weeks later.

The two-spotted spider mite (Tetranychus urticas) feeds on the upper and lower leaf surfaces. These tiny, prolific pests make many small white scratch marks on the leaf. The mites feed on the chlorophyll found in the mesophyll. In the absence of the green chlorophyll pigments, the surface of the leaf appears dusty or pale green. During a hot and dry summer, six to eight generations of mites can occur. This is perhaps the most damaging pest to boxwood; yet it is the most overlooked because the symptoms are so inconspicuous. It is most prevalent on Buxus sempervirens 'Suffruticosa.' Mites in large populations have been known to seriously weaken a plant, making it susceptible to secondary infections. Limited but safe and satisfactory control can be obtained by using a repeated hard water spray from a garden hose on hot, dry summer days. This will often knock the mites off the leaves, and they are usually unsuccessful in finding their way back. Fair to good results can be obtained with repeated applications of an insecticidal soap. CygonTM 2E (Dimethoate) applied in early June, July and August will provide favorable results.

The boxwood leafminer (Monarthropalpus buxi) should not be confused with the better-known holly leafminer, which "mines" or tunnels its way through the leaf, leaving an obvious brown trail on the top surface of the leaf. The boxwood leafminer does not tunnel through the leaf as it eats the mesophyll. The result is a brown blistering effect caused by the

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accumulation of dead cells inside the epidermis. Control is necessary only if persistent or significant damage is observed. Insecticidal soaps, Sevin®, Malathion®, and similar compounds have little or no effect, but fortunately, control can be obtained by using systemic insecticides, such as Diazinon® 50WP or Cygon™ 2E. Application in mid-June and again in mid-July will give good results.

Diseases and Decline

Two fungi (Macrophoma candolleri and Volutella buxi) attack weakened or decaying branches. Typically they can be controlled by pruning infected branches when they appear. Since fungi prefer moist, cool, dark areas, often found near the center

of boxwood plants, the removal of branches also helps contain or eliminate fungi by improving air circulation through the plant.

Truedwarf Boxwood growers are well aware of the symptoms of decline, a progressive browning of whole branches that spreads until the entire plant is straw-colored. A great deal of research has been done to determine the causes of decline, but there is little that can be done to revive boxwood suffering from it. Prevention is best; by keeping a Truedwarf Boxwood culturally healthy, it will be strong enough to resist the initial infection.

1. Batdorf (1978) Culture at the U. S. National Arboretum. *The Box-*

wood Bulletin 18(1):1-2Jensen, W. A., F. S. Salisbury (1984) Botany p. 245

[Note: The mention of a trademark or proprietary product does not constitute a guarantee or warranty of the product by the U.S.D.A. or the ABS, and does not imply approval to the exclusion of other products that may also be suitable. Before using any of these, carefully read all labelled instructions.]

Mr. Batdorf has been a horticulturist at the U. S. National Arboretum since 1977. He is responsible for the Buxus, Malus, Perennial and Aquatic Collections. He is a Vice-President of the ABS.

Boxwood Propagation Experiences Shared

Jack N. Kegley

Many years ago, I became an admirer of "English" ['Suffruticosa' or Truedwarf] boxwood, but they were too expensive for my budget. I had considered rooting them for some years, but all the articles I read prescribed misters and other complicated procedures, which discouraged me. Eventually, however, I got about 100 clippings from a friend, bought some Rootone, got some sand and mixed it with soil, constructed a cold frame, covered it with plastic and got approximately 100% of the clippings rooted.

With absolutely nothing invested, it seemed to me that if I were to raise them for sale, it would be an infinite rate of return on a zero investment, so I went hogwild and started getting clippings literally in the thousands each year. As I got very tired of dipping each clipping in Rootone, shaking off the excess, and using a pencil to make a hole in the soil or sand, I eliminated the use of Rootone. I did not notice any great difference in the rate of rooting.

Next, after finding a very shady spot in the woods and sticking the clippings in the ground, I very carefully covered the 5-foot square area with plastic and watered it almost daily. Again, a very high rate of rooting—about 90%.

Then I tried rooting in an area where, at high noon, the sun would hit the clippings. This time no plastic was used. To shield the clippings from the sun, I placed a cover over the main body of the clippings, but that did not keep the morning or evening sun from hitting the clippings on the edges. I won't say "as predicted," but as a matter of fact, those in the center of the bed that received no direct sunlight rooted well, and those on the edge that received some sun in the mornings and afternoons did poorly; probably no more than 10% rooted.

Another experiment was to locate an extremely shady place in the woods where, for all practical purposes, there was no direct sunlight. The soil was very poor, mostly decayed rock. It was not clay. I used a Rototiller to plow up an area about 5 feet square and stuck in about 2500 clippings with no cover at all. The clippings were spaced about 1 inch apart, giving about 150 per square

foot of ground. I would water them with a hose, not on any regular basis, but about three times a week. My success rate was about 80%.

At the same time I used a Rototiller to plow up an adjacent area, mixing peat moss with the soil. My idea was that the peat moss would keep the ground more moist with my occasional sprinkling. Only about 20% of these rooted. As all other conditions were the same, my conclusion was that the peat moss retained too much moisture. That was my last experiment with peat moss.

My reason for placing the cuttings so close together was that I felt the air flow around the clippings would be reduced, and this would reduce the rate of evaporation. This theory may or may not be correct, but at least it works. The other, more obvious reason is that it is much easier to put as many as possible in a small space.

After about six weeks of watering, I would forget the clippings for the winter, except for one or two trips to the woods to gently rake the falling leaves off the box.

The following spring, in about

March or April, I would move the rooted clippings out into a bed in full sun, planted in a grid pattern on 6-inch centers, and mulched with sawdust to help control the weeds. In such transplanting, I would plant any clipping that had any root whatsoever. By actual count, the success rate in the transplanting was 99%. After transplanting, I watered them liberally and regularly. I also found that until they got to be about six to eight inches tall, I was able to make them grow in the spring and again in the late summer by a liberal watering and fertilizing in July and August.

I found that a very neat way of getting the uniform spacing on a 6-inch grid was by placing a piece of wire mesh (the kind used for reinforcing concrete) on the ground and planting a rooting in each grid.

I left them on the 6-inch grid until they were crowding each other. At that point, I sold my house, bought more land, and built a new house. I reserved the boxwood when I sold. When I moved the boxwood, I shook the roots fairly well, as I knew I could not manage to get a ball of dirt with each plant. Out of a batch of 3,000, I lost only one.

I have found that the best time to make boxwood root is July and August. When I tried it in September or later, my results were dismal. I learned years ago that it takes heat to make boxwood (and other plants) root.

In preparing my clippings, I prefer those about 8 to 10 inches tall. I use grass shears to cut off most of the foliage, leaving about 15 to 20 leaves. I strip the bottom and wound one side of the portion that will be in the ground by dragging it across the edge of my grass shears. I like to have at least five inches above ground, so that when cuttings are transplanted, they can be mulched without being covered up.

As for protecting clippings between the time of cutting and planting, I again found that "English" ['Suffruticosa'] boxwood is almost indestructible.

I had one source of clippings



Grid pattern of Truedwarf Boxwood, about 20" tall, planted on 3' centers

about 40 miles away from my home. On a trip to get the clippings, I simply dropped them into plastic garbage bags. After arriving home, I would put the bags in a shady spot, and sprinkle some water in them. Within one or two days, I would trim the clippings and stick them in the ground.

More recently, I found a friend who had cut down some "English" boxwood about six feet in diameter. One to two days after they had been cut, I got two pickup loads of branches and stored them in my basement. After several days, I put the branches in 5-gallon buckets of water until I could get them trimmed and planted. It took about a week to get the clippings in shape to plant, but I again had about an 80% success rate.

One time I tried rooting in the summer and transplanting in the fall. In the following spring, I found that 95% of the clippings were completely out of the ground, roots and all. At first, I thought it was some animal or kid that had done this, but upon checking with forestry people, who know not to plant seedlings in the fall, I realized that it was frost action that had heaved them all out of the ground.

One other mistake that I have made from time to time is not transplanting the rooted cutting the first spring after rooting them. If I leave them for an additional year in the shady and crowded rooting bed, I find that at least 50% of them die with perfectly good root systems. I attribute this to lack of sunlight.

To control grass around boxwood, I have found that a chemical called Poast (available from Southern States Cooperative) will kill grass, but does no harm to boxwood.

Some years ago, I found a perfect system for keeping dogs away from boxwood: an electric fence, such as farmers use for livestock. By leaving one strand of wire around the boxwood for about 30 days, so that every dog in the neighborhood knows about it, you can then remove the wire. Until you get another uneducated dog in the neighborhood, you will have no dog problem.

To summarize, put 6- to 8-inch clippings in friable soil in July and August, in a place as shady as possible, water several times a week, and 80% should have roots within six weeks.

Mr. Kegley is an attorney in Charlottesville, Virginia. He has a special interest in boxwood, primarily Buxus sempervirens 'Suffruticosa'. He learned some of his propagation techniques from the late Warren Cloud, who was a member of the American Boxwood Society.

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Garcinia buxifolia Chiov. is Buxus hildebrandtii Baill.

Ib Friis

[NOTE: In this article, the type material of *Garcinia buxifolia* Chiov., hitherto assumed to be an aberrant taxon in the *Guttiferae*, is shown to belong to *Buxus hildebrandtii* Baill. (*Buxaceae*), to the synonymy of which *G. buxifolia* is therefore added. The article originally appeared in the Nordic Journal of Botany, p. 747-748, Dec. 1984.]

Chiovenda (1940:20) described Garcinia buxifolia with a number of other new species from Ethiopia based on the collections of Reghini from SE Bale, on the border of the Ogaden. From the description it appears that G. buxifolia in vegetative features resembles G. volkensii Engl., a species distributed in the montane dry evergreen forests of E Africa from Kenya to Mozambique and Malawi, but the number of lateral nerves in the leaf of G. buxifolia is considerably higher than in that species. The floral description is incomplete, but the bracts and sepals are said to be puberulous on the inside, a highly unusual character in African species of Garcinia. Chiovenda does not mention petals, and only tetramerous male flowers, with 8 stamens and no rudimentary ovary are described. African species of Garcinia do often have tetramerous flowers but then the androecium consists of 4 fascicles of numerous stamens, not just 8 free stamens.

In his enumeration of Ethiopian plants Cufodontis (1959: 591) pointed out the anomaly of this plant, and suggested that it should be carefully compared with other African species.

In connection with work on an account of the *Guttiferae* for the Flora of Ethiopia, and on a list of forest trees of Ethiopia and Somalia, the type material of *Garcinia buxifolia* Chiov. has, with the kind permission of the Director of the Erbario Tropicale, Florence, been obtained on loan to Kew

where it was examined by N. Robson, B. Verdcourt, K. Vollesen and the author. Although the type material is poor, consisting of young twigs with leaves and floral buds only, it has been possible to establish that the material does not belong to *Garcinia*, but represents a difficultly recognizable, shaded form of *Buxus hildebrandtii* Baill. (*Buxaceae*) with unusually large, thin leaves and poorly developed inflorescences.

Our examination of the type material has not confirmed Chiovenda's information about the number of stamens: we found 4 stamens, not 8, in dissected flower buds, which all seemed to be male. 4 stamens is the normal number in Buxus hildebrandtii in which the central flower of the dichasia is typically female, while the lateral flowers are typically male. The type material of G. buxifolia has poorly developed inflorescences, and the female flower is therefore insignificant, if at all developed. Bracts and sepals of B. hildebrandtii are puberulous on the margin and inside, as pointed out in the diagnosis of G. buxifolia Chiov. Chiovenda's name in Garcinia has therefore to be added to the synonymy of Buxus hildebrandtii:

Buxus hildebrandtii Baill.

Baillon in Adansonia 11:268 (1874).-Type:Somalia, opposite Aden, 1500-2000 m, Hildebrandt s. n. (P holotype, fide Valenti (1965: 772), who has carefully established the typification of this name). Garcinia buxifolia Chiov. in Atti della R. Accad. d'Italia, Memorie della Cl. di sci., fis., mat. e natur. 11: 20 (1940).-Type: Ethiopia, Bale, between El Marra and Mt. Ellot, in stream valleys near El Carre, Reghini 28 (FT holotype, K photo).

For full synonymy of B. hilde-brandtii, see Valenti (1965:774). The type of G. buxifolia represents the southernmost record in the entire distribution area of Buxus hildebrandtii, although Valenti records another

specimen, Reghini 15(FT), from the same area between El Marra and Mt Ellot. A map of the total distribution of *Buxus hildebrandtii* has been published by Valenti (1965: Carta I).

References

Chiovenda, E. 1940. Plantae novae vel minus notae ex Aethiopia, No. 231-297.-Atti della R. Accad. d'Italia, Memorie della Cl. di sci., fis., mat. e natur. 11:17-67.

Cufodontis, G. 1959. Enumeratio plantarum Aethiopia, Spermatophyta (Sequentia).-*Bull. Jard. Bot. Etat. Brux.* 29, Suppl.: 585-652.

Valenti, G. S. 1965. Adumbratio florae Aethiopiae, 12. *Buxaceae*.-Webbia 20: 771-778

I. Friis is from the Institute of Systematic Botany, University of Copenhagen, Gothersgade 140, DK-1123, Copenhagen K, Denmark. Lynn R. Batdorf, International Registration Authority for Buxus L., obtained the kind permission of Dr. Friis to reprint this important reclassification.

New Cultivars Added to Registration List

Two new cultivars have beeen added to the International Registration List of Cultivated *Buxus* L., which was published in *The Boxwood Bulletin* for April 1987. The additions were announced in January 1988 by Lynn R. Batdorf, International Registrar Authority for *Buxus* L., and Horticulturist, U. S. National Arboretum:

Buxus microphylla Siebold & Zuccarini 'Herrenhausen' Otto Markworth and Dr. Hans-Georg Preissel in Deutche Baumschule p. 516. Dec. 1987.

Buxus sempervirens Linnaeus 'Blauer Heinz' Otto Markworth and Dr. Hans-Georg Preissel in Deutche Baumschule p. 516. Dec. 1987.

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"Historic Garden Week" Tours Virginia April 23-May 1

Charlotte Taylor Massie

During the Garden Club of Virginia's 55th Historic Garden Week, April 23 through May 1, visitors may walk up the paths and through the garden gates of almost 200 private homes and gardens located in 34 areas of the state. Many feature plantings of boxwood.

The traditional character of Virginia gardens, old and new, depends upon the fragrant and velvety boxwood. There are choice spots in almost every Virginia garden for this stately shrub. It borders on walks, enhances house foundations, outlines flower beds, accents lawn boundaries, marks allées, denotes hedges, and provides garden privacy. Some are trimmed, some are clipped into decorative shapes and some are allowed to grow at random and are higher than a tall man's head.

Boxwood was a beloved shrub in Virginia's colonial gardens and has never lost its appeal to gardeners. It is the glory of many gardens, and owners often have a hard time keeping from planting boxwood in any and every available spot.

The garden fashions of Williams-burg are copied today. A typical arrangement has the beds "laid out in geometric designs, perfectly balanced and symmetrically placed in relation to the buildings on the lot." Hedges of "English" [Buxus sempervirens 'Suffruticosa' or Truedwarf] boxwood and tall, billowy tree boxwood distinguish many of the carefully manicured gardens.

Mrs. May borrowed ideas from gardens in Williamsburg that matured into a plan, simple in design and gracious, for her garden at 1951 Lewis Mountain Road in Charlottesville. It will be open Monday, April 25, and Tuesday, April 26, for the tour in Charlottesville.

Formal "English" [Buxus sempervirens 'Suffruticosa'] boxwood, with



Boxwood adds to the historic feeling of the 1740 Lisburne Cottage, which was reconstructed on its present site using only original materials. (Photos: The Garden Club of Virginia)

sweet alyssum and a collection of roses, surround a decorative pool and fountain in the garden of Hodding Carter III and Pat Derian at 211 South Saint Asaph Street in Alexandria. The geometric boxwood pattern of these gardens gives the overall design a beauty of its own, independent of the flowers. This garden will be open on the Alexandria tour Saturday, April 30.

A brick walkway, canopied by an intricately gnarled wisteria vine, leads to formal boxwood gardens at Scaleby, a magnificent Classic Revival mansion open for the Clarke country tour Saturday, April 23, and Sunday, April 24.

A wall, constructed of brick brought back as ballast in sailing vessels, encloses the original boxwood garden at Eyre Hall on the eastern shore of Virginia. One of the oldest and loveliest in the country, this garden will share honors with the mansion, built about 1735, when they open for Historic Garden Week, Friday April 29, and Saturday, April 30.

The gardens at Agecroft and Virginia House in Richmond are often spoken of together as the gardens touch. The garden at Virginia House seems not one but many, though they are held together by a sophisticated use of boxwood, dogwood, shrubs and flowers.

The magnificent gardens at Agecroft "swing away on both sides of the open terrace." Boxwood define the different areas of the garden. Virginia House will be open Monday, April 25,



Fancy Hill, one of Rockbridge County's finest old homes, is enhanced by boxwood



Stately boxwood grow on the lawn at Ditchley, built in 1752, one of the homes open on the Northern Neck Tour

through Friday, April 29, and Agecroft Hall will be open all week for Historic Garden Week.

The Whalen residence in Fredericksburg displays superb boxwood brought from King George County.

Boxwood add to the age-old feeling of the 1740's Lisburne Garden Cottage which was moved to Gloucester County from Lunenburg County in 1986.

Mrs. Charles Beatty Moore's imagination and creativity are evident in the intimate and inviting walled garden at 17th century Toddsbury in Gloucester County. Large boxwood mark the wall boundaries, and seasonal flowers, colorful crepe myrtle and ornamental shrubs provide a suitable setting for the dwarf boxwood garden. Both Lisburne Cottage and the gardens at Toddsbury will be open on the Gloucester tour Friday, April 29, and Saturday, April 30.

A brick walk, outlined by handsome old boxwood, leads to a swimming pool and patio at Mt. Gideon. This 18th century house, believed to be the oldest or second oldest house in Caroline County, will be open on the Hanover County Tour on April 23.

Foundation plantings of boxwood enhance the front of Fancy Hill in Lexington. This 18th century Federalstyle house commands a sweeping view of fields and mountains in all directions and will be open on the Lexington Tour on Tuesday, April 26.

A variety of stately boxwood grow on the surrounding lawn at Ditchley. Built in 1752, the fine two-story brick mansion was named for the Lee estate near Oxford, England, and has long been associated with the illustrious Lee family. Visitors will be welcomed to Ditchley, which will be open on the Northern Neck Tour on Wednesday, April 27.

Flanked by "American" [Buxus sempervirens] and "English" [Buxus sempervirens 'Suffruticosa'] boxwood, the Spurlock home at 1616 Blair Road in Petersburg also features plantings of boxwood in its garden. The Petersburg Tour will be held Tuesday, April 26.

Boxwood are a prominent shrub on the lovely grounds at the Hargrove home in Portsmouth, open Saturday, April 23.

Some of the boxwood on the two acres of landscaped ground at Terra Alta in Roanoke are more than eight feet tall. This home and garden are on the Roanoke Tour Sunday, April 24, and Monday, April 25.

Guidebooks listing the tours, hours and dates, with maps showing detailed routing and location of the tours will be available free of charge, after March 1, at information centers and at the Historic Garden Week Headquarters, 12 East Franklin Street, Richmond, Virginia 23219.

If requested by mail, the Headquarters would appreciate a remittance of \$1.00 toward the cost of postage for the 184-page guidebook and map. Green arrows, trademark of Historic Garden Week, will be placed along the highways and roads to point out the homes and gardens on the tours.



Boxwood is prominent in the landscaping of the Hargrove home in Portsmouth

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Historical Notes on the Firm of Lewis & Valentine

Hewlett Lewis

My father, Harold C. Lewis, oldest of seven children, started a nursery and landscaping business on a small scale near Hewlett, Long Island, in 1909. Various branches of the family had lived in the area for a long time. Within a few years, three of his brothers joined him. Mr. Valentine, who lived in Brooklyn, was a family friend and provided the Lewis brothers with the capital they needed for their rapid expansion. The Lewises bought his interest about 1914, but the firm name had recognition and was continued.

Realizing that the big demand for landscaping services lay on the north shore of Long Island, where many expensive homes were being built, the firm bought a tract of land for a nursery and established an office at Roslyn, L. I. They recognized that the owners of large new homes, many of them built on former farms, wanted their houses surrounded by mature plantings to give the appearance of an established home. As well as large shade and flowering trees and coniferous evergreens, boxwood was an ideal plant to give an aura of dignity, age and aristocratic charm.

Dwarf "English" boxwood (Buxus sempervirens 'Suffruticosa'), as well as "American" boxwood (Buxus sempervirens) had been cultivated in the oldest settled areas of Long Island since the early 18th century. There were many mature plants available for purchase on the grounds of old homes, but the demand soon outstripped the supply on Long Island and sources were sought on old homesteads and farms in New Jersey, Pennsylvania, Delaware, Maryland and Virginia, and as far away as western North Carolina.

In the quiet months of winter, sales and operations personnel were sent out to dig, transport to the nearest railroad siding and load on flatcars the boxwood which had been purchased earlier. The boxwood were shipped to sales grounds in Roslyn, L. I., Rye, N. Y., and Ardmore, Pa., a suburb of Philadelphia, and subsidiary offices of Lewis & Valentine in the east and midwest. There they were available for inspection by landscape architects, estate owners and the local sales forces for placement in area gardens.

The popularity of large old boxwood in large scale landscaping existed from the early years of the century to about 1931, the era of expensive homes on substantial acreage.

The demand for old boxwood ceased as building of large homes virtually stopped during the depression, and since then it has never revived significantly. In the New York and Philadelphia areas boxwood were usually covered with a framework of wood surrounded and covered by a layer of burlap which allowed air circulation and protected the brittle stems from breakage by heavy snow. With reduced gardening staffs in the early 30s, this was sometimes not done, and many boxwood were destroyed or disfigured as a result.

The winter of 1933-34 was very severe in the northeast and killed a great many boxwood. Little or no replacing was done and boxwood gardens deteriorated. A few homes maintained their plantings on Long Island, the area I was familiar with, through the 1960s and no doubt there are now a few places with boxwood in good condition.

One reason for the decline in the use of large old "English" boxwood was the increasing scarcity of plants 50 or more years old which are required to form a sizeable specimen. Had the demand continued at the pace of the 1920s the supply would certainly have become exhausted.

Also, boxwood were planted pushing their northern growth adaptability with disappointing results.

Anyone knowledgeable in box-

wood is undoubtedly aware of this period of "boxomania."

I believe that my uncle Albert's objective in publishing his book. Boxwood Gardens Old and New, was to create an authentic background and history showing real examples of historic boxwood gardens to create interest among those who were able to assemble isolated homegrown plants through Lewis & Valentine and create new boxwood gardens to be enjoyed by themselves and future generations. Through his book and his personal magnetism and enthusiasm, many gardens in which boxwood were prominently featured or comprised the entire garden, were built under his direction. A few of them still exist.

During the depression Lewis & Valentine's operations were severely diminished, although it continued to exist by gradually liquidating the inventory of nursery stock on its 250 acres. After a brief pickup in the late 30s to the early 40s, the landscape and nursery industry was again set back during the war years.

I started working for Lewis & Valentine in 1936, and after a period of military service ending in 1946, I bought the firm from the heirs of the other Lewis families and managed it until 1971, when I retired and sold the business to three members of my staff. It is still operating successfully in the New York-New Jersey-Connecticut area—78 years from its founding.

During my career there was virtually no demand for large boxwood, but small plants for garden edging continued to be used.

Mr. Lewis, a new member of the ABS, is presenting a copy of his uncle's book, Boxwood Gardens Old and New, to the Society's library. Hewill share other Lewis & Valentine memorabilia at the ABS Annual Meeting in May.

Maryland House and Garden Pilgrimage April 23-May

Sarah S. Henderson

The 1988 Maryland House and Garden Pilgrimage scheduled on three weekends from Saturday, April 23, through Sunday, May 7, is offering pilgrims a chance to tour Guilford, in Baltimore City, and other historic homes and gardens in six counties. Some of these are houses where boxwood has been used as a key landscaping element.

In St. Mary's County, Mattapany and West St. Mary's Manor are of particular interest to the boxwood buff. Mattapany, built in 1663 on land granted by Cecilius, Lord Calvert, was acquired by the U.S. Government in 1942, when the property was purchased for the Naval Air Test Center. On a magnificent site overlooking the Patuxent River, it is now the headquarters for the commander of the Air Test Center. Magnolias and azaleas as well as boxwood enhance this lovely old house. West St. Mary's Manor has been called a "museum piece." This beautifully preserved house on the St. Mary's River is built on one of the first recorded land grants in Maryland. There is a delightful small garden designed by the late Alden Hopkins of Williamsburg, in which boxwood has been used with great effect.

Clifton, in Montgomery County, was built by one of the early Quakers who settled this charming area. Part of the house dates back to 1742 and contains many of the original features. The herb garden is surrounded by ancient boxwood. Valley House, dating from the late 18th century, has a 200-year-old sycamore tree which has been recognized by the National Society of Arborists.

For the boxwood lover, Guilford is a treat. Throughout this handsomely planned suburb, boxwood has been used extensively. Some of the houses on this tour have never been opened before, while famous Sherwood Gardens, with its 80,000 tulips, springflowering shrubs and trees and old boxwood has been open to the public each spring since 1965.

The back-to-back tours of Somerset and Worcester Counties, scheduled on the last weekend of the Pilgrimage, offer a unique opportunity to explore this wonderful area of Maryland with its mixture of grand houses and small town dwellings. In Somerset County there is Harrington, a house built in 1798, where much of the fine Georgian paneling has remained intact, and where formal gardens and specimen trees of types known and favored in the 18th century will be of special interest to the horticulturist. Josh House, an 1858 house sheathed in cedar and cypress, with Greek Revival features, has formal gardens delineated by brick walkways and boxwood.

Because William Colbourne, the owner of Pomfret Plantation, was sympathetic to the Quakers, he permitted George Fox, the founder of Quakerism, to hold meetings at Pomfret Plantation during his mission to the New World in 1672-73. Between 1810 and 1820, one of William Coulbourne's descendants built the existing frame house on Coulbourne's Creek. With 95% of its original construction intact, Pomfret is one of the most significant houses of the period in Somerset County. Large hardwood trees and some of the oldest boxwood in the county surround the house.

At Kenwood, in the town of Berlin in Worcester County, can be found some of the largest and best-preserved specimens of "English" boxwood (Buxus sempervirens 'Suffruticosa.') in the area. Caleb's Discovery is another



A formal boxwood garden at West St. Mary's Manor on the St. Mary's River in Maryland. Photos: Maryland House and Garden Pilgrimage

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Large specimens of **Buxus sempervirens** 'Suffruticosa' at Kenwood in Berlin, Worcester County, Maryland.



Ancient boxwood is a prominent feature of Caleb's Discovery in Berlin, Maryland.

house in Berlin where ancient boxwood can be found.

Boxwood thrives in Maryland and had been used extensively over the years to enhance all kinds of architecture. Just a few of these have been mentioned in this article, but many other houses where this versatile shrub has been used with charm and skill await the pilgrim on the 1988 Maryland House and Garden Pilgrimage.

Participating counties receive a portion of the Pilgrimage proceeds for their restoration projects, and the remainder is used toward the maintenance of the Hammond-Harwood House in Annapolis, an outstanding 18th century Georgian mansion which is a Registered Historic Landmark.

Tour books with full information are available. For a pre-tour copy, send your name and address and \$1.00 to

Maryland House and Garden Pilgrimage, 1105-A Providence Road, Towson, Maryland 21204. (Send \$2.00 if 1st class delivery is desired.)

Mrs. Henderson is Magazine Publicity Chairman for the 1988 Maryland House and Garden Pilgrimage. She has enormous old boxwood at her home, and has an appreciation for the plant and its place in history.

NOTES AND CORRESPONDENCE

Landscaping Ideas from Members



A sundial is enclosed by clipped Ilex crenata, and surrounded by billowing Buxus sempervirens 'Suffruticosa' at the home of Mr. William Plumb, Moorestown, N. J.



Deer feeding in a vista framed with boxwood provide a charming picture on a winter's day at Highbury, the home of Mr. Robert de Treville Lawrence, Sr. The Plains, Va.

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Knot Garden Boxwood Report

[NOTE: This article is reprinted from *Herb Scents*, the bulletin of the Western Reserve Herb Society, a unit of the Herb Society of America, which maintains the Knot Garden at the Garden Center of Greater Cleveland.]

After nearly twenty years, the box in the Knot garden had become overgrown, and two recent severe winters resulted in a lot of winter kill. Fairly severe trimming and considerable pruning of dead and weakened branches did not significantly improve its appearance. Therefore, in April 1987, an effort was made to rejuvenate the box by cutting it back to a height of 6-8 inches, a procedure suggested in Bush-Brown's America's Garden Book. This method was approved by Alex Alpanius, horticulturist and director of the Garden Center. However, although Elsetta Barnes, who designed our Herb Garden, urged us to be patient, the expected new growth did not occur, and by July the decision was made to replace the original Buxus microphylla 'Green Pillow' with Buxus microphylla var. japonica 'Morris Dwarf', which was similar and available.

The new box will eventually grow together to form a rope and it is hoped selective pruning and careful trimming can keep it from growing too large. Fall soaking, anti-desiccant spray, and a covering of greens help protect against winter kill.

The old box plants were heeled in and a few members took some of the plants. No record was kept of who took what. Of the four plants I salvaged, the three that had been left with a leafy twig thrived and put on new growth, but only on the leafy twig, not on old wood. The fourth plant had no leaves left and has shown no signs of life. For the record it would be interesting to learn what happened to other plants taken by members. There are a few remaining old box heeled in at the Garden Center.

Sue Keebler

"Boxwood: Import That Thrives in the U. S."

[NOTE: The following article was taken from the August 29, 1987, issue of the *St. Louis Post-Dispatch*.]

We spent the early part of August in the state of Virginia where we saw many beautiful sights. On our way to Virginia Beach, we took the antique dealer's equivalent of a busman's holiday stopping in Charlottesville to see the antiques in Thomas Jefferson's home at Monticello and also at neighboring Ashlawn, home of President James Monroe.

Ashlawn was new to me and while much more modest than Monticello, it has great charm, lovely furnishings and surrounding gardens that fit it nicely.

A highlight of the landscaping is the plant that graces so many Virginia gardens, the boxwood, glossy green, stately and pungent. I have a great fondness for boxwood, partly because I had some success growing it in numbers and propagating it when I lived in Webster Groves [Missouri], where it seemed right at home.

Although boxwood is not exactly suited to Jefferson County [Missouri] and its limy soil, rocky, windswept, sunbaked hillsides, one of the plants I brought from Webster Groves 17 years ago has grown into as pretty and graceful a shrub as you could find in Virginia.

Consequently, I was delighted when, a few days after returning from Virginia, I went to the Horticultural Society meeting and found that the program was on boxwood. Jane Penhale, one of the founders of the Boxwood Society of the Midwest, was the interesting speaker.

If you wondered how it got its name, boxwood was used by the Greeks and Romans to make boxes because of its close-grained, non-warping wood. It was also used for woodwind instruments, dagger handles and engraving in the 18th century. In the Orient, jade carvers practice on boxwood, which can almost pass for ivory.

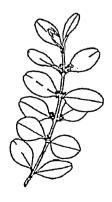
There is no such thing as American boxwood—the English and French brought it here as early as 1692. *Buxus sempervirens* is the most common variety, although later *Buxus microphylla*, an Asian variety, was imported, and from these have come many cultivars.

Boxwood is best described as a small leaf broadleaf evergreen with opposite leaves. It's not a demanding plant, requiring only good drainage and protection from southwest winds. In dry winters, it can burn, but it is a most resilient plant as mine has proved.

Jane Penhale's color slides showed what a versatile plant boxwood can be, grown by bonsai enthusiasts, in small gardens and on huge estates. There's a test garden at Shaw's Garden [Missouri Botanical Garden], and each Wednesday members of the Boxwood Society [of the Midwest] work there and will show you around.

Become conscious of beautiful boxwood and you'll see it everywhere—at Versailles, in St. Genevieve [Missouri], at Williamsburg, Va., at Monroe's home and even in a very scruffy and most unpretentious garden in Jefferson County.

Clarissa Start is a well-known author and historian in the St. Louis area. For many years, she lived in Webster Groves, a suburb of St. Louis, and now deals in antiques in Jefferson County, a nearby rural community.



NOTICES

Conference on Country Houses and Gardens of the Brandywine Valley, May 4-6, 1988

Featured theme: The American Country Estate and the Brandywine Valley. Included are private visits to gardens of Longwood and Winterthur, as well as to other Brandywine Valley estates. Registration information may be obtained from Philip Correll, Landscape Curator, Hagley Museum & Library, P.O. Box 3630, Wilmington, Del. 19807. Telephone: (302) 658-2400.

National meeting of the American Conifer Society at Longwood Gardens, August 3-5, 1988

Write P.O. Box 501, Kennett Square, Pa. 19348-0501 or call Bill Thomas at (215) 388-6741 for further information.

Second Edition of the ABS *Boxwood Buyer's Guide*

In addition to listing updated sources for boxwood, the Second Edition of this popular guide contains a newly-revised International Registration List for Cultivated *Buxus* L. Send check for \$6.00 to the American Boxwood Society.

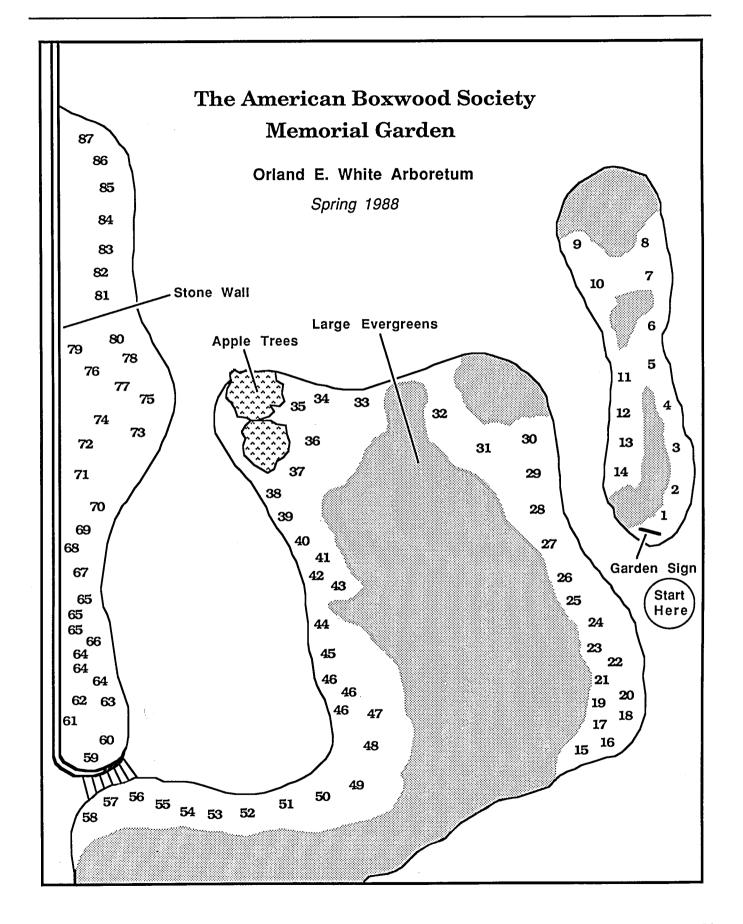
ABS Seeks Information on Boxwood Topiary

There have been several recent inquiries about sources and care of boxwood topiary. The Bulletin Committee would appreciate input from our readers. Information on sources, experiences with care, and photos of gardens with boxwood topiary would serve as a basis for an article on the subject.

NEWS OF THE SOCIETY

Updated Chart of Memorial Garden

A r	evised chart of the American	36.	B. s. 'Welleri'
Boxwoo	od Society's Memorial Boxwood	37.	B. s. 'Woodland'
	at the Orland E. White Arbore-	38.	B. s. 'Butterworth'
	Blandy Experimental Farm at	39.	B. wallichiana
		40.	B. s. 'Myrtifolia'
	Virginia, has recently been pre-	41.	B. s. 'Sport'
	y Commander Phillip E. Larson,	42.	B. s. 'Ste. Genevieve'
	r of the ABS and Chairman of	43.	B. m. var. japonica
the Men	norial Garden Committee.	44.	B. s. 'Handsworthii'
		45.	B. s. 'Maculata'
Numeri	ical Key [Due to space limit-	45. 46.	
	sempervirens and microphylla		B. s. 'Suffruticosa'
	abbreviated as "s," and "m."	47.	B. s. 'Decussata'
are nere	abbreviated as s. ana m.	48.	B. s. 'Edgar Anderson'
		49.	B. s. 'Hermann von Schrenk'
1.	B. s. 'Ponteyi'	50.	B. harlandii
2.	B. s. 'Latifolia Aurea Macu-	51.	B. s. 'Elegantissima'
	lata'	52.	B. s. 'Graham Blandy'
3.	Buxus microphylla	53.	B. s. 'Elegantissima' /Prostrate
4.	B. s. 'Pendula'		form/
5.	B. m. 'Grace Hendrick Phillips'	54.	B. m. "John Baldwin"
6.	B. s. 'Myosotidifolia'	55.	B. X 'Green Gem'
7.	B. s. 'Ste. Genevieve'	56.	B. X 'Green Mountain'
8.	B. s. 'Northland'	57.	B. X 'Green Velvet'
9.	B. s. 'Agram'	58.	B. X 'Green Mound'
10.	B. s. 'Latifolia Marginata'	59.	B. s. /Topiary/
11.	B. s. 'Northern Find'	60.	B. m. var. insularis 'Pincushion'
12.	B. s. 'Latifolia'	61.	B. m. var. insularis 'Tall Boy'
		62.	B. m. var. insularis 'Winter
13.	B. s. 'Undulifolia'	02.	
14.	B. s. 'Fortunei Rotundifolia'	62	Beauty'
15.	B. s. 'Glauca'	63.	B. m. 'Henry Hohman'
16.	B. m. 'Helen Whiting'	64.	B. m. var. japonica 'Morris
17.	B. s. 'Bullata'		Midget'
18.	B. s. 'Vardar Valley'	65.	B. m. var. japonica 'Morris
19.	B. s. 'Belleville'		Dwarf'
20.	B. s. 'Argentea'	66.	B. m. 'Compacta'
21.	B. s. 'Krossi-livonia'	67.	B. m. var. insularis 'Tide Hill'
22.	B. s. 'Salicifolia Elata'	68.	B. m. var. insularis 'Wintergreen'
23.	B. s. 'Latifolia Nova'	69.	B. m. 'Miss Jones'
24.	B. s. 'Inglis'	70.	B. m. 'Kingsville'
25.	B. s. 'Pyramidalis'	71.	B. s. 'Fastigiata'
26.	B. s. 'Rotundifolia'	72.	B. s. 'Henry Shaw'
27.	B. s. 'Latifolia Japonica	73.	B. s. 'Hardwickensis'
	Maculata'	74.	B. s. 'Aristocrat'
28.	B. s. 'Angustifolia'	75.	B. m. var. japonica 'National'
29.	B. s. /Anderson 789-34/	76.	B. s. 'Ipek'
30.	B. s. 'Salicifolia'	77.	B. s. 'Yorktown'
31.	B. s. 'Handsworthiensis'	78.	B. s. 'Joy'
32.	B. s. 'Prostrata'	79.	B. s. 'Cliffside'
33.	B. s. 'Berlin'	80.	B. s. 'Memorial'
34.	B. s. 'Aurea Maculata'	81.	B. s. 'Varifolia'
35.	B. m. var. insularis /Brouwer's	82.	B. s. /Meyer's Columnar/
	Seedling No. 1/	83.	B. m. var. japonica 'Nana'



84.	B. s. 'Green Beauty'	9.	'Agram'	23.	'Latifolia Nova'
85.	B. m. 'Sunnyside'	29.	/Anderson 789-34/	45.	'Maculata'
86.	B. s. 'Newport Blue'	28.	'Angustifolia'	80.	'Memorial'
87.	B. m. /Asiatic Winter Gem/	20.	'Argentea'	82.	/Meyer's Columnar/
	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	74.	'Aristocrat'	6.	'Myosotidifolia'
Alphal	petical Listing	34.	'Aurea Maculata'	40.	'Myrtifolia'
	-	19.	'Belleville'	86.	'Newport Blue'
50.	Buxus harlandii	33.	'Berlin'	11.	'Northern Find'
3.	Buxux microphylla	17.	'Bullata'	8.	'Northland'
87.	/Asiatic Winter Gem/	38.	'Butterworth'	4.	'Pendula'
66.	'Compacta'	79.	'Cliffside'	1.	'Ponteyi'
5.	'Grace Hendrick Phillips'	47.	'Decussata'	32.	'Prostrata'
16.	'Helen Whiting'	48.	'Edgar Anderson'	25.	'Pyramidalis'
63.	'Henry Hohman'	51.	'Elegantissima'	26.	'Rotundifolia'
54.	'John Baldwin'	53.	'Elegantissima' /Prostrate form/	7.	'Ste. Genevieve'
70.	'Kingsville'	71.	'Fastigiata'	42.	'Ste. Genevieve'
69.	'Miss Jones'	14.	'Fortunei Rotundifolia'	30.	'Salicifolia'
85.	'Sunnyside'	15.	'Glauca'	22.	'Salicifolia Elata'
	Buxus microphyllavar. insu-	52.	'Graham Blandy'	41.	'Sport'
	laris	84.	'Green Beauty'	46.	'Suffruticosa'
35.	/Brouwer's Seedling No. 1/	31.	'Handsworthiensis'	59.	/Topiary/
60.	'Pincushion'	44.	'Handsworthii'	13.	'Undulifolia'
61.	'Tall Boy'	73.	'Hardwickensis'	18.	'Vardar Valley'
67.	'Tide Hill'	72.	'Henry Shaw'	81.	'Varifolia'
62.	'Winter Beauty'	49.	'Hermann von Schrenk'	36.	'Welleri'
68.	'Wintergreen'	24.	'Inglis'	37.	'Woodland'
43.	Buxus microphylla var.	76.	'Ipek'	<i>7</i> 7.	'Yorktown'
	japonica	78.	'Joy'	39.	Buxus wallichiana
65.	'Morris Dwarf'	21.	'Krossi-livonia'		Buxus X
64.	'Morris Midget'	12.	'Latifolia'	55.	'Green Gem'
83.	'Nana'	2.	'Latifolia Aurea Maculata'	58.	'Green Mound'
75.	'National'	27.	'Latifolia Japonica Aurea'	56.	'Green Mountain'
	Buxus sempervirens	10.	'Latifolia Marginata'	57.	'Green Velvet'

Mrs. Robert L. Fr	
1714 Greenway I	Orive, Fredericksburg, Va. 22401
I (wa) wish to register the follows:	ng for the ARS Annual Maetings
I (we) wish to register the following	ng for the ABS Annual Meeting:
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Nomacci	
Name(s):	· · · · · · · · · · · · · · · · · · ·
Name(s):	
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The Seasonal Gardener

Practical tips for boxwood enthusiasts from Society members

Spring is an important season for the care of established plants and it is an excellent time for the transplanting of boxwoods. Insect problems are often more troublesome in the spring, so special care should be taken to watch for leafminers, mites or psyllids, and to take appropriate control measures if they are present. It is also an excellent time to evaluate your boxwood to determine whether pruning is needed to keep the plants at the proper size for a pleasing landscape composition.

Avoid Cultivation

Do not attempt to work fertilizer into the soil, because boxwood roots are close to the surface and are easily damaged. Water the soil thoroughly after applying dry or liquid fertilizer to avoid fertilizer burn to the root system. Do not dig around boxwoods to control weeds or grass. Instead, use a mulch or pull weeds by hand in order to prevent damage to the root system.

Sanitation

Clean out leaves and twigs that have accumulated in the center of the boxwood. A vigorous shaking of the plant often helps. Remove the dead material by hand or with power vacuum equipment. Failure to do this will often lead to a buildup of debris, with the result that aerial root development along the branches is induced. Aerial roots can be easily damaged during periods of dry weather or extreme cold, and the top portion of the plant may die.

Purchasing Boxwood

Select only quality plants that are in containers or balled and burlapped.

Check to see that stems are firm and not flabby.

Avoid plants that have excessive browning or yellowing of the foliage.

Look for plants with healthy green foliage in the center. Avoid plants that have only sparse foliage on the inner stems.

Check to see whether the soil ball is firm, and avoid plants where the ball is undersized.

Observe whether the roots have been exposed and allowed to dry out.

After Care

The first year after the planting of boxwood by a nurseryman is often a critical period unless you remember to do your part. Keep the following in mind, and you will help the plants recover:

Apply a mulch, if not applied by the nurseryman.

Do some thinning or plucking of the inner portion of the plant, if not already done by the nurseryman. This will help reduce some of the growth and restore the balance between the top and the root system. (During the digging operation, many roots are lost.)

Be prepared to water generously if no natural rainfall occurs. Boxwoods need to have one inch of water every seven to ten days during the growing season from early spring to mid-summer. From mid-summer to freezing weather, water every two weeks at the rate suggested above.

If the plants do not look vigorous two months after planting, do not be afraid to do some pruning; reducing some of the top foliage may help the plant to overcome the transplanting shock.

Albert S. Beecher, ABS Director

