APRIL 1969

The Boxwood Bulletin

A QUARTERLY DEVOTED TO MAN'S OLDEST GARDEN ORNAMENTAL

A garden walk edged with old boxwood and shaded by tall crepe myrtles which are a riot of color from midsummer to early fall. At Castle Hill, Albemarle County, Va. Photograph from the Virginia State Library.

Boyce, Va. Vol. 8 No. 4

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The Editors solicit and will welcome contributions of articles, news notes, photographs suitable for reproduction, of boxwood specimens, gardens, and plantings, and other items of probable interest to readers. While every effort always will be made for the protection of all material submitted for publication, the Editors cannot assume responsibility for loss or injury.

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The Boxwood Bulletin

APRIL 1969 Vol. 8 No. 4

EDITOR — MRS. EDGAR M. WHITING

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ILLUSTRATIONS

9TH ANNUAL MEETING

THE AMERICAN BOX SOCIETY

Wednesday, May 14

This Year, At Oatlands, Loudoun County, Va.

Place: The Carriage House at Oatlands (National Trust) on Rte. 15, about halfway between Leesburg on Rte. 7 and Gilbert's Corner on Rte. 50, both west of Washington, D. C. More road directions on INFORMATION page, back cover.

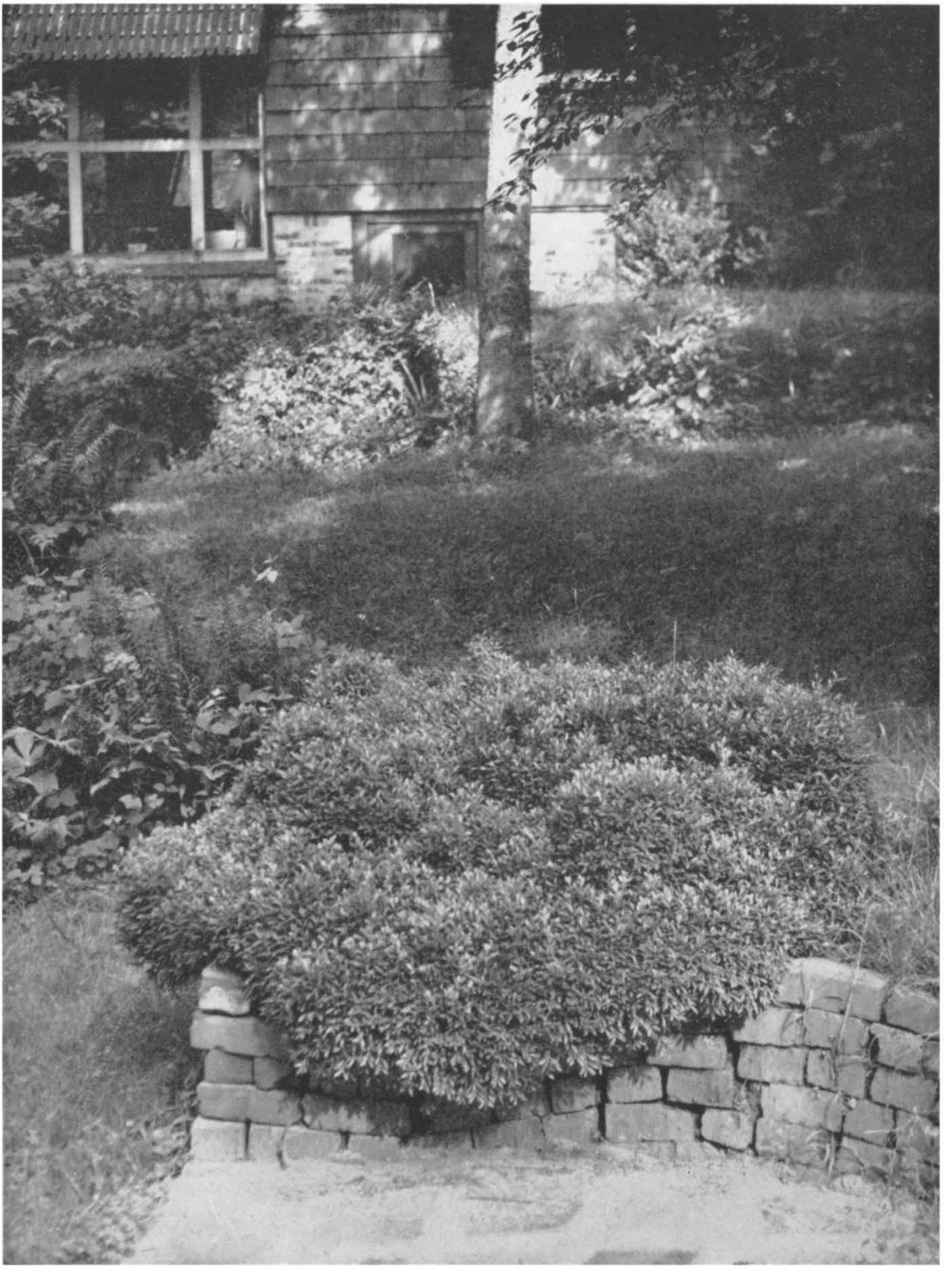
Times: (all DST): 10 A.M. Registration begins.

**Tours.* By special arrangement, the grounds will be open in the morning to persons attending the ABS Meeting; House and gardens (see below) open in the afternoon.

11:00 A.M. Business meeting convenes.
12:30 P.M. Recess for box luncheon.
1:30 P.M. Meeting reconvenes for unfinshed business, and a program of speakers, who will include Dr. John L. Creech on Oriental Boxwoods and Dr. J. T. Baldwin, Jr., on Korean Boxwoods.
— Adjournment about 3:30.

**Tours:* By special arrangement, the beautiful boxwood gardens (see picture below) will be open in the morning from 10 A.M. to persons attending the ABS Meeting; House and grounds open in the afternoon. National Trust groups rate — 80¢ per person. Admission to be paid directly to Oatlands staff who will be on hand to issue tickets. National Trust members admitted by membership card.

ABS members are urgently requested to return their lunch reservations, including check for $1.75, as soon as possible (not later than May 12th) to The American Boxwood Society, Box 85, Boyce, Va. 22620.



KOREAN BOXWOODS

J. T. BALDWIN, JR.

There is confusion about the boxwoods that are native to Korea. What scientific name or names should be used for them? What is the status of *Buxus koreana* versus *Buxus microphylla* var. *koreana*? What cultivars of Korean box are in America? These are perplexing questions: prior attempts to answer them have incited debate, often of an acrimonious nature. Perhaps we can now bring some clarity to these muddled matters. Various individuals have assisted me: Carroll E. Wood, Jr., F. Raymond Fosberg, Donald Wyman, Richard W. Lighty, Henry J. Hohman.

This paper will likewise be published in the American Nurseryman.

Let us begin at the beginning.

In January, 1906, Professor Jinzo Matsumura suggested to his student Takenoshin Nakai that he undertake the study of the Korean flora, which, of course, was an ambitious assignment. Nakai devoted the next thirty-seven years to that study, except for obligatory military service for fifteen months in 1909 and 1910 and except for a five-months trip to Java, Ceylon, Bonin Islands, and Hokkaido in 1920. He was director of the botanic gardens in Java for 1943-1946, and then, after the "most stupid war which we fought" (his words), returned to Japan to resume his studies.

In 1952 Doctor Nakai, Professor Emeritus in Tokyo University and Director of the National Science Museum of Japan, published *A Synoptical Sketch of Korean Flora*, the then existent conditions making it "hopeless to publish the entire work." Therein, as introductory notes, the author lists abbreviated itineraries of twenty-seven trips to Korea and also mentions study visits to Mongolia, China, Europe, and the United States; records that "specimens which I collected myself fill forty regular cases, and several other cases are filled with specimens collected by Japanese and Korean" individuals; and states that he has "published successively what I have investigated about the Korean plants." Surely, Nakai had a better firsthand knowledge of the plants of Korea than any other botanist probably ever will: to their study he devoted his life. Even in his day much of the vegetation had been destroyed, and the situation worsens. Agriculture (as the very structure of the word tells us), wood-getting for fuel, timber-cutting for construction, and wars have no regard for natural associations of plants, and these pursuits have been followed with ardor in this little country. Fortunate that there are many mountains to serve as vegetational refuges and the environs of many temples that are plant sanctuaries.

Included in the synoptic flora were *Buxus koreana* Nakai and of this species varieties *elongata* Nakai ex Kawamota and *insularis* Nakai ex Kawamoto. Thus, Doctor Nakai, after long familiarity with the boxwoods of Korea in the field and in the herbarium, segregated them into three taxonomic categories and relegated no Korean plants to the Japanese *B. microphylla*. Each Korean taxon, species and varieties alike, encompassed countless seedlings. Each seedling like each human being is genetically unique; this is true because of the processes basic to sexual reproduction. A student once asked "How do plants populate?"; I replied, "Just like people." And I was serious in my answer.

We credit Doctor Nakai with a unique knowledge of the Korean flora, but we recognize that as a taxonomist he was a splitter and named an inordinate number of entities (species and varieties) and that, unfortunately, he was nationalistic in his botany and whenever possible established separate categories for the plants of Korea, China, and Japan. Moreover, he on occasion did not follow the usual professional procedures; he did not, for example, validly establish *Buxus koreana*: there was no Latin description published and no type specimen deposited in an herbarium.

British-born Ernest H. Wilson, trained in horticulture in nurseries and at the Birmingham and Kew botanical gardens, became one of the great plant explorers of the Far East, and, though the name "Chinese" Wilson especially identifies him with China, he effectively introduced plants from other countries as well. In 1906 Professor Charles Sprague Sargeant, first director of The Arnold Arboretum, got Wilson to go to China for the Arboretum, and, thereafter, until an untimely death in 1930, Wilson remained in the employ of that institution.

Wilson went twice to Korea under Arboretum sponsorship: from May, 1917, until the end of the year he explored that peninsula (with only about two times the area of Virginia) and the adjacent islands; he returned to Korea in June, 1918, and left on September 28th. Nakai spent a month with him on his first trip, on Dagelet and Quelpaert islands. On both trips Wilson collected herbarium specimens of *Buxus* and on his second presumably arranged to have cuttings sent back later, for sixty-three box cuttings from Korea were accessioned at The Arnold Arboretum on August 29, 1919, under No. 11323. But Wilson (1931) in *If I Were To Make A Garden* wrote: "I count this Boxwood one of the most useful

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Opposite page:

Figure 1. Buxus microphylla var. koreana, photographed in 1952 by Dr. Bernice M. Speese.

plant introductions I was privileged to make in Korea. It came to The Arnold Arboretum in 1918 [1919 is usually given as the year of introduction], and so far has never suffered any winter injury." Possibly the cuttings were not accessioned immediately upon arrival at Jamaica Plain. At any rate, soon thereafter, Korean boxwood from The Arnold Arboretum entered the American trade.

On the assumption that Nakai had validly published *Buxus koreana,* Wilson in 1920 (Journal of The Arnold Arboretum) made the combination *Buxus microphylla* Sieb. & Zucc. var. *koreana* Nakai, thus reducing *koreana* from rank of species to that of variety, though Wilson would later vacillate (sometimes in the same volume) between usage of *B. koreana* and *B. microphylla* var. *koreana.* But his new combination in 1920 was a *nomen nudum* — a name without technical description in the literature. Alfred Rehder, author of the Manual of Cultivated Trees and Shrubs, took care of that in 1926 (Journal of The Arnold Arboretum): he published a Latin description of var. *koreana* and designated *E. H. Wilson* 9625 in The Arnold Arboretum Herbarium as the TYPE: "Prov. Keiki, near Keijyo, common on side of streams on rotten granite base of Kwangaku-san, November 23, 1917." The type consists of three sheets of specimens with the statement that their heights ranged from six inches to two feet. One sheet has two six-inch specimens with roots; the other two sheets, six rather stiffly ascending shoots.

Clearly, Rehder based his description upon a seedling (or seedlings) from the wild: accordingly, var. *koreana* specifies a wild population whose members do not exceed a height of two feet; the name does not designate a cultivar — a clone propagated vegetatively and therefore without apparent variability. Of the technical characters of var. *koreana* we concern ourselves here only with height.

An array of people have accepted Rehder's interpretation of what he meant by var. *koreana*: E. H. Wilson (1928) in *More Aristocrats of the Garden,* Edward I. Farrington (1931) in *Ernest H. Wilson Plant Hunter,* L. H. Bailey (1949) in his *Manual of Cultivated Plants,* Fred Lape (1965) in *A Garden of Trees and Shrubs,* Henry J. Hohman (1966) in a letter pertaining to plants 35-50 years old; other individuals have had a different concept of the variety: Donald Wyman in *Hedges, Screens & Windbreaks* and Benjamin Blackburn in The Boxwood Bulletin for July 1966. Wilson (1931) in *If I Were To Make A Garden* refers to boxwood as he especially remembers it in Korea as a low-growing plant "native around Seoul." The clones of var. *koreana* in the American trade may very likely derive from that population. Henry Hohman years ago called my attention to two *koreana* clones in cultivation with us: one with branches that do not spread apart to leave a centrol opening, another that does so spread, and he has long offered in addition var. *koreana* 'Garden Variety'.

Records show that sixty-three cuttings of Korean *Buxus* were accessioned at The Arnold Arboretum under No. 11323. Doctor Wyman, Horticulturist at the Arboretum, writes me that four plants of the original introduction are still maintained at the Arboretum. These half-century-old individuals measure:

5' tall x 8' spread

3' tall x 6' spread

5½' tall x 6' spread

7½' tall x 10' spread.

Obviously, none of these plants falls within the limits of var. *koreana,* yet each of them is doubtless the progenitor of a clone in the American trade. Herein lies the confusion: clones of Korean boxwood not included in var. *koreana* are in cultivation in the United States and Canada; those clones, often referred to var. *koreana,* should be individually designated. In the Blackburn reference cited above it is stated that Chester Wedrick of Flora Nova Gardens, Simcoe, Ontario, Canada, received "many 2- to 5-year seedlings from a friend in Korea in 1926, and their progeny have made many specimens in various habits ranging to 8 feet in height . . . . " Those plants, also in the trade, are a sample of Korean *Buxus;* it may be that none of them falls within var. *koreana.* Wrong reference of some of them to this variety has leavened the confusion.

In the October 1967 number of The Boxwood Bulletin, Richard W. Lighty described boxwood in Korea as he and Edward G. Corbett found it during four-months exploration there in 1966. Around Seoul the plants were variable bushes "from eight inches to two feet in height and . . . . roughly as broad as high" and with habit "typically open and loose although individuals varied for compactness"; there the plants "colonized denuded and burnt-over areas." At other places, in nature or in cultivation, they saw plants as high as eight feet with seven-inch diameters, low lax plants, plants with scale-like leaves or with leaves much larger, plants that were horizontal or mounded in habit.

All evidence indicates that the population of *Buxus microphylla* in Korea is highly variable and that in this respect this Asiatic species rather parallels *Buxus sempervirens* in Eurasia: varietal designations specify certain populations in each species (as var. *koreana* and var. *arborescens*); other varietal names, certain cultivars or clones (as var. *compacta* and var. *suffruticosa*). Many fine clones in each species have no names.

Korean boxwood as known in America since 1919 has shown a high level of hardiness. A single illustration will suffice. From Fred Lape's book: "The Korean boxwood is so hardy here [at the George Landis Arboretum, midway between the Catskill and Adirondack mountains, at Esperance, New York] that an old specimen in a south-facing rock garden where it is blasted by the winter sun, the very worst spot for a broad-leaved evergreen, rarely ever winterburns." From the deep South of the United States to Ottawa in Canada, Korean boxwood is horticulturally important; germplasm newly introduced from Korea can be expected to increase the usefulness of this complex of plants. As we now know Korean box in the United States it does not, in most situations, hold its green color in winter;

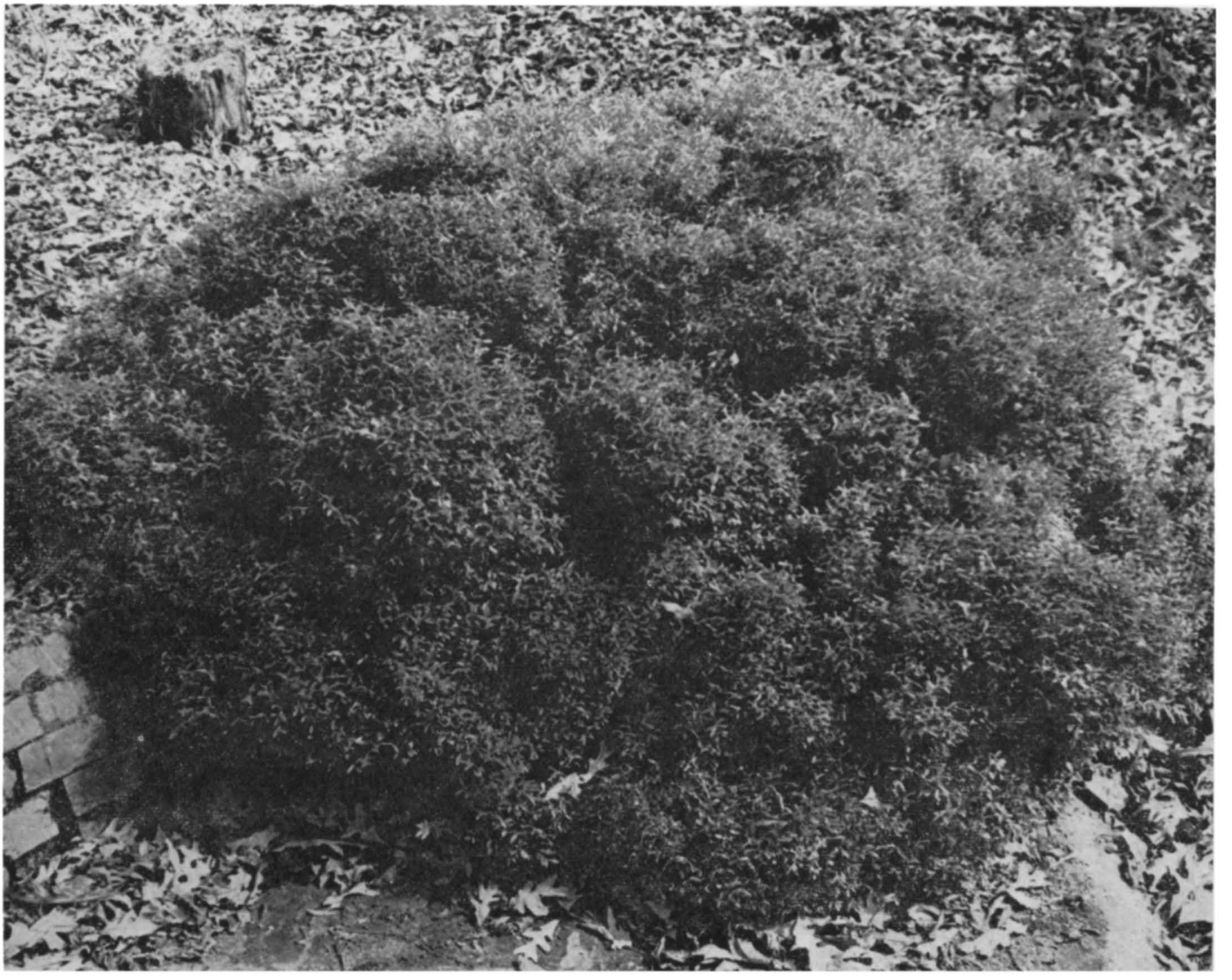


Figure 2. Companion plant to specimen in Figure 1: photographed in 1969 by Col. Donald W. Noake.

perhaps some of the new introductions will. And certainly we shall soon be able to choose among plants with varied habits and with leaves of different shapes and sizes.

Figure 1 shows an excellent specimen of var. *koreana* as photographed in 1952; that plant is still extant but has suffered from lack of attention. Figure 2 shows a companion plant photographed in 1969; it is twenty-three inches tall and has a spread just short of seven feet. These boxwoods were grown outside Williamsburg, Virginia, by J. B. Brouwers, formerly Landscape Superintendent for Colonial Williamsburg. Fifteen years ago Henry Hohman told me that these were the best specimens of var. *koreana* that he had seen. Figure 3 is a close-up view of a branchlet of one of the plants. As the branches spread they root freely in proper soil: I see no reason why the plants should not live indefinitely and extend themselves over surrounding situations that favor their growth and rooting.

The question now arises: by what scientific name should other Korean box not included in var. *koreana* be called? As presently interpreted they all belong to the species *Buxus microphylla*: many individuals, not referable to var. *koreana*, fall within the limits of var. *insularis* (Nakai) Hatusima. The ac-

count of *Buxus microphylla* that follows relates Korean box to other members of the species in the different geographic areas.

Sumihiko Hatusima (1942) published "A Revision of the Asiatic Buxus" in the Journal of the Department of Agriculture, Kyusyu Imperial University, Vol. 6, No. 6: 261-342, Plates 1-26, wherein he treated all species of *Buxus* in Asia exclusive of Syria. He recognized twenty-six species. We are concerned here only with *Buxus microphylla*, the most widely distributed species in Asia. We follow Hatusima's treatment of the species rather closely.

Hereafter a conspectus of *Buxus microphylla*:

B. microphylla Siebold et Zuccarini. Long cultivated in Japanese gardens: not known in wild; probably arose in cultivation.

_____ var. *japonica* Rehder et Wilson. Widespread but of local occurrence in Japan, from the island of Yaksima in the south to the northern part of Honsyu. Often planted as an ornamental. Attains great size and age on limestone mountains: a tree with an eighteen-inch diameter at breast height and estimated to be two hundred eighty years old was cut in 1927.

_____ form. *rubra* (Makino) Hatusima. Garden plant with orange-colored leaves.

_____ form. *major* (Makino) Matusima. Plant with leaves to 3.5 cm. long. Possibly luxuriant because of moist subtropical climate of the islands where it grows.

_____ subsp. *sinica* (Rehder et Wilson) Hatusima. Common and widespread in central and northern China and possibly in Taiwan. Related to var. *japonica*, which has glabrous branches and usually smaller leaves while subsp. *sinica* has in variable degree pubescent branchlets and flowers. Grows faster than var. *japonica* and has long been intensively planted in Japan for timber.

_____ var. *aemulans* (Rehder et Wilson) Hatusima. This Chinese variety differs from the subspecies in having ovate-lanceolate to lanceolate leaves with more acute apices and shorter stamens.

_____ var. *insularis* (Nakai) Hatusima. Perhaps only an insular plant. Has glabrescent branchlets with somewhat thickened and large leaves.

_____ var. *koreana* (Nakai) Rehder. As discussed above. Most of the population of *Buxus* in Korea — which is the only species there — is not at present referable to a variety; when individual plants of such Korean box are introduced into horticulture as clones, they would appropriately be given nomenclatural recognition.

_____ var. *compacta* Rehder. Clone introduced in 1937 by Henry J. Hohman and based upon seedling of 1912 grown by Sam Appleby.

To keep the record up-to-date and to emphasize that as of now there is no general agreement about the taxonomic treatment of *Buxus* in Korea, I cite the following treatment from Tchang Bok Lee (1966) *Bibliography of the Illustrated Woody Plants of Korea*, Bulletin of Forest Experiment Station, Japan, 231-348: *Buxus microphylla* Siebold et Zuccarini var. *koreana* Nakai and of this variety form. *elongata* (Nakai) Lee. For reasons already given, I can not accept this concept; rather, on evidence presently available, my estimate is that the treatment adapted from Sumihiko Hatusima is reasonable and realistic.

In a later number of The Boxwood Bulletin I shall publish a summary of Hatusima's monograph on the genus in Asia.

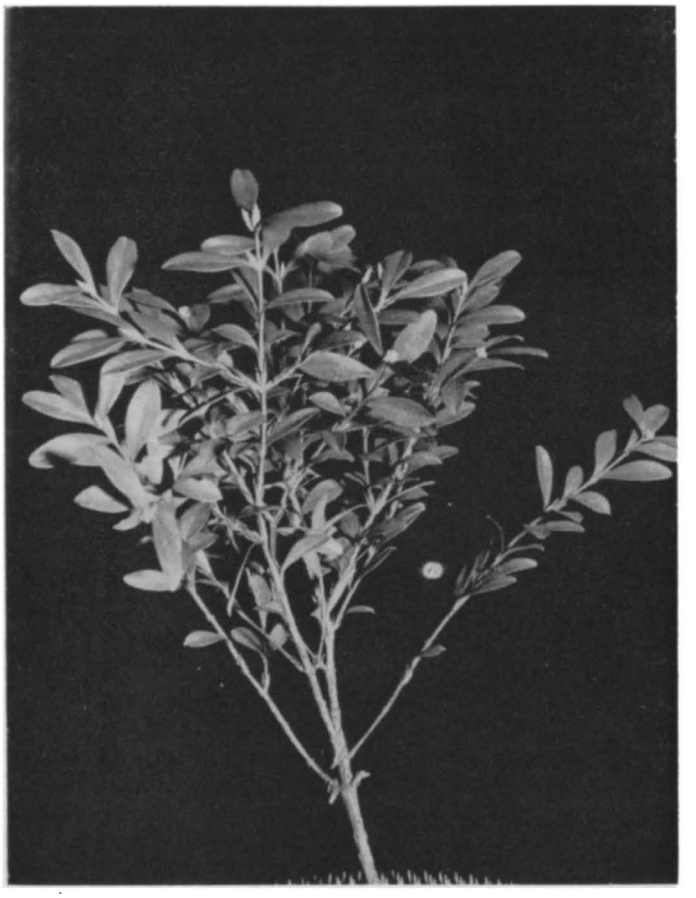
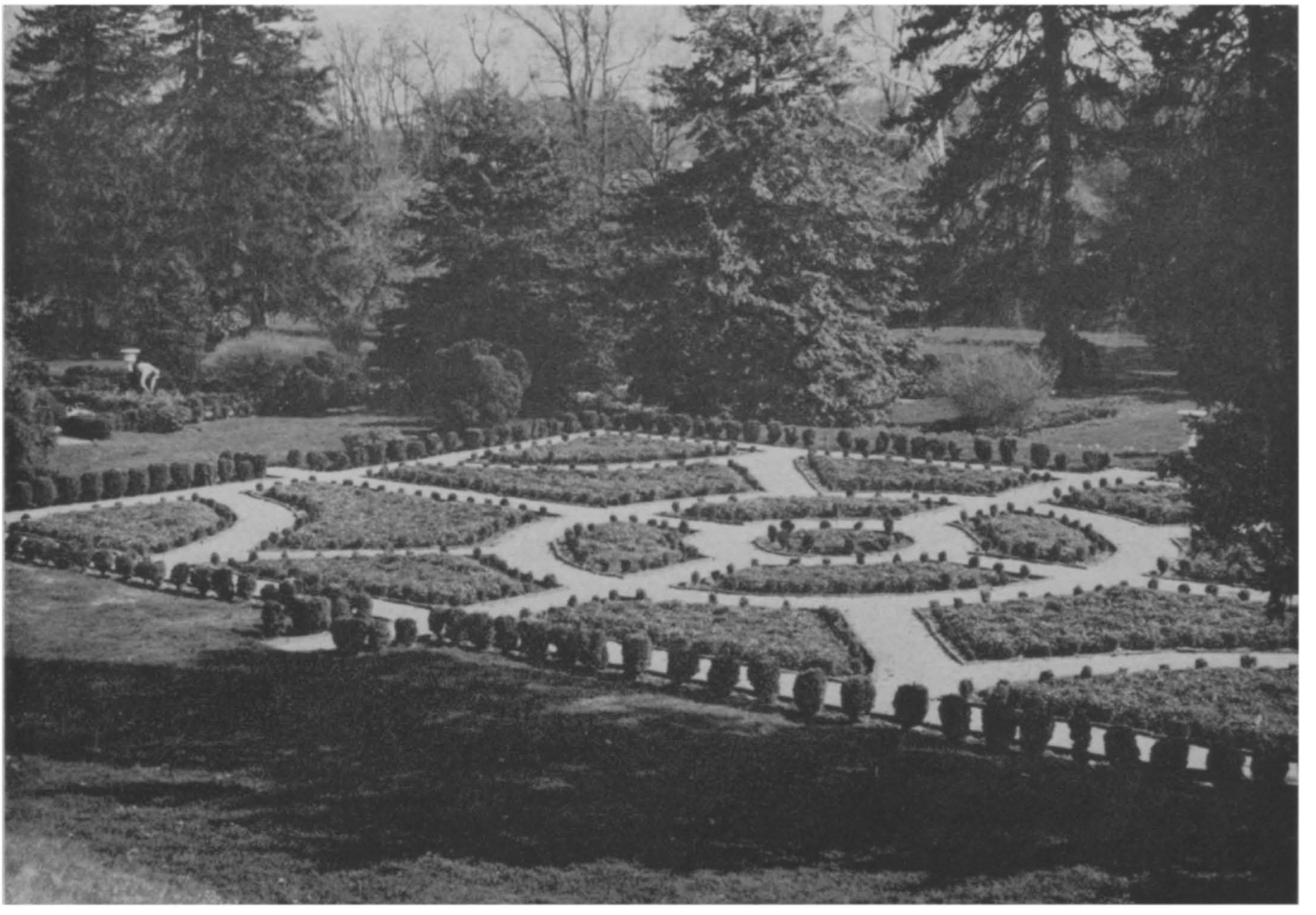


Figure 3. *Branchlet of plant in Fig.* 2: *photographed by Colonel Noake.*



THE TERRACED GARDENS AT HAMPTON

At the beginning of this century, Alice Morse Earle wrote in OLD TIME GARDENS:

"The Ridgely estate, Hampton, in County Baltimore, Maryland, has a formal garden in which the perfection of the box is a delight. The will of Captain Charles Ridgely, in 1787, made an appropriation of money and land for this garden. The high terrace which overlooks the garden and the shallow ones which break the southern slope and mark the boundaries of each parterre are fine examples of landscape art, and are said to be the work of Major Chase Barney, a famous military engineer. By 1829 the garden was an object of beauty and much renown.

A part only of the original parterre remains, but the more modern flower borders, through the unusual perspective and contour of the garden, do not clash with the old box-edged beds. These edgings were reset in 1870, and are always kept very closely cut. The circular domes of clipped box arise from steams at least a hundred years old."

Hampton, built between 1783 and 1790, is one of the great post-Revolution mansions of America, combining the formal charm and elegance of late Georgian style with the spaciousness and massive construction of the newer Greek Revival. In its heyday it was surrounded by thousands of acres owned by the Ridgelys — land which now forms a large part of the northern suburbs of Baltimore, with many street and community names derived from the Ridgely holdings.

Six generations of Ridgelys owned and occupied Hampton during the century and a half after its building. In 1948 the mansion, with its surviving

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Above: The first parterre to be restored, gift of the Roland Park Garden Club of Baltimore. Damaged by hard winters in the early 1960s and replanted about 1964. Wrongly designated as the G.C.A. parterre in January 1967 Boxwood Bulletin.
Photograph, Mrs. Charles Banks Belt.

outbuildings and 45 acres of land, was sold to the Avalon Foundation, founded by Mrs. Ailsa Mellon Bruce, who presented it to the Federal Government. It is open to the public as a historic museum house under the National Park Service, and is administered by the Society for the Preservation of Maryland Antiquities.

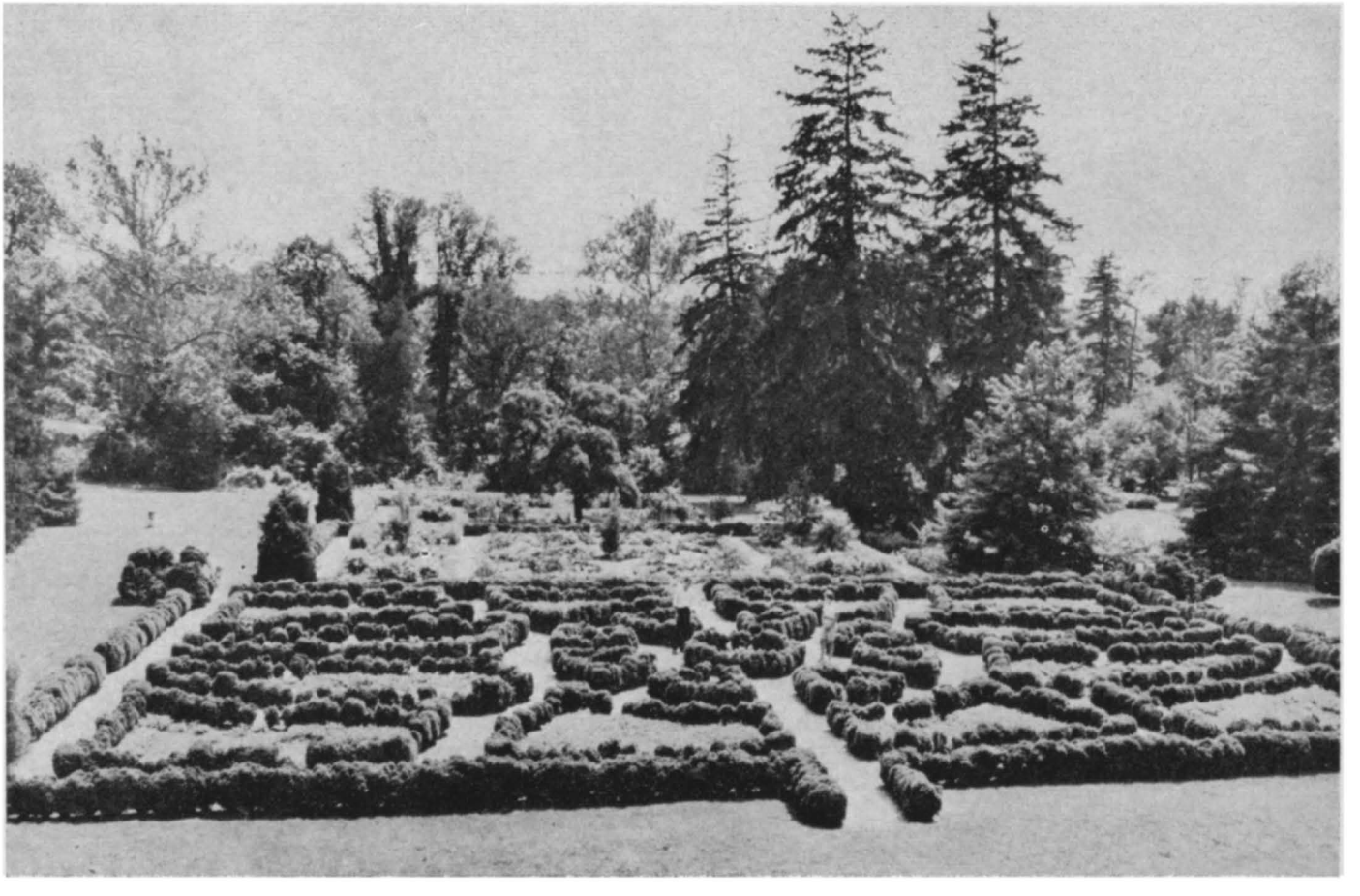
The terraced gardens of Hampton were developed by the second owner of the mansion, Charles Carnan Ridgely, Governor of Maryland from 1816 to 1819. William Booth, a Baltimore nurseryman who ranks high among early botanists, was employed in the planting of the formal gardens. Alterations were made by the Governor's son John and his wealthy wife, Eliza, who brought back from their European travels a taste for the Italian style, as well as forty marble urns still to be seen throughout the Hampton gardens.

The tall Cedar of Lebanon which towers above the garden today was also brought back by them from England, as a little seedling. Among other exotics introduced by Eliza and John were six specimens of the Chinese Sophora (or Pagoda) tree, sometimes called the Weeping Scholar-Tree. Of these six only one survives, in the center of the third terrace. Mrs. D. L. McPherson, Resident Curator at Hampton, writes of this tree:

"It is a grafted tree from the mother tree in India. It has a straight trunk, supporting twisted limbs with many gnarled knots. The foliage is a fine, fluffy, light green, weeping as a willow. It blossoms August 15th, regularly every year, with a fine white blossom in large clusters; and it must be very sweet, as it attracts all the insects, bees and humming birds."

The southern portico of the house overlooks the gardens. Nearest the house is the upper terrace, a lawn or bowling green bordered by old cedars. A grass ramp goes down to the lower levels with terraced formal box gardens on each side, the vista ending in a large group of spruce. The ruins of the old orangery are close to the house. Southeast of the mansion, enclosed by a brick wall, is the family graveyard.

When the Society for the Preservation of Maryland Antiquities first took over in 1948, the gardens needed attention. The parterres were lost in honeysuckle, much box was missing, and what was left needed care. The late Alden Hopkins was called in



Gift of the Garden Club of America through their Founder's Fund award. Thought to be the only one of the original parterre patterns used in planting. Photograph courtesy of Resident Curator, Hampton National Historic Site.

to advise and prescribe, and to prepare designs for garden restoration where needed. Mr. Hopkins wrote in his original plan an analysis of the periods of planting of the formal gardens as follows:

"We are fortunate to have so many large trees emphasizing the various design periods through which the garden has passed.

The most outstanding and prominent tree planting was in the style of Andrew Jackson Downing. This landscape architect flourished from 1840-1862 and set a characteristic style in which the newly introduced exotic or foreign tree became the fashionable planting trend in gardening. At Hampton we see these exotics in many sections of the garden: the Cedar of Lebanon, Norway Spruce, Hemlock,Paulownia, Cryptomeria and Purple Beech on the Bowling Green or house terrace; the Norway Spruce on the third and fourth terraces; the weeping Scholar-Tree as central feature of the fourth terrace, are all symbols of this period.

The Hemlock was equally popular in 1880 but it did provide an unusual foliage which blended well with Downing's exotics. The location of these trees in the garden was apt to be loose and unsymmetrical; a result of the English landscape school influence then becoming popular in America. This style originated in England about 1715 with the work of Kent, Walpole and Brown. These men were exponents of a style in contrast to the formal restricted Dutch-influenced gardens of William and Mary.

A great many years passed before this new, informal style became fashionable in the colonies where nature was so common in surrounding fields and forests. Finally, General Washington revised his layout at Mount Vernon about 1785 to include an informally outlined walk around his bowling green and several 'wildernesses'. It was not until 1808 that Thomas Jefferson laid out his 'roundabout' at Monticello. The curving, finely designed walk around the bowling green terrace at Hampton follows this fashionable idea developed at Mount Vernon and Monticello.

Interspersed around the edge of this informal 'roundabout' we see several antique Catalpas. This tree was tremendously fashionable in the 18th century. It was found planted in connection with the Governor's Palace at Williamsburg, Doughoregan Manor and Ratcliffe Manor in Maryland. There are, no doubt, other old Maryland places at which this tree was planted during the 18th century. Fortunately at Hampton they were planted along the outside of the bowling green where their growth would not have interrupted the large green before the house. The Paulownias were not known in this country until after 1800. The old specimen at Doughoregan Manor nor the few at Hampton could not have been planted before the first quarter of the 19th century."

Mr. Hopkins worked out geometric, period designs for all six of the formal parterres, but only three have so far been completed. The first to be finished was the gift of the Roland Park Garden Club of Maryland. It is on your right as you go down the grass ramp from the house. The boxwood in this parterre suffered severely from the hard winters of the early sixties, and about 1964 was replanted, using the existing, large bushes around the edge and the new, smaller bushes inside. The first parterre on your left was given by the Garden Club of America, through their Founder's Fund award. The design used for this garden is thought to be the only one of the original geometric patterns remaining from the old garden. Below this parterre to the south is the Old Fashioned Rose Garden. This was given and endowed in memory of Jane Ridgely Wolcott (Mrs. Roger Wolcott), niece of Mr. Ely Lilly of Indianapolis, Indiana, whose mother was Lily Ridgely Lilly.

The mansion is open Tuesday through Saturday from 11 A.M. to 5 P.M., and on Sunday from 1 to 5 P.M. It is closed on Mondays.

To reach Hampton from Baltimore, follow Charles Street (State Route 139) or York Road (U.S. 111) north to Towson. Take Dulany Valley Road (State Route 146) past Goucher College one-half mile to Hampton Lane; the intersection is marked. Turn right on the lane which leads to the site.

From the Baltimore Beltway, take Exit 27 NORTH (Dulany Valley Road), turn right on first intersection at sign (Hampton Lane); one-half mile to Hampton gates.

AN INVITATION FROM THE PRESIDENT

The President of the American Boxwood Society, Rear Admiral Neill Phillips, USN Ret'd, extends a cordial invitation to *everyone* to stop by Heronwood for refreshments and to see the gardens, on Wednesday May 14th, after the ABS meeting.

How to reach Heronwood: From flashing light at Red Fox Inn, Middleburg go west on US 50 6.1 miles, then turn left on Country Road 623 and go 1.1 miles to entrance of Heronwood (stone gate posts, with sign).

HOW TO APPLY NEMATICIDES TO BOXWOOD

J. B. WILSON

Extension Specialist — Plant Pathology & Entomology

West Virginia University

If your boxwood are affected by twig die-back, browning or yellowing of the leaves, or they are in a general state of decline, you may have a nematode problem.

The only way to be sure of the presence of nematodes is to have a soil sample examined by a nematologist. Collect the soil sample in several areas of the planting and be sure to include some feeding roots in the sample. A pint of soil is needed to run a test which should be immediately placed in a plastic bag, such as a type used for freezing meats and vegetables. Securely tie the bag and place it in a cardboard container for immediate mailing to your State Extension Nematologist or Plant Pathologist. This can often be done through your local County Agent.

One of the best nematicides is 1,2-dibromo-3-chloropropane which is marketed as "Nemagon" and "Fumazone". This material is available as emulsible concentrates and may be obtained as approximately 70% or 48% actual material by weight. Nemagon is also available in a 10% granular form.

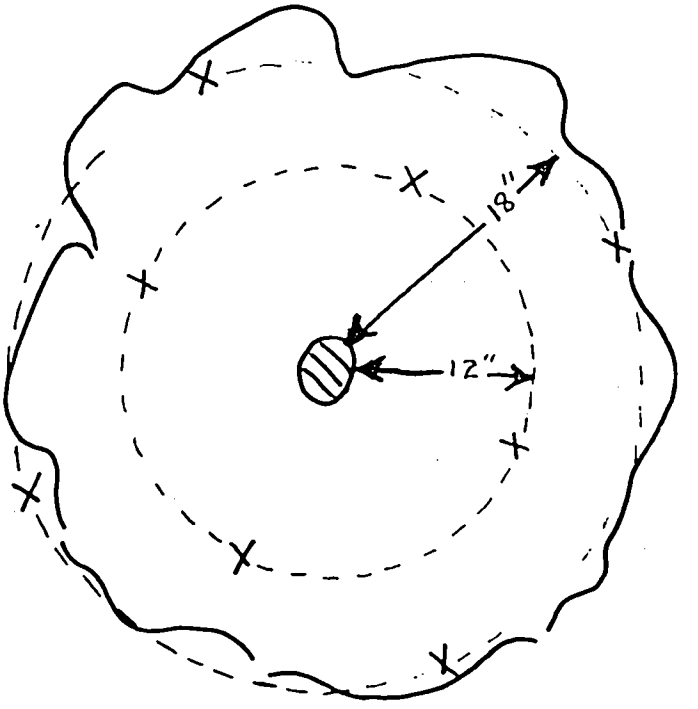
To apply these nematicides punch holes 6 - 8 inches deep around the shrub as indicated by X's in the diagram. These holes are in circles 12 and 18 inches from the stem area. Place the material in the holes and plug them by caving the hole in with the shoe or with a garden tool.

If you are using the 70% emulsible material dilute it at the rate of ¾ teaspoon per gallon of water. If the 48% material is used, dilute 1½ teaspoons per gallon of water. These diluted materials are then applied at the rate of one gallon of diluted nematicide per square yard (3' x 3') of area treated. Use a watering can or similar container to pour the nematicide into the holes.

If you are using the 10% granular Nemagon, apply one heaping teaspoon per hole. Here are some things to remember when using these nematicides:

1. Do not apply unless the soil temperature is 50°F. or above.
2. Do not apply when the soil is too wet or too dry. A good rule to follow is to apply when the soil is suitable for seeding.
3. Be careful when handling this material and be sure there is good ventilation. Do not inhale the fumes and be sure to wash off any material with soap and water. Read and carefully follow directions on the label.

If your shrubs form a hedge and this hole method cannot be used, dig shallow (4-6 inches) trenches along each side at one foot intervals and place the material in the trenches. Use the same rates as above and cover with soil and firm with the shoe.



ADDRESS OF SOME STATE EXTENSION SPECIALISTS IN PLANT PATHOLOGY

Alabama — Auburn Univ., Auburn, Alabama 36830
Arkansas — P.O. Box 391, Little Rock, Ark. 72203
Connecticut — Univ. of Conn., Storrs, Conn. 06268
Delaware — Univ. of Delaware, Newark, Del. 19711
Florida — Univ. of Florida, Gainesville, Fla. 32603
Georgia — Univ. of Georgia, Athens, Georgia 30601
Illinois — Univ. of Illinois, Urbana, Illinois 61803
Indiana — Purdue Univ., Lafayette, Indiana 47907
Kentucky — Univ. of Ky., Lexington, Ky. 40506
Louisiana — La. State Univ., Baton Rouge, La. 70810

Maryland — Univ. of Maryland, College Park, Md. 20740

Massachusetts — Univ. of Massachusetts, Amherst, Mass. 01003

Mississippi — Mississippi State Univ., State College, Miss. 39762

Missouri — Univ. of Missouri, Columbia, Mo. 65202

New Hampshire — Univ. of New Hampshire, Durham, N. H. 03824

New Jersey — The State Univ., New Brunswick, N. J. 08903

New York — Cornell Univ., Ithaca, New York 14850

North Carolina — Box 5397, State College Station, Raleigh, N. C. 27606

Ohio — Ohio State Univ., 1735 Neil Ave., Columbus, Ohio 43210

Pennsylvania — 211 Buckhout Lab., Pennsylvania State Univ., Univ. Park, Pa. 16802

Rhode Island — Univ. of Rhode Island, Kingston, R. I. 02881

South Carolina — Clemson Univ., Clemson, S. C. 29631

Tennessee — P.O. Box 1071, Univ. of Tennessee, Knoxville, Tenn. 37901

Virginia — Price Hall, Virginia Polytechnic Institute, Blacksburg, Va. 24061

West Virginia — 314 Brooks Hall, West Virginia Univ., Morgantown, W. Va. 26506

Preliminary Tests With

CONTAINER-GROWN BOXWOOD

At the University of Southern Louisiana

By HAVELY GUILLORY

From 1968 Annual Report on Ornamental Research, Southern Nurserymen's Association

Although field-produced boxwood normally presents a few problems for growers in this area, container production of quality plants is often a disappointment for some growers under their practices of container fertilization.

Rooted cuttings of *Buxus japonica* 'Creole' were potted in 6-inch clay pots and were fertilized with commonly recommended rates for both uramite and 5-10-10. Two growing media were employed (1 soil: 3 peat and 2 soil: 3 peat, by volume). One-half of all plants received applications of lime (3 tablespoons container) 2 times during the year.

Following 12 months growth, the weight of top and root growth was determined. Regardless of media employed and under the conditions of this work, *uramite in combination with additional lime* produced superior plants.

While the weight of roots was greater than the top weight for plants grown in the 2 soil: 3 peat mix, top weight exceeded root weight in the 1 soil: 3 peat mix.

Current tests are underway to more accurately determine desirable fertilizer-lime relationships with container-grown boxwood. Harland's and Richard's Boxwood have been included in this work.

THE MAIL BOX

R.D. 1,
Loysville, Pennsylvania 17047
January 11, 1969

Dear Mrs. Whiting,

I have been raising boxwood as a hobby in our garden in Arlington, Virginia, since 1938. Over the years their number has increased from the few with which we started to several hundred — many of which are now fine specimen plants, suitable for a focal position in some landscape.

Most of these plants are in a special planting in our garden, but they are becoming crowded and it would be better for them if every other plant were taken out. After caring for these plants over the years (many of them we grew from cuttings) one feels almost as though they were persons and not plants, and it is important to a grower like myself that if they are given away and swapped they find a place in someone's garden who will continue giving them good care.

There may even be historic homes that are being preserved that need plantings of this type, but it is hard for the average person to know just where to turn in a situation like this. As a charter member of the Boxwood Society, I feel that some member of this organization would be able to come to the rescue of these fine plants needing a new home.

Sincerely,

Frances Colbert (Mrs. E. E.)

Mrs. Colbert suggests that anyone interested either write her at the Loysville, Pa., address, or call her there. Her number is (area code 717) 789-3740.

Shall we continue the holes in the Bulletin? Several members and libraries have indicated that they would prefer the copies un-perforated. We will ask for a vote on this question at the Annual Meeting. If you cannot be there, please give the Editor your opinion on a postcard (address, back page. Do you want the Bulletin *whole* or *holed*?

Buxus sempervirens var. *Handsworthii. Plant from Kingsville Nurseries, Kingsville, Maryland. Photograph by Col. Donald W. Noake.*

The Common Box In Britain

By

Roy Lancaster

Reprinted from GARDENERS CHRONICLE, issues of May 31, June 7 and June 14, 1968; with permission from the author, Mr. Roy Lancaster, and the publishers, the Haymarket Publishing Group, London W 1, England.

As a wild plant the "common box" — *Buxus sempervirens* — ranges from western Asia to southern Europe and north Africa. Its status as a native in the British Isles has long been a source of argument and speculation, due mainly to its extensive planting in the past and its ability, under suitable circumstances, to become thoroughly naturalised.

In the *Flora of the British Isles* (2nd. ed. 1962) the box is regarded as native in the counties of Surrey, Bucks, Kent and Gloucestershire. In the *Atlas of the British Flora*, also published in 1962, box is recognised as native in only three remaining localities: Boxwell in the Cotswolds; on the hills between Dunstable and Tring, and Boxhill in Surrey. It is thought to have been native in a number of other localities including Boxley in Kent, but to confuse matters there are records of it having been planted from early times and it has been suggested that it may originally have spread from Roman villas.

Though it will attain small tree size, the box is more often seen as a large multi-stemmed shrub. In either form heights of 20 to 30 ft. are not uncommon and A. J. Elwes (*The Trees of Great Britain and Ireland*) mentions trees of 30 to 40 ft. reported as growing in the mountains above the Black Sea.

Mr. David Barter, member of the 1963 Bowles Memorial Scholarship Botanical Expedition to Iran, recalls seeing trees of a similar size in the dense, dripping jungle-like area bordering the Iranian coast of the Caspian Sea.

In the British Isles the type will easily reach and surpass 20 ft. particularly when growing in woods and among other trees. Even as a hedge or screen this height and over, is quite common. Elwes again mentions a row of trees near Hitchen which, in 1839, averaged 30 ft. in height, whilst a clipped hedge of the cultivar 'Pyramidalis' at Birr Castle in Ireland is 30 ft. and reputedly 200 years old.

The box in commerce

According to Loudon (*Hortus Brittanicus*, 1883), boxwood is amongst the heaviest of woods, weighing, when newly cut, 80 lb. 7 oz. per cubic foot. He further claims it to be the only European wood that will sink in water. Tests made in France proved the wood to be, when fully seasoned, twice as hard as oak.

An interesting account of the wood and its characteristics, and other aspects may be found in the *Handbook of British Hardwoods*, a useful work issued by Forest Products Research. Here the wood is referred to as European, Abassian, Iranian, Persian or Turkey boxwood, according to its origin.

European boxwood is now little used compared with former times. Rollers in certain sections of the textile industry, shuttles in the silk industry, hard wearing tool handles, mallet heads, croquet mallets, skittles, rulers, small pulley blocks, fancy turnery goods, chessmen and draughts, are quoted in the handbook.

Compare this with an account given in Joseph Paxton's *Botanical Dictionary* of 1868 where it is described as follows: — "a hard wood used by turner, engraver, mathematical instrument maker, comb, pipe and flute maker and the roots by the inlayer and cabinet maker. Wheels, skewers, pins, pegs for musical instruments, nut crackers, button moulds, weavers shuttles, holler sticks, bump sticks, rollers, rolling pins, tops, screws, spoons, knife handles, combs, etc., are made of it as well as many other useful articles".

An interesting account of boxwood, its uses, folklore, etc., may be found in *Holly, Yew and Box* by W. Dallimore, now unfortunately out of print but available at the larger libraries.

The box in cultivation

Though usually found in the wild state on soils of a calcareous nature, the box in cultivation will grow quite happily on a wide range of soils and is a most adaptable tree. Thriving equally well in dry or moist soils it is happy in both sun and shade. It also proves to be wind tolerant but dislikes salt spray.

With the turn of the last century came the decline of the box as an ornamental. Together with the holly, the bamboo, the aucuba and others like them, the box had become as much a part of Victoriana as the gas lamp and the Chesterfield. Faced with the overwhelming flood of exciting new introductions from the treasure chests of China and Japan the comparatively humble, mundane box suffered a gradual decline from favour and was forced into reluctant retirement.

Admittedly, one can hardly describe the box in aesthetic terms though a few clones, such as 'Aurea Pendula' and 'Pendula' are of elegant habit. They belong to that large museum of plants so neatly described in nurserymen's catalogues as "useful evergreens". They are utility plants, ideal for hedges, shelterbelts and screens and for that most butcherous and abysmal of garden malpractices — topiary.

It is hardly surprising therefore, that today, if one cares to wander around any of the many beautiful gardens created since the last war, the box in any of its forms is seldom to be found.

Even the botanic gardens seem to have forgotten the box which, if represented at all, is to be found in those dark, wild, unfrequented corners peculiar to many of these institutions. Indeed, in one such garden the greatest concentrations of box and its forms may be found around the public lavatories — such is familiarity.

A glance through the catalogues of any of the leading nurserymen will confirm the alienation of the box from the public eye. At the height of its career, it boasted over one hundred named cultivars. Now, the demand for them hardly merits propagation.

All this seems to suggest that the box, as a garden plant, is on the verge of extinction. While it is true that many old cultivars have been lost, perhaps forever, it is by no means the end of the road. A number of "Victorian" plants, such as hardy ferns, bamboos and ornamental grasses, are already making a come-back and soon it will be the turn of the evergreens.

With the holly and box a resurgence of interest has been born, not, sad to say, in this country, but in the United States where so often the neglected and forgotten potential of a plant is recognized and given a new lease of life. Just as the Holly Society of America exists to promote interest in, and explore the garden potential of hollies, so the American Boxwood Society is attempting (and successfully) to place the box species and their forms on a footing with the more fashionable ornamentals.

The adaptability of the box to most conditions goes without saying and in particular its tolerance of shade has been long and fully exploited. But there are other considerations, and what it lacks in flower and fruit it makes up for in habit and foliage effect.

As already mentioned, clones such as 'Aurea Pendula' and 'Pendula' are suitable as lawn specimens where their elegant drooping habit may be fully appreciated. 'Prostrata' is also a graceful specimen shrub when well grown. 'Elegantissima' is a silver-variegated shrub of neat compact habit which lends itself to plantings of a more formal nature and 'Arborescens', 'Handsworthensis', 'Latifolia' and 'Pyramidalis' have long been used for screening purposes.

'Suffruticosa', perhaps the oldest of all, makes a low formal hedge, but if a really attractive hedge is required 'Aureo-variegata' and 'Latifolia Maculata' have few equals. The bright golden young foliage of the latter in spring is particularly eye-catching.

These and many newer American selections are all contenders for a place in the modern garden and one feels it is only a question of time before the re-emergence of the box as an English ornamental.

Variation

The box in cultivation is one of the most chameleon of plants and the variation in foliage, oftentimes on the one bush, is most confusing. A single bush may, with seemingly Protean ingenuity, produce a variety of growths, and with equal aplomb, revert to the *status quo*.

This does not of course happen overnight, nor does it mean there are no stable clones, but it is quite conceivable that a proportion of the legion of names given in the past were based on material of a transient nature. From the subsequent changes and reversions arose the confusion common to large complicated groups of this kind.

Most of the variegated clones, at least the older ones, tend to revert and it seems the more vigorous a clone, the more likely it is to revert. This is also true of regularly and harshly clipped hedges or topiary. It is quite common to find large specimens of clones, such as 'Marginata', almost totally reverted.

In a "Registration List of Cultivar Names in Buxus", compiled for the American Boxwood Society in 1965 by Burdette L. Wagenknecht, 155 names of *Buxus sempervirens* are listed of which 52 are claimed to be synonyms. Of the hundred or so named cvs. recorded in cultivation, only a handful are at present available in England. For every named clone found in cultivation there are at least two or three without a name. Of these, few if any are sufficiently distinct to be worth growing.

'Arborescens'

A tall, vigorous shrub or small tree bearing dense, luxuriant masses of handsome, lustrous dark green foliage. Leaves medium to large*, variously shaped, ovate, ovate-elliptic to ovate-lanceolate.

A strong-growing form making a small, multi-stemmed tree or large bushy shrub. Excellent as a large hedge or screen and reaching 20 ft. or more. A screen in the Winchester Nursery is 17 ft. high and almost 12 ft. through, after years of pruning. The name *Buxus sempervirens arborescens* was orig-

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***Key to Leaf Sizes**

Small _____ 15 mm. or under (½ in. approx.)
Medium _____ 15-25 mm. (½-1 in. approx.)
Large _____ 25 mm. and above (1 in. and over)

inally given by Linnaeus to the arborescent or tree-like wild form, as distinct from the small shrubby form, *B. sempervirens suffruticosa*. Both now tend to be attached to distinct clones or groups of very similar clones.

'Arborescens Variegata'

An attractive variegated form of rather dense, compact habit. Leaves are medium-sized, variously shaped and puckered; dark shining green, streaked paler green and with an irregular creamy-white margin. A pretty shrub when grown well, but tending to revert if over-crowded by other plants. An old plant at West Hill Nursery, Winchester, has made a rounded, rather dome-shaped bush of 4 ft., but may attain more if left unpruned.

'Agram'

Received from the United States Plant Introduction Station, Maryland, in 1959. Described as being columnar in habit. Leaves medium to large, elliptic to oblong, deep shining green. Originally collected by Dr. Edgar Anderson near Skoplje in the Vardar Valley, Macedonia.

'Aurea Pendula'

An elegant cv. of somewhat spreading habit. The branches are long and lax and the branchlets pendulous. Leaves medium-sized, ovate to ovate-elliptic, sometimes sickle-shaped; dark green, variously splashed and mottled creamy-yellow. An attractive lawn specimen, tending to retain its variegation into old age. A specimen at Winchester was 12 ft. before a recent move. A large specimen at Botley Hill, Hants., measured 25 ft. in 1967.

'Aureo-variegata'

A large shrub of dense, bushy habit. Leaves medium-sized, ovate to ovate-elliptic, sometimes misshapen; dark green, striped and mottled creamy-yellow. One of the best variegated box for general planting and excellent as a hedge. Growing in deep shade, specimens often lose their variegation which becomes creamy-white. A specimen at Winchester reached a height of 10 ft. until a recent move. The foliage of this and the latter often turn bronze during a cold winter.

(To be continued Next Issue)

This article is based upon cultivars of box growing in the nurseries of Hillier and Sons, Winchester, and the garden and arboretum of Mr. H. G. Hillier, whose help and guidance during the compilation of this list is greatly appreciated. In addition, specimens have been studied and compared from other sources in the south of England.

Blandy Farm's rare columnar box contrasts with another cultivar of more usual form. See next page. Photographed 1966 by U.S.D.A.

American Boxwood Society

April 1969

New Members

(Added since January 1969)

Ayo, Dr. Donald J., Nicholls State College, Thibodaux, Louisiana
Crostic, C. Scott, 200 Baltimore Drive, Colonial Heights, Virginia
Flynn, H. W., 281 Carolina Avenue, Danville, Virginia
Gamble, Mrs. D. Goodrich, 23 Bon-Price Terraces, Saint Louis, Missouri
Griffin, Allen, P.O. Box 626, Pebble Beach, Calif.
Matuszak, Mrs. Frank A., Tip O'the Hill, Rt. 2, Purcellville, Virginia
Minot, Mrs. Grafton, 11 Brolino, 665 Buena Vista Road, Santa Barbara, California
McGhee, George, Farmer's Delight, Middleburg, Va.
McKinne, Mrs. Collin, 301 East Noble Street, Louisburg, North Carolina
Nelson, Mrs. Howard A., 3113 Brookwood Road, Birmingham, Alabama
Norwood, Mrs. C. Willard, Rt. 5, Box 168, Mechanicsville, Virginia
Remke, Dr. Joseph W., Jr., P.O. Box 620, Lawrenceburg, Tennessee
Royal Botanical Garden, Library, Hamilton, Ontario, Canada
Sherwood, Mrs. D. H., P.O. Box 6788, Towson, Md.
Tapp, Fred Allen, 223 Third Street, Henderson, Ky.
Walker, Mrs. M. Bagley, Sr., 5197 Shell Road, Virginia Beach, Virginia
Whiting, James H., 8001 Riverside Drive, Richmond, Virginia
Wilbanks, W. C. III, 338 Main Street, New Albany, Mississippi

BUXUS SEMPERVIRENS VAR. FASTIGIATA

J. T. BALDWIN, JR.

It is with hesitation that I refer the plants pictured here to variety *fastigiata* of *B. sempervirens*. I sent a photograph of one of these plants to the Royal Botanic Gardens at Kew and the Royal Botanic Garden at Edinburg several years ago, and no member of the staff would hazard identification. Yet the clone probably came from one of those gardens in the 1930's when Thomas H. Alphin was assembling a collection of boxwoods at The Blandy Experimental Farm. He got cuttings of thirty-six kinds from Kew and Edinburgh, and these clones constituted the heart of his collection. But interest in box has declined in Great Britain since 1900, and doubtless many cultivars have been lost.

I think I recognize the plant here pictured in Alphin's (1940) paper on varieties in box (American Journal of Botany 27: 349-357); Fig. 18, B.E.F. no. 35. The plants are now about thirty-five years old. The photograph that constitutes Figure 1 was taken about 1966; that for Figure 2, in 1969 by Alan L. Caspar. The present sparseness of the foliage results from severe cold in the winter of 1967-1968 and subsequent removal of dead wood.

To me this is a handsome plant that should serve horticulture well. If this cultivar has been lost in Great Britain, I hope the current renaissance in the use of *Buxus* there will cause the return home of this clone.

A pair of columnar box (Buxus sempervirens fastigiata) at Blandy Farm. These plants, prior to this 1966 photograph, had never been trimmed, tied together, or otherwise artificially shaped in any way. Photograph courtesy of Extension Service, U.S.D.A.

Severe winter damage in 1967-1968 necessitated removal of dead wood. To right, the same box plants shown above, reduced almost to skeletons of their former shapes. Taken from an angle nearly corresponding to that on p. 63, which shows only the fastigiate box to the left of this picture. Photographed in 1969 by Alan L. Caspar.

Dr. Baldwin and the Bulletin editor would be glad to hear of any other boxwood of this naturally columnar shape. Pictures would be welcome; and information on age, origin and hardiness.

THE AMERICAN BOXWOOD SOCIETY

INFORMATION

FOR YOUR ADDRESS BOOK

If your letter is concerned with

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Change of address

Gift Membership

Ordering back issues of the Bulletin

Ordering Dr. Wagenknecht's List

General information about the Society

write to

Mrs. Andrew C. Kirby, Secretary-Treasurer,

The American Boxwood Society

Box 85, Boyce, Va. 22620

If you have something of real importance — a question of policy, a new project for the Society, a matter which needs top-level consideration, write to

Rear Adm. Neill Phillips, USN Ret'd., President,

Heronwood,

Upperville, Virginia 22176

If you have contributions for the Boxwood Bulletin — articles, news notes, photographs, suggestions of anything of probable interest to boxwood people, it saves time to direct them to

Mrs. Edgar M. Whiting, Editor,

The Boxwood Bulletin,

415 West Clifford St.,

Winchester, Va. 22601

This applies to criticisms and corrections, too — "We regret errors; we welcome corrections."

DUES AND SUBSCRIPTIONS

Regular membership dues of The American Boxwood Society are $3.00 a year. There has been some misunderstanding of the statement that $2.00 of this are for a subscription to the Boxwood Bulletin. It should instead be understood that the Society allots 2/3 of the money received from dues to the publication expenses of the Boxwood Bulletin.

Non-member subscriptions are for groups and institutions such as botanic gardens, libraries, etc. These are $5.00 a year, and run by the calendar year.

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 to lighten as far as possible the heavy work load of our busy Secretary-Treasurer, who, like all other officers of the Society, is an unpaid volunteer.

Single numbers of the Bulletin are $1.00, plus 5¢ postage, each. 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.)

Besides regular membership dues at $3.00 per year, there are other classes of membership available: Contributing, $10.00; Sustaining, $25.00; Life, $100.00; and Patron, $500.00.

NINTH ANNUAL MEETING

WEDNESDAY, MAY 14, 1969

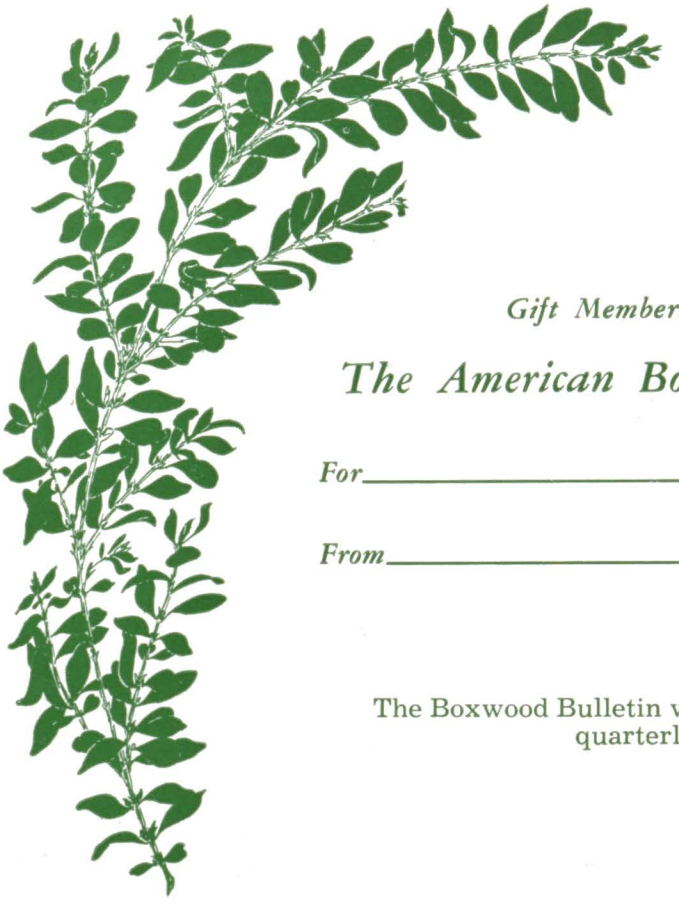
AT OATLANDS

To reach Oatlands: From Washington Beltway (495) take Exit 10 to Rte. 7, go 22 miles to Leesburg, turn left on Rte. 15, 6 miles to Oatlands gate.

From Rte. 50, turn right (or left if coming from Winchester) on Rte. 15, go about 6 miles to Oatlands.

From tidewater Virginia, leave Rte. 95 at Falmouth and take Rte. 17 through the Warrenton bypass, take right fork (211 and 15) about 9 miles, turn left at Haymarket on Rte. 15, go straight through Gilbert's Corner (traffic light) to Oatlands.

From central Pennsylvania, Rte. 15 south from Gettysburg through Frederick, Maryland and Point of Rocks to Leesburg and Oatlands.



Gift Membership in

The American Boxwood Society

*For*_____

*From*_____

The Boxwood Bulletin will be sent to you quarterly.

GIFT MEMBERSHIP IN THE AMERICAN BOXWOOD SOCIETY

Above you see a reproduction of our gift card just as it would go to one of your friends announcing your gift membership to them for one year. The Society year runs from May 1 to April 30, or from one annual meeting date to the time of the next annual meeting.