



Annual Report 1970-1971

TO THE PROVOST OF THE UNIVERSITY:

SIR,

When the Wilson report, "[*The University And The City*](#)," was published in 1968, the authors decided to consider only the relationships with Cambridge and omitted even the brief data submitted by the Arnold Arboretum staff of its contributions to Cambridge.

The role the Arnold Arboretum plays in the communities of Jamaica Plain, Roslindale, West Roxbury, and Weston, adjacent to its properties, and, in a broader sense, in Boston and Massachusetts, was not discussed by the Wilson committee. I wish to emphasize our role of service to the community and the botanical-horticultural profession, for the requests for such service have grown during the past year and now represent a significant factor in staff time and directly in the expenditure of Arboretum funds.

For all of its 100 years the Arnold Arboretum has been an oasis in the community of Boston. Always open to the public, it is indeed a place for many people to visit during the spring when the plants are in flower, and in the fall when the autumn color of the foliage and the colorful fruits make it equally attractive. The Arboretum staff maintains the plantings and the grounds, and within creasing amounts of litter this becomes a significant contribution.

The public service offered by the staff throughout the year maybe less obvious. There are contributions made in the many identifications of plant materials submitted in person or by mail; the multitude of questions answered of a horticultural or scientific nature; the classes, lectures and tours which reach several thousand people each year; the scientific collections it shares with professional colleagues; and the pages of printed material in its own publications or in newspapers and other journals which are professionally, as well as popularly, valued by the recipients. Two aspects of a growing service are worthy of mention in detail-the poison plant information service, and the consultation offered ecology-minded citizens and organizations.

Boston, like other major cities, has a cooperative Poison Center operated in one of the city hospitals on a twenty-four hour basis. Calls from citizens which concern the ingestion of or exposure to plant materials of a possible poisonous nature are referred to the Arboretum office during the normal working hours and to specific staff members at their homes at other times. On the average, throughout the year, a dozen calls a day are received by the Arboretum staff.

The task of identifying and evaluating the plant from the description given over the telephone by an anxious mother is indeed a challenge. While most calls involve non-toxic plants, there are serious situations demanding emergency treatment. The call from the emergency room of a hospital requires quick access to a taxonomist who may, in turn, refer to appropriate library volumes kept near the telephone. A few years ago, all of the calls to the Arnold Arboretum were from Metropolitan Boston. Now, however, the long distance calls, even from out-of-state hospitals, are more frequent. The Boston Poison Center is known nationally now for its ability to handle plant-poison calls, yet all of these are referred to the staff of the Arnold Arboretum.

The phenomenal increase in the concern over the quality of our environment and the appearance of our cities and neighborhoods has been accompanied by the participation of many citizens and the financial support of their activities through federal, local, and private funds. Every concerned group soon faces the problem of what to do beyond the picking up of debris. Almost everyone knows that a vacant lot can be made into a park, but how is the soil to be treated? What plants will grow there? How should they be placed? What subsequent maintenance is necessary? What are the best plants for the control of erosion, for the screening of noises or vistas? Ultimately, the questions become "Will you help us?" or "Do you have plants to spare which we can use for our project?"

The most important item that the Arnold Arboretum has to offer an organization or individual is information. The members of our limited staff do have the qualifications needed in a large number of horticultural and botanical areas. However, it must be a matter of policy that we cannot organize groups or programs, cannot direct all, cannot finance any, and can supply relatively few plants. Rather, we work with established organizations, supplying advice as to the practicality of their proposals, providing demonstrations and education within the Arnold Arboretum on the proper method of dealing with their problems, and then allowing the members of the organization to carry out their work. This help is given free of charge.

During the year 1970-1971, members of the staff of the Arnold Arboretum have worked with 26 organizations, ranging from neighborhood committees, colleges and universities, and the City of Boston departments and committees, Authorities (such as the Massachusetts Bay Transportation Authority, the Boston Redevelopment Authority, and the Metropolitan District Commission), to special groups such as DARE, a "halfway house" program for teenagers. Several of these are self-supporting organizations. Some are community-organized groups which contribute or seek their own financing. One group has a renewable grant from the U.S. Department of Health, Education and Welfare. Three groups are using vacant land or areas owned by Harvard University and have received some funding from Harvard for the employment of youth who care for the improved areas.

It is clear that there is a desperate need for horticultural advice in the community which neither the city nor private professional talent can meet. It is also clear that the Arboretum staff cannot do much more than it is doing currently, due to limitation in the number of its staff. In fact, if we are to continue or to increase our activities and contacts with the public sector of our

society, it will be necessary to have a staff member with the clear, sole responsibility of coordinating these activities with limited active participation in the work.

THE CENTENNIAL YEAR

It is generally difficult to say exactly when an arboretum or botanical garden begins, for desires, ideas, plants, financial support, and personnel are needed, and each may be equally critical to its development. We mark the establishment of the Arnold Arboretum in 1872, when the bequest of [James Arnold](#) was accepted as a trust by the Officers of Harvard College. We are planning to mark 1972 as the Centennial Year of the Arnold Arboretum. A special program is planned for the spring, but noteworthy activities and meetings are scheduled throughout the year. A special Centennial Committee has been established, and the Governor of the Commonwealth has accepted a role as an honorary chairman. Rear Admiral Harry Hull (U.S. Navy, retired) has agreed to be the executive chairman, and supporting subcommittees with chairmen have been chosen. The development of this program has occupied much of our time and energies, from changes on the grounds and in the living collections, to special publications and much correspondence with possible participants.

We sincerely hope that many friends and colleagues, representing horticulture and botany, will join us in 1972 to share in an appreciation of the Arnold Arboretum and its contributions. An increase in the number of members of the Friends of the Arnold Arboretum is a natural consequence of the Centennial program activity. It is this group which, through members' contributions, may further the work of the Arboretum by financial and physical participation in our programs.

The Friends of the Arnold Arboretum has grown in membership over the past three years from about 400 to 6,000 contributing members. For the Centennial program, we have already received special gifts for immediate use, as well as funds to be capitalized with the income to be used for special purposes such as exploration, publications, and care of the living collections.

HORTICULTURE

By a directive of the Corporation, the care of the living collections is the priority responsibility of the Director. The word, rejuvenation, must characterize our efforts on the grounds of the Arboretum in Jamaica Plain and in Weston during the past year. The seasonal weather extremes were not severe, in contrast to previous years, and the collections are growing well.

The horticultural staff added 168 taxa new to our collections during the year among the 872 specimens planted in the permanent collections. An automatic irrigation system has been installed in the lawn in front of the Administration Building and in a newly regraded area to the south of it.

A limited water supply on the Case Estates in Weston has been augmented by the installation of a new supply pipe, giving us a greater volume of water. In both locations, the

water we use is from a municipal source and is metered. In addition, in Jamaica Plain a city sewer tax is imposed on the water we use on the grounds. The cost of this essential element to the good growth of our collections is increasing, yet is one which must be assumed.

A general improvement in the aging collections is evident through the removal and replacement of stag-headed trees; the opening of collections to permit the better growth of selected plants; the increase in special collections, such as those of Buxus, and Rhododendron; the development of teaching collections by the relocation of representative taxa and the overall increase in maintenance. An aerial bucket, mounted on a special truck body, was delivered and is in use. The effectiveness of our pruners in this expensive piece of equipment indicates it is well worth the investment, as it eliminates climbing by ropes and permits a greater coverage of an individual mature tree specimen as well as the number of specimens treated.

One section of the Arboretum, known as the South Street tract, is low land with a pond of immediate interest as a wild-life area. This area was reserved for future expansion of the collections after improvement in drainage, contouring, and fencing. The area has been mentioned in previous reports when it was considered by city committees for school locations or recreational playgrounds. In 1959, however, the land was the subject of a legislative vote for taking by eminent domain proceedings, but the necessary legal action by the M.D.C. was never completed.

In May of 1971, two small children were drowned when they fell from a raft they had constructed with material from a dump on adjacent city owned property. There was considerable unfavorable newspaper publicity as well as petitions and several commentaries by local politicians. After serious consideration of alternative methods of meeting the problem, the pond was filled during the summer, and the deep water hazard eliminated.

Extra effort was made to verify the location, origin, and condition of plants within our living collections during the spring, anticipating the incorporation of data on our collections within the national inventory being made by the Plant Records Center of the American Horticultural Society. The director of the Arnold Arboretum had until this year been chairman of the committee, supervising the work of the Plant Records Center which plans to develop a data bank on the holdings of the major botanical gardens and arboreta within North America. Our records have now been placed on microfilm, insuring their duplication and safety in case of an accident to the existing files. From the microfilm a computerized printout of our inventory will be possible at moderate cost, eliminating the need for the costly and laboriously-compiled catalogs previously maintained.

The horticultural staff was involved in four flower show exhibits during the year. These educational displays offer a remarkable opportunity to present accurate information to large groups of people. Duplicate and surplus plants were again offered to the Department of Buildings and Grounds at Harvard as required by the indenture. The remaining material has

been given to several colleges in New England, to neighboring towns, to civic beautification groups, and to members of the Friends of the Arnold Arboretum.

The greenhouses of the Arnold Arboretum are used for work in plant propagation, both for the maintenance of the living outdoor collections and for basic or experimental research of the staff. There are no display collections offered to the public and only a few general collections are used in association with teaching programs. The regular work of the greenhouse staff involves the care of these collections. In addition, requests for plant material are received from botanic gardens and arboreta, as well as from individual scientists. These are filled when possible, and during the past year included 169 shipments involving 800 taxa to seventeen states and 12 foreign countries. A backlog of credit or goodwill thereby established, permits the staff of the Arnold Arboretum to make similar requests for materials for study.

EDUCATION

The members of the Arboretum staff who are members of the Faculty of Arts and Sciences are available to offer formal courses within the Harvard curriculum and to guide the programs of graduate students. In this capacity, Dr. Wood offered a course in elementary plant taxonomy, and Dr. Howard an advanced class. Dr. Schubert is supervising the graduate studies program of a student from Mexico. Three staff members participated in a cooperative course offered in the Department of Biology to acquaint new graduate students with the various research fields and experimental programs of the Department. Participation in seminar programs at Harvard, as well as at other colleges in New England, involved seven members of the staff. The informal education program of the Arnold Arboretum open to the general public included six courses during the year, as well as two lecture series. We have under consideration the request that such courses be included in the Harvard Extension program or the public education programs of Boston or Cambridge.

Throughout the year, but especially during the summer months, the Arboretum has offered employment to high school and college students. During the year a new emphasis has been placed on the training aspects of this work opportunity and selection of student employees is now based on an avowed interest in botany or horticulture. The students are essentially apprenticed to a staff member and they receive several hours of formal instruction in the course of each week. Students were accepted during the past year from Antioch, Harvard, and Smith Colleges, and from Belmont Hill School and the Norfolk County Agricultural High School.

THE HERBARIUM

Although the professional members of the staff of the Arnold Arboretum have broad interests and conduct research or publish in related fields, the primary opportunity for contribution to botanical science is based on the living collections, the herbarium of dried botanical specimens, and the excellent library facilities. Thus, publications in systematic botany and taxonomy dominate the 77 papers published by the staff during the past year. Four separate floristic

studies involve several members of the Arboretum staff. The areas are the Southeastern United States, the state of Veracruz in Mexico, the Lesser Antilles in the Caribbean, and Hong Kong and the New Territories. Staff members continued field work associated with each of the projects.

The congestion in the Harvard University Herbaria in Cambridge, resulting in temporary expedients for the housing of herbarium specimens, must be emphasized. The lack of proper space for scholars, whether staff or visitors, to work is deplorable. Herbarium specimens are now stored in cardboard boxes on top of the metal cases. Seminars and lectures draw audiences which cannot be accommodated in available lecture rooms. The proper use of the scientific collections and the proper expectations from a professional staff cannot be obtained in the inadequate facilities now existing in Cambridge. By contrast, sufficient space is still available in the Administration Building in Jamaica Plain, and the greatest percentage of increase in herbarium materials and library resources occurs in the horticultural area.

Additions to the herbarium during the year raised the holdings of the herbarium of cultivated plants to 145,989 specimens and the total herbarium to 935,839 sheets.

THE LIBRARY

The increasing cost of books and services associated with the libraries is becoming of great concern. The members of the Arboretum staff represent many areas of specialized interest, and in the past we have attempted to have a representation of books pertinent to these interests for reference and for teaching purposes. Publications from foreign countries may once have been considered reasonable in price, but at the present time the price per page of many foreign publications exceeds that of American periodicals and books. Within certain areas of knowledge, the association of the libraries of the Gray Herbarium and the Arnold Arboretum in Cambridge has permitted a coordinated acquisition program. In areas of forestry, floras of Europe, Asia, and Africa, or horticultural publications, the responsibility is that of the Arnold Arboretum staff alone. A careful study is in order to determine the coverage of library materials desirable.

The total holdings of the library of the Arnold Arboretum in volumes and pamphlets was 79,741 on June 30, 1971. This is a net increase of 2,093 items during the fiscal year. During the year, we increased our attempts to recondition or repair older volumes which show signs of age or deterioration. A total of 1,100 volumes were bound in the past year, and a special gift was gratefully accepted to further this program.

By sacrificing study space within the library in the Harvard University Herbaria building, additional stacks were installed to permit a temporary easing of the crowded shelf condition. A Xerox 720 copy machine was leased for general cooperative use within the building. This has reduced the number of library volumes which were formerly sent out for copying or on interlibrary loan. The volume of copy service to our staff and to other libraries has increased due to the added convenience, but this effort is largely self-supporting through fees.

[Miss Stephanie Sutton](#) is undertaking a biography of [Joseph Rock](#), who collected plants for the Arnold Arboretum in Asia. Many of Rock's letters, field notebooks, and photographic negatives were the property of the Arnold Arboretum. Upon his death, however, material of his estate was widely scattered. Miss Sutton visited the Royal Botanic Garden, Scotland, and several locations in Hawaii to study materials held there. She was able to purchase, on our behalf, the papers of Rock bequeathed to a relative in Austria. These manuscripts and letters will be incorporated in the Arnold Arboretum library.

PUBLICATIONS

Dr. Bernice Schubert continued to serve as editor of the [Journal of the Arnold Arboretum](#). The four issues comprising Volume 52 involved 667 pages with 31 articles by 38 authors. In preparation is a cumulative index to the authors and titles of the first 50 volumes, and this will be issued as a special publication.

A review of the increased costs of publishing and distributing numbers of the Journal of the Arnold Arboretum indicated that our subsidy of this publication was excessive. The *Journal* is used in exchange for other publications, but a comparison of the subscription prices would suggest, incorrectly, that the exchange was markedly in our favor. To place a more accurate value on the Journal and to help meet the ever increasing costs of publication, the price per volume was increased to \$16 for the next year.

In October of 1970, Mrs. M. Roca-Garcia accepted the editorial responsibility for *Arnoldia*. Volume 30 of *Arnoldia* contained 260 pages of text.

One special publication was issued by the staff during the year. An illustrated book, [The Arnold Arboretum: The First Century](#), was written and compiled by Stephanie Sutton, with illustrations by Pamela Bruns. The booklet of 72 pages includes eight pages of colored illustrations, a foreword by Walter M. Whitehill and an afterword by Richard A. Howard.

The Macmillan Company produced and distributed "*Wyman's Gardening Encyclopedia*," a volume of 1,222 pages compiled by Dr. Wyman during the year. The MIT press issued a selection of *Frederick Law Olmsted's Writing on City Landscapes* edited by Stephanie Sutton under the title of "Civilizing American Cities," a volume of 310 pages.

THE STAFF

Many professional responsibilities have been accepted by members of the staff in University and society or organizational offices and committees. We are, however, exceedingly pleased to report the special honors and awards received by members of the staff.

Dr. Lily May Perry was awarded the degree of Doctor of Science, honoris causa, by Acadia University, Wolfville, Nova Scotia, with the citation stating that Dr. Perry "has devoted her life to solving the mysteries of plant relationships, and has become an authority on the vascular plants of Southeast Asia."

Dr. Carroll E. Wood, Jr. was honored by Roanoke College, Salem, Virginia, with its medal to alumni, in recognition of distinctive service and professional achievement.

Dr. Donald Wyman received the Arthur Hoyt Scott Garden and Horticultural award from Swarthmore College. A citation noted him as a "man whose devotion to horticulture has been absolute."

A more detailed report of the important records and activities of the staff of the Arnold Arboretum will be published in the November 1971 issue of *Arnoldia*. A complete bibliography of publications is included there.

RICHARD A. HOWARD, Director