JULY 1976

The Boxwood Bulletin

A QUARTERLY DEVOTED TO MAN'S OLDEST GARDEN ORNAMENTAL

The boxwood garden of Dr. and Mrs. Henry T. Skinner in Bowie, Maryland. Photographs by the Skinners. Article begins p. 6.

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The Boxwood Bulletin

JULY 1976 Vol. 16 No. 1

EDITOR — MRS. EDGAR M. WHITING

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ILLUSTRATIONS

Boxwood In North Carolina 50 Years Ago

Elizabeth McClure

It has been my good fortune to live for a considerable length of time in the mountainous section of North Carolina where boxwood forms an important part of nearly every mountain garden. Unlike Virginia, you do not see much of the dwarf or English box — perhaps the altitude has something to do with this, or possibly our very acid soil is the answer, — but the *sempervirens* and the tree box flourish in true magnificence, and with a little coaxing the English box can be made to feel at home as well. The smallest mountain cabin has often a group of superb "green bushes" before its door, and the enduring permanence of these great clumps has a peculiar kinship with the rugged and kindly character of the Southern mountaineer.

I am well aware that in the Garden Club of America there are those who have a passion for boxwood and those to whom the very sight and smell is anathema. But for the many who have once fallen under its strange spell, there is only an increasing enchantment.

The origin of boxwood is somewhat doubtful. Bailey tells us that there are some thirty varieties growing in the southern part of the European continent and extending through Persia into India where it grows on the slopes of the Western Himalayas. It is found growing, in perhaps greatest abundance, throughout Great Britain, and is thought by some authorities to be native in the chalk hills of the South of England. A certain enthusiastic gentleman, one John Ray, who wrote an immense treatise on the history of plants some two hundred years ago, says: "The box grows wild on Boxhill, also at Boxwell on the Cotswold Hills of Gloucestershire, and at Boxley in Kent, and it grows plentifully on the chalk hills near Dunstable."

All this is interesting in view of the fact that nowhere in France, Holland or Belgium is it found growing wild but only in a formalized or hedge-row planting. Nobody seems to agree as to whether or not it is a true native of England, and there are those who think it may well have been brought in by the Romans who made extensive use of boxwood in the adornment of their huge country places. The gardens of Renaissance Italy and France continued the boxwood tradition, and always with that extraordinary sense of its architectural significance that is so peculiarly theirs.

Tudor England delighted in the use of boxwood to create knot gardens or "scrawl work". . . . These knot gardens were square garden beds, in which were set a very complicated and elaborate design of dwarf boxwood, clipped flat. The design was then enhanced by filling in the spaces with colored earth. Various designs were used: the lozenge, the diamond, the cinquefoil, the flower-de-luce and many others. Complicated directions for making these appear in old garden books of the period. A red background was procured by pounding up red tiles, black backgrounds were made with coal, and white pebbles were favored by others.

In 1734 Richard Bentley, in his *New Improvements of Planting and Gardening,* states that dwarf or Dutch box is of extraordinary use for edging or bordering flowers beds or for the use of scrawl work," much cheaper than border boards." It is interesting to note in this connection the use of the word Dutch, as it would seem to indicate that the slow-growing dwarf box, which we so glibly refer to as "English box" must have come to Great Britain by way of Holland, and certain old 18th century Dutch prints show plainly what lengths this fashion went to there.

After the knot garden came the parterre, wherein box edgings were again extensively used. The beds were made in favorite gemetric designs and outlined in box, the centers then filled with blooming flowers. These parterres were generally from 18 inches to 24 inches high and were 18 inches wide, cut flat on top as they were used often for drying linen. There are, of course, many such parterre gardens still existent in England, while in this country a most beautiful example is to be found in the old box garden at Mount Vernon and another famous one at the Hampton Estate in Baltimore County, Maryland.

English Queen Anne had an aversion to box, and at her royal command much of it was destroyed, in particular the beautiful box hedge at Hampton Court. Fortunately, it did not remain long in disfavor. Parkinson tells us that box hedges were universally planted in England for purposes of drying linen; an according to Alice Morse Earle, "Somewhere in the year 1710 an order was issued for the destruction of quick setted arbors and hedges (mean-

ing hawthorn and privet) on the grounds that they agreed ill with the ladies' muslins." Another triumph for boxwood! In this country, the early colonists used boxwood extensively to hold webs of homespun and flax which were stretched out to receive every benefit of sun and dew. Though many household gods were reluctantly left behind, nearly every woman took with her a few slips of boxwood to grow in the New World.

Boxwood had no medicinal value that we know of, but Parkinson says in his herbal that the leaves boiled with lye would make the hair to be an "aborn or abraham" — hence, perhaps, our modern word auburn. But who, nowadays, would be bold enough to find out?

In America there are magnificent boxwood gardens at Mount Vernon, at Tuckahoe and at Gunston Hall. In Camden, South Carolina, at Upton Court, are hedges of vast height and size. Boxwood thrives well on Long Island and there are many established specimens there of great age and beauty, while the transplanted boxwood is apparently entirely at home. There is some very fine boxwood at Salem, Massachusetts, and Philadelphia abounds in beautiful specimens. Not far from us here is the famous Preston Garden of Columbia, with its magnificent box hedges. But beware of asking, as we did, for the garden under this name. It is now a part of the Presbyterian Women's College!

The wood of the species is very dense in structure, has a uniform grain, and is perfection for the purposes of the wood engraver and for measuring instruments. As far back as Virgil and Ovid we find reference to the value of boxwood in making musical instruments.

Nowadays, the wood of the European box is little used in commerce for it is very slow growing, adding not more than one-half or two inches (sic) in twenty years.

The main source of this (commercial) supply comes from the variety *Buxus balearica,* a fair-sized tree rising to 80 feet, with leaves three times the size of the common box, and native to the islands of the Mediterranean, Turkey, Asia Minor and the shores of the Black Sea. The wood near the root is surprisingly mottled and is called "dudgeon." Alice Morse Earle, in one of her delightful books, tells us that in the roistering Elizabethan days it was regarded as the wood *par excel lence* for dagger hilts; and that the term "dudgeon dagger" was a common one, gradually giving way to the expression "drawn dudgeon" or "high dudgeon," which is amusing to think of in connection with our sense of the word now.

That box bushes should ever have root value is difficult to realize now when to most of us are so preeminently something to be cherished for their lovely green billowy shapes alone. Not long ago, however, I was made to realize that there is, after all, another point of view, when I accidentally ran full tilt against the magnificent indifference of a mountaineer friend. He had just finished hacking down an immense, ancient, wonderful bush of English Box, at least a hundred and twenty-five years old, or more. When I protested in amazement, he wiped the sweat from his brow and explained briefly that he "had bought Ma'm one of them new-fangled kitchen stoves and the durned bush block the door when he went for to move it in!" So much for singleness of purpose and the progress of civilization.

To all intents and purposes, there are for most gardens but three varieties of box, the *arborescens,* or tree box; the *sempervirens,* or common box, and the *suffruticosa,* or English dwarf. If you wish to know the other varieties, you must consult Bailey.

The *Arborescens,* or tree box, grows twelve to fourteen feet high, and becomes a loosely branching tree with the typical oval box leaf. It can be grown in compack hedge form by continued vigorous pruning but its growth never become quite as dense as that of the *sempervirens* variety and it is more twiggy. It can readily be distinguished from the *sempervirens* when it is a small plant by the greater vigor of growth in the main stems, and a certain gawkiness of type. The tree box, too, in its early development is of a somwhat yellower green in color, particularly noticeable in the stems. A good deal of the tree box is seen growing around old homesteads in North Carolina, and it has a very picturesque, rugged quality when left to its own devices.

The *Buxus sempervirens,* or the common box, is to be found all through this mountain region. It seems to thrive with a peculiar vigor. Its natural habit of growth is toward a round globe-like shape, and it ultimately reaches an immense height, as is evidenced by the beautiful specimens at the old Dr. Fletcher place at Fletcher, N. C. It must be kept well-sheared, however, to develop a close, compact growth, otherwise it becomes loose and branchy. There are of course certain effects to be gained by leaving the *sempervirens* unsheared and as such it is always interesting, but it must be left so from choice rather than from chance. The great round bushes of *sempervirens* count wonderfully as accents in any garden scheme, and it is the best box to use whenever a box hedge of some size is desired. It was the box always used in England for topiary

work, and the more you shear it the thicker it becomes. It can be shaped into any desired form, and it is extraordinary how much it improves under a restraining hand. You can dig up the most sorry specimens, plant them in a rich, moist soil, prune them well to the shape you require, fertilize them and in three years you will be amazed at the result.

The third variety of box, the *Buxus suffruticosa*, or English box as it is generally known, is far less common here in the mountains. For some reason it does not seem to thrive here as freely as the *sempervirens*. Certainly, one finds it growing rather infrequently. It has a distinctly different character from the *sempervirens*, as from the beginning of its growth it is dense and compact. It seems to hug itself closely from the very start; and the growth on well-established specimens, from the ground up, has something of the quality of a bird's plume. Each bush differs from its neighbor.

As the *suffruticosa* box ages it develops the most amusing and extraordinary shapes with bumps and humps that give an almost sculptural quality and tends to great variety in the play of light and shade on its surface. The leaf is rounder than that of the *sempervirens* and in color it is a decidedly richer, darker, warmer green. On old specimens the foliage somehow makes you think of uncut velvet. It should never be sheared or pruned except to remove dead wood. The *sempervirens*, unfertilized, grows about four inches a year. The English box, under similar conditions, scarcely two inches. Another determining characteristic is its very pronounced fragrance — far more distinct and noticeable than in the *sempervirens* variety. If it is grown in full sun it develops into a denser, more solid clump of green. If grown in the shade, the branches tend to become loose and it approaches more to the *sempervirens* in type.

In planting the English box it is well, if possible, to give it some sort of protection from the direct rays of the sun in February and March. This variety of boxwood occasionally burns very badly in the late winter months, but if there is some slight shade this is not so apt to occur. The *sempervirens* rarely burns and is easier to transplant, and with us in North Carolina, decidedly more hardy. Moved with reasonable care, you scarcely even lose a *sempervirens*, but the English box is more temperamental, and in spite of every precaution will occasionally die after transplanting, for no apparent reason at all. In digging up large bushes of either variety, it is well to choose a damp day, as the earth is apt to fall away from the fibrous roots.

Take up as large and deep a ball as possible, getting the entire fibre root system and the main root. Secure the ball with burlap firmly anchored around it. Then when you come to unload the box, heave it on to a light wooden platform, perhaps three or four feet square, underneath which are placed two ordinary lengths of three-inch galvanized pipe. The carriage thus made can be rolled anywhere by pushing at the lead pipes, and the box can be transferred to any part of the garden with no damage to the root system.

We have always placed a quantity of well-rotted hanure in the holes but if this is not obtainable bone meal is excellent. Leave the burlap untouched around the roots, as it will soon decay; and soak the root ball well before entirely covering.

You can plant boxwood at almost any depth and old leggy specimens can have the bare trunks buried well under the soil. We planted one ungainly *sempervirens* three feet below its original surface. Some years later, when we had occasion to move it, the bush had developed a second ball of figre roots, just as large, three feet above the original one, and it was an extraordinary spectacle when the entire bush was dug up. Don't forget that it is very necessary to keep newly set boxwood bushes or hedges well soaked at periodic intervals, particularly the English box, which must be soaked all over every ten days during a dry spell. I never feel that the English box is really safely established until it has been in the ground for a year.

We have found it best in moving boxwood, to do so in January or early February as the roots are then ready to make immediate growth when the sap is active and the oncome of spring is favorable to early adjustment on the part of the plant.

When it comes to fertilizing established specimens, it is well to give a good heavy mulch of manure in late February. This manure mulch seems peculiarly beneficial if spread a few weeks before spring growth is active. The roots get the benefit of the soaking rains, carrying down the manure just at a time when they most need stimulus and nourishment. This should be done at least every two years and the mulch left on during the summer as it protects the roots from too much sun, and conserves moisture. It is a wonderful tonic and does great things for color and general vitality. I have seen quite a few, rusty bushes take on a good rich green some time before the new growth started.

In caring for hedges, it is well to remember that the individual plants are set so close together that the roots do not get adequate nourishment, and so a regular all-round feeding is necessary. Since manure is not always desirable to spread around a hedge, bone meal is very satisfactory, worked into the ground in early spring. Then, if you want to make your boxwoods really jump into action, wait for a day of good soaking rain and between showers, if possible, apply a handful of nitrate of soda around the roots of your big bushes, being very careful not to let any touch the leaves. Do this when the new growth is first feathering out, probably about the middle of April. You can get eight inches on your *sempervirens* and a good three on the English box and you can keep it growing right along by doing this in four weeks; but, remember — never apply nitrate of soda except when your ground is very wet. and remember that a teaspoonful would be the right amount for a box bush twelve inches tall and a cupful for a big five-foot fellow. The growth will be very loose and soft for a time, of course, but it will harden up as usual. No stimulants should be used later than the middle of June, as you want the growth to be dark and well hardened by autumn.

Another thing to remember, when it comes to general routine care: In the autumn. BE SURE to soak all your boxwoods well, before freezing weather with dry roots, as the transpiration of the leaves continues all the time and if there is no moisture for the roots to draw on, your bush may die back in patches. If a hard freeze does come, provided your ground is wet, there will be no harm done. Snow, the soft powdery kind, is rather a friend to boxwood as it soon blows off and carries fertilizer down to the roots; but oh, beware of the damp, heavy, clinging sort! There is nothing for it but to put on your most waterproof gloves and your tallest boots, and armed with a light cane, set to work to beat it off. Knock it off gently, beginning toward the bottom and working up, as in a heavy snowfall the snow from the top, added to that already weighing down the lower leaves, is apt to break the branches. *Sempervirens* is comparatively easy to handle in the snow, but the English boxwood becomes terribly brittle with cold, and you may have to ease it off its burden with very careful hands. If you are to be away in winter, lay it on your gardener's soul to keep snow from accumulating on your boxwoods and make him realize that even a few hours' delay will sometime ruin the shape of a bush or make great disfiguring gaps.

It is a question with us whether the *suffruticosa* box does not do better with some lime in the soil. Certainly the astonishing vigor of the *sempervirens* in this mountain region seems to argue that their acid fare here is entirely satisfactory. But I wonded very much if the Virginia soil, which produces such magnificent specimens of the English box, does not supply a considerable amount of lime — at least in those sections where this variety of boxwood flourishes, and if that and the climate is not perhaps the secret of its permanence and thriftiness there? We are, at any rate, working on this problem here and in another year or two may have something to report to you. Perhaps the Virginia ladies can give definite information on this point.

In this connection, may I again quote from Richard Bentley, who in his dissertation on gardening in 1730 seems to know it all! He states that "Boxwood delights in chalky mountains=(mark this well) where it grows much quicker than it does in our gardens. It is on these hills where it should be planted therefore for profit, as the Boxhill in Surrey, where the box trees are some as large as to equal any sort of timber trees. But a natural soil in a garden is rather to be preferred if we would keep it in shape and within bounds." I have no doubt, however, but that Virginia can be as definitely informing on this matter of lime in the soil.

In shearing sempervirens speciments, it is best to do as little as possible to well-cared-for, well-shaped bushes. Keep them rounded but avoid that overbarbered look that makes you think of Versailles and a force of fifty gardeners — unless, of course, you go in for a very formal 18th century type of place. There is a certain shaggy quality that one should preserve while aiming always at a uniform bush, free of holes and breaks. The best results are perhaps obtained by a very slight trimming of well-shaped bushes in February or early March and a very vigorous shearing of neglected misshapen bushes. Hedges, too, should be gone over if it is needed, and you are then ready for spring growth.

There is considerable variance of opinion about summer pruning. Three are those who insist that the common box should be sheared in May or early June, just after it has made its spring growth; the contention being that sheared early, the second growth will cover the marks of the scissors. In my observation, this does not happen except in the case of hedges. The soft growth is always badly bruised by even the sharpest shears, and the continued growth afterward is not such as to hide the ugly marks. It seems to me far better to wait until a general hardening-up of the foliage ha come about in the fall or late August, as the leaves are then tough and you can shear with comparatively little damage. Hedges, on the contrary, are best given an early summer clipping. Add a dose of nitrate of soda to stimulate new growth and you will find that it induces them to thicken up wonderfully. The marks of the shears will soon be covered and they will probably need a second going-over in the autumn, in order to be neat and trim for winter. This, of coarse, applies always to *sempervirens*. A hedge of *suffruticosa* you would not touch, except with a most prayerful and discriminating hand.

In the matter of propagating, the *sempervirens* roots very easily and comparatively quickly. You can collect your Angust prunings, prepare them and set them in the ground, well shaded with straw. They should be about four to six inches long, cut with a clean cut at the base, just below a node or leaf bud, and stripped of all leaves, excepting for a little tuft at the top, as this starts your growth off from the very beginning in bushy form. If you do not find it convenient to prepare your slips for rooting immediately after pruning, they can either be buried in the vegetable garden soil for a week or more, or they can be left rolled in wet burlap and kept thoroughly damp until you are ready to attack them. Be sure to plant them in well-drained, damp but not too rich soil that will hold moisture. Be sure that the slips are very closely planted and very tightly wedged; right up to their ears, so to speak, in the ground. Be terribly sure about firm planting, as it is the main secret of successful rooting — that, and keeping them always damp. If you can get them successfully through a few dry weeks in the fall, you practically never have to think of them in winter. Some fine day in February you will decide to have a look at them and you will be astounded to find quantities of little white roots. You can set them out, about six

inches apart, where you wish them to be permanently located. Line the trench with bone meal, tramp them in very firm and water occasionally. It is as easy as A B C, and you will have a very presentable hedge or border in three years.

The English box develops tiny rootlets at the joints of the sprays inside the bushes, and these may be detached from old bushes and planted in a nursery row, where they can be well watered until a root system is developed. They may then be moved to their permanent quarters. Poke inside your English boxwood and you will find certain sections where there is a vast number of little white roots coming from certain branches. By making use of these cuttings you save time. Curiously enough, this never happens with *sempervirens.*

Another odd characteristic of the English boxwood is a certain nest-like development of roots in the center of the plant, and at the joints of branches, entirely out of the ground. Old mountain women have told me that it is very necessary to nourish these roots with occasional handfuls of rich dirt and old rotted leaves. It is an interesting fact that many of the finest old hedges and specimens of English box have been growing for years on neglected farms where the chickens and turkeys have found them admirable roosting grounds, the droppings of the birds furnishing a high nitrogen content to the roots, and the decaying leaves of nearby trees blowing under and providing humus.

"Other favorite details of the colonial garden, whether terraced or level, were the box-walk, the box-maze, and the rose-embowered summer house — both dwarf-box and tree-box being much in use.

A dwarf-box maze at Tuckahoe and one at Mount Vernon may still be seen. Gone is the original, beautiful garden at Westover, praised by Chastellux when with other French officers he visited the Byrd family, soon after the surrender of Yorktown, but some clumps of the ancient box-trees has survived, and the flower garden and its wall have in late years been restored."

Colonial Virginia, Its People and Customs, by Mary Newton Stanard. J. B. Pippincott Company, 1917

BOX HILL

"To the south, between Epson and Dorking, is Box Hill, a celebrated beauty spot now preserved by the National Trust and created where the River Mole has carved a deep valley through the wooded chalk escarpment of the North Downs (Jane Austen lovers will know this as the scene of the dramatic climax of *Emma.*)

The hill is named after its acres of boxtree woods, and on its western slop is Flint Cottage, where George Meredith lived for 30 years until his death in 1909. Near the station is the late 12th century Humble Chapel. In fact, there is so much of interest in this pleasant part of Surrey that you may wish to spend a day or two here. A good choice would be the Burford Bridge Hotel, beside the River Mole, where Keats wrote the last stanza of Enlymion and Horatio Nelson stayed on his way to fame and death at the Battle of Trafalgar. Or you could stay at the busy market town of Dorking with its tall church spire, expensive antique shops, and old houses. In the wide High Street stands the White House (Horse), an ancient coaching inn, and there is another very old inn, The King's Arms, in West Street.

With Dorkin as your base. you can explore on foot the ancient Pilgrims' Way, which runs along the southern slopes of Boxhill, or visit Mickleham, where two famous Canadians, the late Lord Beaverbrook and Lord Bennett, a former premier, lie buried in the churchyard.

But above all, be sure to visit Polesden Lacey, a National Trust House standing in its own magnificent grounds at Great Bookham, above the valley that links Leatherhead and Dorking. The house was rebuilt in the Regency style in 1824 and houses the Greville collection of pictures, some good furniture and find porcelain. In summer the local dramatic society stage open-air performances of Shakespeare's plays in the grounds."

Fig. 1. Before Pruning.

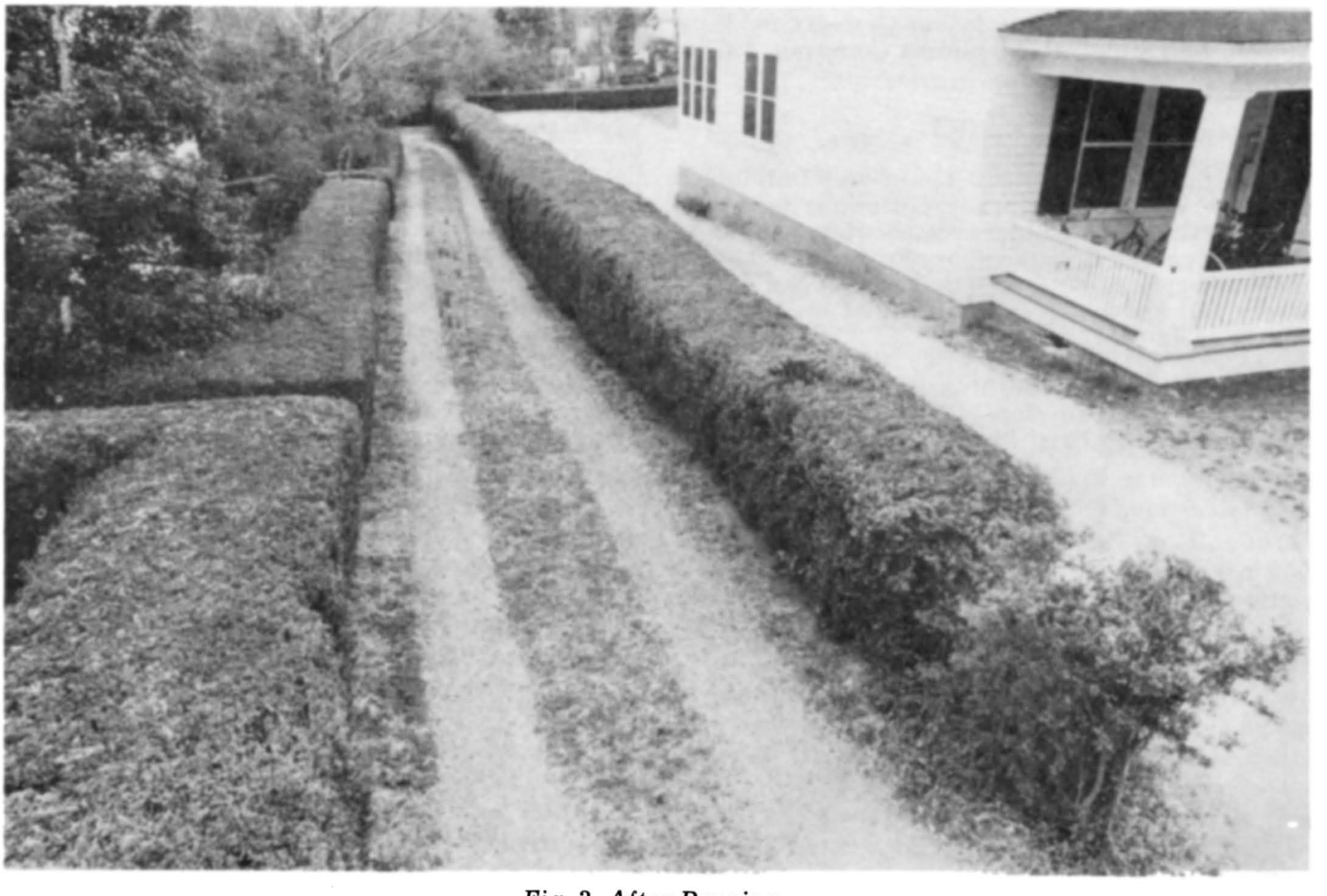

Fig. 2. After Pruning.

"May Japanese Boxwood"

Sally Stetson

In the early 1950s my husband and I became much interested in boxwood, and set about acquiring different varieties. These we bought mostly in small sizes; but at a nearby nursery, now no longer in existence, we found a few large-leaf bushes of a type unknown to us. The nurseryman called them "Japanses box" and they were later tentatively identified as *Buxus microphylla japonica*. We bought 8 in September 1936, and a year later one more. These were, as I recall, about five feet high, scraggly and not in good condition. 6 years later we bought from Fruitlands nursery a specimen of *B. microphylla japonica* for comparison purposes and found them almost identical. The description of a shrub "six feet with spreading branches and light green luctrous foliage" fits our bushes well, especially the "spreading."

Planted in a line along a path in the garden, they not only grew about fifteen feet tall, but sidewise to block the path, although care was taken to keep them reasonably well trimmed. Finally drastic measures had to be taken, the lower branches removed, new growth kept closely trimed on what are now four inches in diameter trunks. The tops have been thinned to form a canopy over the path.

Cuttings from this plantation have now given us hedges around three sides of a city lot; hedges four or five feet high and several feet across. Also, behind a paved semi-circular terrace near the house, is what was originally a low clipped hedge, planted in 1946 under overhanging trees. Because of storm damage the trees had to be removed, new growth kept closely trimmed on what are now four inch in diameter trunks. The tops have been thinned to form a canopy over the path.

To a casual eye the hedges are often mistaken for privet, but while rampant for boxwood, they do not have the privet habit of growth. Branches break easily, and on the rare occasions when snow visits Williamsburg and stays a day or so the leaves turn yellowish, and the whole hedge bends flat to the ground. The growth is, according to season, from three to twelve inches per year, so clipping is necessary for control. As I have no single specimens I have no idea of the ultimate height or breadth it will attain, untrimmed, in this area.

As cuttings and plants have been given to people all over town and elsewhere in state, and flourish mightily, it must be said that this box seems prolific and durable. It does not winterkill in this climate nor sunscald to any great extent. It is a most enthusiastic and cheerful grower, so must be clipped to keep it in bounds. The driveway, bordered on each side with such hedges, requires constant attention from the pruning shears.

For a long time this box did not succumb to the boxleaf miner, though other types did. However, during the past few years this infestation has reached it, and it too must be sprayed several times a year at the proper times. This seems to keep it reasonably healthy. I have noticed this year, in spite of the spraying, more infected leaves than usual, as some flies hatched before the program was started. However, an unsuspected source of control has also been noted: leaves are plucked from the stems, stripped open and worms removed, evidently by diligent birds who relish them. I have never actually seen a bird in the act of so doing, but the littered paths and absent worms are good circumstantial evidence.

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Notes on Some Forms of Japanese Boxwood

Dr. Henry T. Skinner

Japanese boxwood, *Buxus microphylla* var. *japonica* was introduced to western cultivation around 1890. As has previously been noted (*Comments on the Wild Occurrence of Three Boxwoods*, Boxwood Bulletin, Vol. 7, No. 1, July 1967), it is idigenous to the mountains of Honshu, Shikoku and Kyushu, Japan, where its occurrence is local and comparatively rare. But it has long been cultivated by the Japanese, especially around their hilltop shrines. Only one other boxwood is native to Japan and this is *B. microphylla* var. *riparia*, a low to procumbent plant with much smaller leaves which seems also much closer akin to such other forms of this pecie as the Korean and Chinese boxwoods. Japanese boxwood has large, glossy and generally rounded leaves 1/4 to 1/2 inch wide and 3/4 to 1 inch long, grows in Japan as an erect shrub to small 10-foot tree, often with a single main trunk. Because of these features it has been proposed that it could well be separated from *B. microphylla* as a species in its own right but no botanist to date has taken this step. By virtue of its leaf shape, 4-sided stems and the ditinctive yellow-green of it young foliage, this plant is separable, almost at a glance, from our more common Tree or Dwarf boxwoods (*B. sempervirens*).

As seen in America, Japanese boxwood carries all the features of Japanese description except its upright to single-trunked habit. Some of the largest and oldest specimens I happen to know are those of the Morris Arboretum in Philadelphia. These mav have been imported by Mr. John T. Morris some 75 or more years ago, or they may, more likely, have come from the Arnold Arboretum, but none have single main trunks. They tend to be many-stemmed and broader than high as shown in Fig. 1 — a quite typical plant at the U. S. National Arboretum. It is to be noted, however, that most such plants of our nurseries and gardens derive from side-shoot cuttings. Had they been grown as seedlings their growth habit could well be different.

Perhaps the one major attribute of Japanese Boxwood lies in the broadness of its climatic adaptability. Just fifty years ago Ernest ("Chinese") Wilson in his *Aristocrats of the Garden* promoted this boxwood as a best northern substitute for New England-tender *B. sempervirens* and since Wilson's time we have found it to be happy in the southern states as well. The Japanese is one of the few boxwoods seen fairlv commonly in southern California, and to be recommended for the Gulf States and Florida.

While at the Morris Arboretum during the late 1940s I became interested in some early attempts to control two of our, then, worst pests of boxwood, root nematodes and leaf miner. A bye-product of these efforts involved attempted inter-specific hybridization towards increasing variability and possible pest resistance. No crosses between forms of *Buxus semperviren* and *B. microphylla* were successful but in course of these proceedings there did chance to be raised an excellent stand of open-pollinated seedlings of Japanese boxwood. These seedlings were grown on for a few years and exhibited quite surprising variability. Some were fast-growing and fairly broad, but many seemed more upright, while a few remained quite dwarf. A number of these plants were taken to the National Arboretum in 1952 and from among them three of the more distinctive were eventually selected for propogation and naming. These three included two dwarfs, 'Morris Dwarf' and 'Morris Midget' and one upright form of normally rapid growth which became *B. microphylla* var. *japonica* 'National.'

The form 'National' was described on page 62, Vol. 12, No. 4 of the Bulletin without illustration. Fig. 2 of the present note shows the form and height of this plant at about 21 years of age. Its ultimate height is an unknown factor. 'National' has been distributed by the U. S. National Arboretum for testing purposes.

Fig. 1. Japanese boxwood. Typical habit of a maturing specimen at the U. S. National Arboretum.

Of the dwarfs, 'Morris Midget' was distributed by the National Arboretum in 1962. In 1972 it was redistributed together with 'Morris Dwarf.' Descriptions accompanying these plants are as follows:

Buxus microphylla var. *japonica* 'Morris Dwarf,' Natl. Arb. Access. No. 2027-C: "A miniature, slow-growing version of Japanese boxwood which shows a prospect of becoming 3 to 4 feet high in 20 years. Compared with the companion seedling, "Morris Midget,' leaves of this clone, 1/2 inch long and 3/16 inch wide, are slightly narrower and are possessed of a less pronounced terminal notch. Clustering of the 2- to 3-inch shoots results in an irregular or "tufted" bush outline. Foliage takes on a yellowish cast in winter but returns to a good green color with warm weather. One in a hundred or so plants will

Fig. 2. Cultivar 'National' with Roland M. Jefferson, Taxonomist of the National Arboretum.

show an occasional reversion in growth habit to the normally vigorous *B. microphylla* var. *japonica. U.S.D.A. Hardiness Zone 8."*

Buxus microphylla var. *japonica* 'Morris Midget.' Natl. Arb. Access. No. 7026-C: "A miniature form of the Japanese boxwood which shows a prospect of becoming 2 to 3 feet high in 20 years. Growth is somewhat slower and more smoothly regular in outline than *B. microphylla* var. *japonica 'Morris* Dwarf,' with annual growth averaging 1 to 1-1/2 inches. Leaves, 1/2 inch long, are slightly wider, to 1/4 inch wide, more rounded, and tend to be more conspicuously notched at the apex than those of 'Morris Dwarf.' Foliage takes on a yellowish cast a little earlier in winter than 'Morris Dwarf' but returns to a good green color with warmer weather. This clone has shown no tendency to bud reversion. U.S.D.A. Hardiness Zone 6."

The foliage of 'Morris Midget' is shown by Fig. 3 and the growth habits of both dwarfs are illustrated in Figs. 4 and 5.

It was stated that these selections derived from the open pollination of Japanese boxwood, yet the occasional sport-reversions to the normal vigorous type of this plant provide good evidence, we believe, that the seedlings represent Japanese box without hybridization. The nature of the bud sports suggests that the dwarfs may resemble the Kingsville *microphylla* dwarf in being periclynal chimeras and thus comparable in turn to color-sporting camellias and azaleas.

Both dwarfs make highly attractive plants, either in natural growth or when closely trimmed as in a small formal garden at my home in Bowie, Maryland, shown in Fig. 6. Thus trimmed, they closely resemble the normal 'edging' box of English gardens — trimmed *Buxus semp. suffruticosa* — and in view of the current problems of "English" box in this country these *microphylla* dwarfs can well be a good substitute, particularly in light of their wide climatic adaptabilities. A frequent question from visitors to my own garden is how often do you have to trim to keep these hedges in shape? The answer is twice a year with electric shears, and it doesn't take

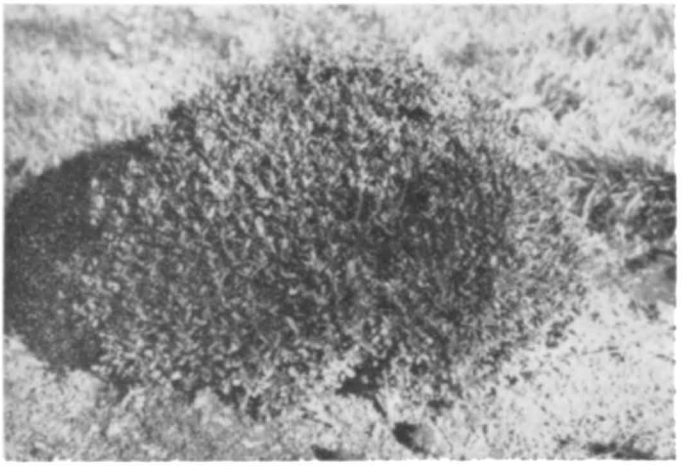

Fig. 4. Buxus microphylla var. japonica 'Morris Midget' maintains a smooth-rounded outline.

long — in late June or early July and again in late winter to take care of the last summer's growth. The second trimming could be done in late fall but not earlier since artificially induced late growth will inevitably discolor and be somewhat unsightly dur- the winter months.

Ever since making the three selections, 'National' and the two dwarfs, from seedlings of Japanese boxwood, I have regretted that no attempt was made to comb the ones of more intermediate growth habit towards the discovery of two or three more closely approximating the habit and growth rate of *B. semp. suffruticosa.* Such a substitute has become increasingly needed. No *microphylla*-derived substitute would ever carry the scent or smell (a matter of opinion) of English box but its production need not be at all difficult. Little would be needed besides a Japanese box bush with a good crop of seeds.

Fig. 1. 'Locket'
Photographed May, 1976 at 21 years: 59 inches tall and 22 inches wide.
Photograph by Lyle Rosbotham, Williamsburg, Va.

A Correction

On page 40 of the *Boxwood Bulletin* for January 1976 (Vol. 15 No. 3,) is a picture and brief description as follows: "*Buxus Microphylla* Sieb. & Zucc. var. *compacta* 'Curly Locks' Henry Hohman 'Locket' J. T. Baldwin Jr. This is all correct, but on the opposite is a picture — purporting to be of 'Locket' — which is NOT 'Locket.' The correction was made by Dr. Bernice Speese, working with the papers of the late Dr. Baldwin. Dr. Speese, generously assumes responsibility also for the mistake.

In his sketchy "first draft" of an intended paper on New Cultivars of the Buxus Microphylla Complex Dr. Baldwin, speaking at a meeting of the Officers and Directors of ABS, called 'Locket' "a most distinctive and valuable plant that I here name 'Locket', adding, "This plant is now 18 years old and is fruiting; it is 44 inches tall, 22 inches wide. I am hopeful that some of the seed just harvested (July 23, 1973) will germinate. The foliage of 'Locket' is delicate and light green — vastly different from that of any other box that I know. The leaves are lanceolate (maximum length, 3/4 inch) with acuminate bases and acute tips. The tips are usually yellowish, perhaps a nutritional condition rather than a genetic one."

A proof of the right (we hoped) 'Locket' was sent to Dr. Speese, who wrote in reply "The proof is of the 'real' Locket. And again I apologise for the confusion caused by my mistake. Soon now, I shall send you descriptions for the rest of Doctor Baldwin's selected cultivars and at that time identify the plant represented by the photograph published through my mistake) as 'Locket'.

Taxonomy of the Cultivated Boxwoods Buxus, Buxaceae

Peter Goldblatt

Peter Goldblatt is a South African, now settled in the United States. He was born in 1943 in Johannesburg, South Africa, and educated there and at the University of Cape Town, South Africa, where he obtained a Ph.D. in botany. After teaching botany for several years in Johannesburg and Cape Town, he moved to the United States to take up a research position at Missouri Botanical Garden. In 1975 he was appointed B. A. Krukoff Curator of African Botany. His main research interests are the systematics of Papaver and biosystematics and evolution of the family Iridaceae.

Introduction

Buxaceae, the family to which *Buxus* (the boxwood genus) belongs, is a small one consisting of 5 or 6 genera, and is found throughout the world with the exception of Australasia. The genera are *Styloceras* (Andean S. America), *Simmondsia* (California-Mexico), *Sarcococca* (*Indomalesia*), *Pachysandra* (S. E. United States and western Asia), and *Buxus* (Eurasia, Africa and the Caribbean). Most of the African species found south of the Sahara are often placed in a sixth genus, *Notobuxus* (Verdcourt, 1965).

Buxus itself is the largest and most wide-ranging genus in the family, and comprises some 70 species according to Airy Shaw (1973). Its center of distribution is western Asia where 26 species occur from Japan, south and west to the Himalayas, and the East Indies. Extending westward, a further 5-6 species are found from Iran and on to the Mediterranean basin and Central Europe. Ten species occur in sub-Saharan Africa or, if *Notobuxus* is recognized as Vercourt (1965) does, only three true *Buxus* occur there, while there are about 25 in the New World in the Caribbean area. *Buxus* is absent from Australasia and South America excluding the Carribbean coast of this continent.

The Cultivated Boxwoods

1. European species

The cultivated boxwoods, however, fall into a few species, the most important being *Buxus sempervirens* L. This species ranges from central and southern Europe to North Africa with its eastern limit in western Turkey. *Buxus sempervirens* was in the past believed to extend into the Caucasus and Iran, but recent treatments regard the boxwoods of this area as *B. colchica* Pojark and *B. hyrcana* Popark (Pojark 1949; Rechinger 1966). There appears to be no information on whether the latter two species were ever introduced into cultivation under the name *B. sempervirens.*

Buxus sempervirens itself was the first boxwood to be grown for ornamental purposes and was probably one of the first ornamentals grown by man. It is a very variable species both in the wild and, of course, in cultivation, and many cultivated varieties have been named (Dallimore, 1908, provides a good summary). Linnaeus, who described *B. sempervirens,* recognized both arborescent and dwarf forms (var. *arborescens* and var. *suffruticosa*). Although horticultural manuals usually cite several named varieties under *B. sempervirens,* Dallimore listing as many as 21, the tendency today in taxomomic treatments is not to give subspecific recognition to variants. In Flora Europaea, Webb (1968) does not even mention the variation found in this species. However, the older botanists did formally recognize several varieties and Baillon (1859), who monographed the family, listed 7 varieties and 10 subvarieties of *B. sempervirens.*

The only other European species in cultivation is *Buxus balearica* Lam., from the western Mediterranean region including North Africa. This is a large-leafed species and is a little less hardy than the other cultivated boxwoods, but nevertheless does survive in the open in England at Kew where one plant is now a large tree.

2. Asiatic species

The second important group of boxwoods are the eastern Asiatic forms of *Buxus microphylla* Sieb. & Zucc., a species which ranges from Japan and Korea to China. Four varieties of *Buxus microphylla* are generally recognized in horticultural treatments:

Var. *microphylla*

This, the typical variety, is not known in the wild. It was introduced to the West from Japanese gardens about 1860. It is a small plant with very tiny leaves.

Var. *japonica* Rehder & Wilson

This is widely cultivated today and as its name suggests is a native of Japan. Like all forms of *B. microphulla,* it is very hardy. The leaves are comparatively large for the species and the plants will, given time, grow to about 9 feet. The Japanese boxwood is often recognized as a distinct species (Bailey 1915: Chittenden 1951).

Var. *insularis* (Nakai) Hatusima (the earlier and thus correct name for var. *koreana,* the Korean boxboxwood).

The variety is becoming well-known for its great hardiness and has increased the area where boxwoods are hardy by a considerable extent (Rehder 1966). The plants are very slow growing and thus seldom achieve much size.

This fairly straightforward way of treating the variation found in *B. microphylla* is not, however, the one favored by Hatusima (1942) who monographed the Asistic species of *Buxus*. Hatusima divided *B. microphylla* into 2 subspecies and further subdivided these into varieties. According to this classification, the four cultivated forms have the following clumsy names:

B. microphylla Sieb & Zucc. ssp. *microphylla* var. *microphylla*
Var. *Japonica* Rehder & Wilson
ssp. *sinica* (Rehder & Wilson) Hatusima var. *sinica*
var. *insularis* (Nakai) Hatusima

Hatusima recognizes several more varieties and even forms, but these do not seem to be important from the horticultural point of view.

Other Asiatic species reported in the literature as being in cultivation are:

Buxus harlandii Hance

An endemic from Hong Kong, it is not hardy and seldom encountered in gardens today. The name is occasionally given in error to forms of *B. sempervirens.*

B. wallichiana Baillon

This is a Himalayan species, probably introduced as a curiosity. It reaches a height of 6 m and is a useful timber tree in India. It seldom reaches this height in cultivation. Dallimore reports that it is a strong grower, but difficult to propagate.

Cytology

Chromosome numbers are known for only 4 species of *Buxus*: a haploid number of n = 14 being reported for *B. sempervirens, B. balearica,* and *B. wallichiana* by Cimonet & Miedzyrzecki (1932) and for *B. colchica* by Grif (1965). In the related genus *Sarcococca* Simonet & Miedzyrzecki (1942) reported numbers of n = 14 and n = 28. These counts indicate that n = 26 for *Simmondsia,* which suggest that these are not closely related to *Buxus* itself, even though *Notobuxus* is sometimes included in it. *Buxus* is, however, very inadequately known from the cytological point of view and more reports are needed before firm taxonomic conclusions can be drawn from the cytology of *Buxus* and its allies.

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BOXWOODS

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Ohio Agricultural Research and Development Center

Boxwoods are normally considered to be too tender a plant to be grown around Wooster and in some parts of Ohio. Common Boxwood *(Buxus sempervirens)* is usually considered as being not able to survive temperatures much below -5° F. and Littleleaf Boxwood (*Buxus microphylla*) is usually killed at temperatures below -10° F. However, several strains or cultivars of both species have survived temperatures below -10° F. in the Secrest Arboretum. A few have survived temperatures of -20° F.

The first boxwood set out in the Arboretum was Asheville Common Box *(Buxus sempervirens* 'Asheville'). In the spring of 1923 six specimens of this cultivar were planted and have grown well ever since. Some 90 different kinds of boxwood have been outplanted since the initial plantings in 1923 and 59 of these are still living.

Boxwood planted on sites protected from wind and winter sunshine grew better than when grown on exposed sites. Excessively windy sites proved fatal to all boxwoods. As boxwoods are shallow rooting,, care should be taken not to damage root systems. Planting too deeply can damage root systems by smothering. Too shallow planting or setting the plant too high can cause root injury through soil erosion exposing roots to drying out. Too heavy a mulch can also smother the root system.. Digging in the root area either by man or animals can also damage root systems. Tunneling by moles or chipmunks have killed small plants. Extremes of watering, too much or too little, can damage or kill plants. A moist site but with good drainage is required for optimum growth. Excessive matting of ground covers such as Ground Ivy (*Nepeta hederacea*) or Baltic Ivy (*Hedera helix baltica*), can damage root systems and can kill plants. Excessive amounts of fertilizer can injure the plants. Small plants under a foot tall usually need special protection for the first two or three years until they become established and begin to grow. Winter killing is often associated with overfeeding or poor drainage.

In 1973 eighteen different types of the more promising boxwoods were assembled for different locations in the Arboretum and set out in a plot together. These plants are now beginning to become reestablished as it takes two or three growing seasons for larger plants to do so. The oldest plantings of boxwood can be found in Arboretum Plots A1 and A2. All of the boxwoods listed below have withstood temperatures to -14° F. or lower and show promise of being hardy in Plant Hardiness Zone V (average annual minimum temperatures of from -10° F. to -20° F.).

Buxus microphylla 'Curleylocks'. CURLEY-LOCKS LITTLELEAF BOX. Grown for 10 years. Grows slowly. Has grown from 10 inches tall to 26 inches tall with 3 foot spread in 10 years time. Above average condition on protected sites, has not survived on exceptionally windy locations. Flattened by heavy 22-inch snowfall December 1974, now 18 inches tall. Branches curling and twisted. Has survived -14° F. in protected location when covered by snow.

Buxus microphylla var. *japonica*. JAPANESE LITTLELEAF BOX. Grown for 19 years. Grows slowly, 4 feet tall in 19 years. Has survived temperatures to -20° F. when grown in protected locations. Foliage bronzed during winter but "greens up" quickly in spring. Hardy around Wooster on protected sites.

Buxus microphylla var. *koreana* 'Wintergreen'. WINTERGREEN KOREAN LITTLELEAF BOX. Grown for 3 years. Three types, Wintergreen, Wintergreen 58, and Wintergreen HNS have been outplanted on exposed locations. Although not outplanted long enough to become fully established the plants have survived temperatures to -14° F. Cultivars show promise as they have been reported to have been hardy in Ohio locations for years. Have been grown in protected nursery beds in the Arboretum for 7 years with no winter damage. Has retained green color all winter. Slow growing, has been growing less than 2 inches a year.

Buxus microphylla. LARGELEAF ASIATIC CLONE. Grown for 10 years. Above average condition in protected locations, below average condition in exposed locations. Fast growing in protected locations, has averaged over 6 inches growth in a year. Ten-year-old plants are 6 feet tall. On severe sites leaves turn reddish in winter but green up in spring. Has grown exceptionally well on protected sites.

Buxus sempervirens 'Asheville'. ASHEVILLE COMMON BOX. Grown for 53 years. Grows slowly. Fifty-three year old plants are from 6 to 7 feet tall. Plants are in above average condition on both protected and exposed sites. Have failed as foundation plantings on south and west sides of buildings when exposed to winter sunshine. Holds green color all winter on both protected and exposed sites. Has survived temperatures to -20° F. Hardy around Wooster. Original cuttings from old plants growing on the grounds of the summer home formerly occupied by a son of President Hayes at West Asheville, N. C. The best boxwood in the Arboretum.

Buxus sempervirens 'Edgar Anderson.' EDGAR ANDERSON COMMON BOX. Grown for 10 years. Slow growing, 10-year-old plants 3 feet tall. Plants are above average condition on protected sites and below average condition on exposed sites.

Buxus sempervirens 'Fastigiata'. COLUMNAR COMMON BOX. Grown for 10 years. Slow growing, 10-year-old plant 3 feet tall. Plants are above average condition on protected sites and in poor condition on exposed sites. Upright plant.

Buxus sempervirens, Mulsted selection. MULSTED SELECTION OF COMMON BOX. Grown for 10 years. Fast growing, 10-year-old plants over 6 feet tall. Average growth of more than 6 inches a year. Plants are in good growing condition on both protected and exposed sites. Retains its green color all winter. One of the most promising boxwoods in the Arboretum.

Buxus sempervirens "Northern New York. NORTHERN NEW YORK COMMON BOX. Grown for 10 years. Slow growing, 10-year-old plant 18 inches high with 30 inch spread. Has increased height growth less than an inch per year. Plants are in good growing condition on both protected and exposed sites.

Buxus sempervirens 'Naviculariś'. NAVICULARIS COMMON BOX. Grown for 10 years. Slow grrowing, 10-year-old plant 4 feet tall. Average growths less than 4 inches a year. Plant in good growing condition on protected sites, below average on exposed sites.

Buxus sempervirens 'Pendula'. WEEPING COMMON BOX. Grown for 10 years. Slow growing, 10-year-old plant 4 feet tall. Average growth less than 4 inches a year. Plant in good condition on both protected and exposed sites. Has been killed on excessively windy sites.

Buxus sempervirens 'Rotundifolia'. ROUNDLEAF COMMON BOX. Grown for 46 years. Slow growing, 46-year-old plants 6 to 7 feet tall. Average growth less than 2 inches a year. Grows well on protected site. Holds green color through most of winter. Off color by early spring. Soon becomes green with warm weather. Has survived temperatures to -20° F. Hardy around Wooster.

Buxus sempervirens 'Schmidt'. SCHMIDT COMMON BOX. Grown for 8 years. Fast growing, 8-year-old plants 3 to 4 feet tall. Average growth in excess of 4 inches per year. Plants in good condition on both protected and exposed sites. Holds color well. One of the more promising boxwoods in the Arboretum.

Buxus sempervirens 'Suffruticosa'. TRUE DWARF COMMON BOX. Grown for 46 years. Slow growing, 46-year-old plants 7 to 8 feet tall. Average growth less than 2 inches a year. Grows well on protected site. Holds green color all winter. Some leaves off color at -12° F. Has survived temperatures to -20° F. Hardy around Wooster on protected sites.

Buxus sempervirens 'Vardar Valley'. VARDAR VALLEY COMMON BOX. Grown for 10 years. Slow growing, 10-year-old plant 3 feet tall. Average growth over 2 inches a year. Plants in good condition on protected site, below average on exposed site. This cultivar has been reported to be hardy in Plant Hardiness Zone V in other locations.

Buxus sempervirens 'Varifolia'. Grown for 10 years. Fast growing for boxwood, 10-year-old plant 4 feet tall. Average growth in excess of 4 inches a year. Plants are in above average growing condition on both protected and exposed sites.

Buxus sempervirens 'Wooster No. 1'. WOOSTER NO. 1 COMMON BOX. Grown for 20 years. Slow growing, 10-year-old plant 3 feet tall. Average growth in excess of 2 inches a year. Plants are in above average growing condition on protected sites and below average condition on exposed sites.

Buxus sempervirens 72-663. Grown for 8 years. Fast growing, 8-year-old plants 3 to 5 feet tall. Average growth 4 inches a year. Plants are in average growing condition on both protected and exposed sites.

Boxwood Calls for Moisture

Arthur Dugdale

Boxwood, that "living antique" of old gardens, is one of our most desirable and valuable broadleaf evergreens; and it requires relatively little care. Its needs are few, but if the plant is to thrive and look its best, these cultural aids should be provided.

In summer, these shrubs need an organic mulch 2 to 3 inches deep, to hold moisture and keep shallow roots cool during hot weather. Good materials for this purpose are compost, old sawdust or shavings, processed pine bark, ground corn cobs or pine needles.

Boxwoods have a relatively shallow root system, therefore these plants should have adequate moisture at all times, and should never be allowed to dry out.

Boxwood Leaf Miner is believed to be this plant's most serious pest; however, good control may be obtained by spraying early with Mslathion* and with Diazinon* in midsummer.

In the past few years, there has been a noticeable decline in English boxwood in parts of Virginia, especially in northern areas and in the Shenandoah Valley. The American Boxwood Society has helped to investigate this decline, funding experimental studies at Virginia Polytechnic Institute and State University to identify the probable causes and attempt their control.

For details of the control of boxwood diseases and pests, and the general culture of boxwood, procure Extension Bulletin No. 248 — "Boxwood in the Landscape — from your County Agricultural Agent's office, or from the Extension Division, V.P.I. & S.U., Blacksburg, Virginia, 24061. (See p.) of this issue of the Boxwood Bulletin.)

Caution, do not work boxwood with a hoe; some feeding roots are near ground level, and serious damage to roots may be done without realizing it.

Boxwood thrives in a wide variety of soils — from heavy clay to light sandy loam. It does equally well in full sunshine or partial shade, but it often becomes thin and open when grown in full shade.

It is probable that more damage is done to boxwood in Virginia by allowing the soil to become too dry, than from other causes. Established plants can withstand a considerable moisture deficiency without dying, but dryness does weaken them, and lessens their resistance to severe winter weather and freezing winds, as well as insect and disease attacks.

Boxwood is slow in every way — plants that have been weakened by drought conditions in summer may not show it until late autumn or mid-winter, when the leaves turn a sickly brownish-red color, and many of them fall off. Shrubs and evergreens need a certain amount of moisture at all times, during all four seasons, even when they are not growing. In their "breathing" process the leaves give off moisture and oxygen by transpiration, and the roots must supply it.

Boxwood is one of the few shrubs that have two separate growing seasons each year — during April and May, and in August and September. They prefer to grow slowly and naturally, and respond best when given slow-acting organic fertilizers, such as equal parts of bone meal, cottonseed meal, and commercial sheep or cow manure. New growth that has been forced with fertilizer having a high nitrogen content is more liable to suffer winter damage than slowly grown leaves and twigs.

Large boxwoods that have recently been transplanted may need the protection of lattice frames during the first two summers and winters to provide semi-shade in summer, and to prevent damage from sunscald and freezing winds in winter. This applies particularly to dwarf boxwood, which isn't quite as hardy as other types.

The faster growing varieties of boxwood need light pruning every two years to induce lateral growth and to make them more shapely and compact. The pruning also strengthens the slender branches, making them less vulnerable to snow and ice damage in winter.

Do the pruning in late autumn or in March, before new growth begins.

THE AMERICAN BOXWOOD SOCIETY

INFORMATION

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DUES AND SUBSCRIPTIONS

Regular membership dues of The American Boxwood Society are now $5.00. This includes a subscription to *The Boxwood Bulletin,* to the publication of which the Society allots about 2/3 of the money received from dues.

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The Boxwood Society year runs from one Annual Meeting to the next; from May of one year to May of the next year. Those joining the Society at other times are sent all the *Boxwood Bulletin* issues for the current Society year, beginning with the July number. Their dues are then again due and payable in the following May. This was voted by the Society in order to lighten as far as possible the heavy work load of our busy Treasurer.

Price per single copy $1.25 plus 5¢ postage to members: $1.50 plus 5¢ postage to non-members. Orders of five or more copies are sent postpaid. At the present time any or all *Bulletins* are available, back to Vol. 1, No. 1 (Vol. 1 consists of three issues only, there was no Vol. 1, No. 4.)

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