



# The American HORTICULTURAL Magazine

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*50th Anniversary Edition*





# Journal of the American Horticultural Society, Inc.

901 NORTH WASHINGTON STREET, ALEXANDRIA, VIRGINIA 22314

For United Horticulture . . .

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*The particular objects and business of the American Horticultural Society are to promote and encourage national interest in scientific research and education in horticulture in all of its branches.*

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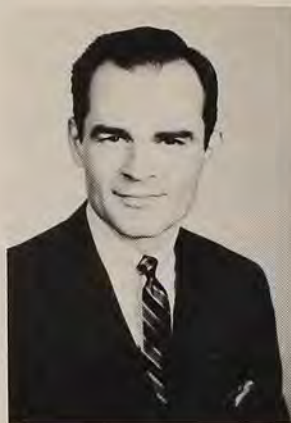
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## Bringing Us All Together

The American Horticultural Society celebrates with this issue of *The American Horticultural Magazine* its Golden Anniversary under the cloak of a United Horticulture. The *Magazine* has become an indelible record of the horticultural achievements for the past 50 years. A brief history of the Society is featured in this final issue of Volume 50.

In reviewing the progress in American horticulture of the past 50 years, I have realized again that the goal for our Society is to become the parent "society" of horticultural societies in this country. We have, however, splintered ourselves in these years into such rigid organizations—based on research, teaching, or extension; commodity or discipline; industry or amateur orientation; location—that there is little communication within the various spectra of horticulture. This compartmentalization is not always justifiable. Good leadership, for effective cooperation, is our most urgent need. The American Horticultural Society could truly become that supra-organization of organizations, through the active cooperation and leadership of its individual members and organizations.

Because of my involvement in various organizations, and in National Lawn and Garden Week, I have had the opportunity to observe the gaps between many different horticultural groups. Underneath the seemingly different veneers of each organization is an abiding concern to guide the hands of every consumer in the better use of plants and plant products. Also, within all of these groups there is the feeling that much of our know-how is lost before horticultural products reach the consumer. Our press often confuses basic principles of growth and development of plants with uncontrollable BIOTIC programs. The news media indict mechanization, standardization, and containerization as expressions of phony food and flowers.

We—the horticulturists—have some real internal and external gaps to bridge, if we are to communicate the real meaning of plants in people's daily lives. We must instill in the mind of every user the intrinsic values of plants, and help to create life styles that are based on respect and love of living things.

The first step in this process would be, certainly, *the establishment of a National Center for American Horticulture*. This goal has been a recurring dream of the Presidents of AHS. They have visualized a

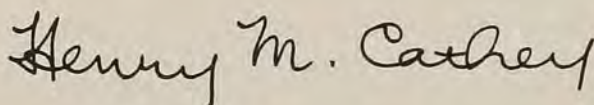


group of facilities where the national headquarters of the various cooperating organizations could be located. All the cost benefits of mutual facilities for production, printing, and mailing of horticulturally oriented materials could be realized under such a plan. We should urge our Board of Directors to establish a committee drawn from our membership to study the feasibility of a National Center. The committee should start by visiting other National headquarters of various organizations. The planning that established the American Association for the Advancement of Science, for all of Science, should be the model for horticulture.

Second, we should, for American horticulture, seek the integration of the purposes of the various organizations and personalities into *one national plan*. The representatives from AHS to our related organizations should strive to help set national priorities and standards in regards to fruits, vegetables, flowers, shrubs, turf, and trees. The alliance of organizations could speak for American horticulture on matters of cooperation and policy, by setting up standards, which are urgently needed in many sectors of horticulture. Some sectors of the membership of American Society for Horticultural Science, for example, feel that the traditional spokesmen for American science tend to forget the pressing needs of American horticulture. Even the type of research and educational programs that we must be conducting are changing. We must continue the traditional programs of creating new information, new techniques, new plants, but we must also help rid visual pollution, set community priorities, and produce safer foods. A *National Horticultural Foundation* could give our established priorities a public hearing, and bring action.

Third, we need the long-range *support of private foundations and agri-business* to supply capital for much needed but often unsupported research, teaching, and demonstration programs. Many sectors of American society function only because public funds are meshed with those contributions obtained from private foundations or agri-business. The contributed money would permit horticultural leaders to develop high priority, short-term, specific programs with existing staff and facilities—all of these being impossible without readily available money. Many projects are never realized because of the need for part-time help, or because of the lack of a specific piece of equipment. Such support for publishing reports on high priority subjects would also hedge off increasing costs of publication and make our information available to a wide audience.

Through the creation of a National Center for American Horticulture, and through establishment of a national plan supported by private foundations for horticulture, every horticulturist would enter into the mainstream of our American life and economy. We are needed as never before.



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# The American Horticultural Society 1922-1971

(By the Editor and the Editorial Committee)

## *Preface*

*"The American Horticultural Society is the only organization in the United States representing all horticulture, generally, in either domestic or international affairs and relationships."* (From a report by Dr. Richard P. White, in the Proceedings of the Fifteenth Annual American Horticultural Congress at Pasadena, California, November 9-12, 1960.)

Now in its fiftieth year, The American Horticultural Society has left a lasting imprint on horticultural achievement in this country. It is appropriate, therefore, to record past accomplishments, particularly at this time for the benefit of all the membership.

In 1922, two horticultural societies with similar objectives came into existence, The National Horticultural Society in Henning, Minnesota and the American Horticultural Society in Washington, D.C. The two groups soon sought a means to join and a merger was consummated in 1926. Similarly, a situation arose in the 1950's for the American Horticultural Council to join with The American Horticultural Society. That merger was consummated in 1960.

The intention of the founders was to develop a national organization devoted to horticulture in all its branches; to educate; and to disseminate horticultural information to all parts of the country. From its inception, The American Horticultural Society was an organization that included amateur and commercial horticulturists, scientists and professionals, as well as a number of affiliated societies and associations among its ranks.

The Society has always differed from other horticultural organizations in this country through its publications and programs which attempted to bridge the broad area between the serious amateur gardener and professional horticulturist. Primarily, the Society has sought to attract and challenge those with a sustained intellectual interest rather than those with a transitory curiosity about plants, their history, and culture.

Always with an inadequate budget, the Society could never buy the services it needed. Yet devoted people continue to contribute their talent, and the Society surges forward in the hope that the fragile fiscal base will somehow improve. By no means has the Society yet reached its zenith of influence in the horticultural affairs of this country.

The Society is best known for its *Magazine*, as a source of information on plants and their culture based on actual practice and experience of experts. The *Magazine* has never dwelt on general gardening to any extent nor has it been a



how-to-do-it publication. It was the aim of long-time Editor Ben Morrison to bring an awareness of the plant world to gardeners and plantsmen who like to dig in the soil and grow plants.

To peruse the back issues of the *Magazine* takes the reader on an armchair adventure around the world through pictures and prose of a vast array of gardens and garden plants. Plant groups such as *Acacia*, *Fuchsia*, *Campanula*, *Galanthus*, conifers, and others have been treated with almost monographic coverage. And on occasion there have been reports of unusual plants, such as *Welwitschia mirabilis* and *Amorphophallus titanum* that flowered for the first time in this country and were therefore events worth noting in the *Magazine*.

The merger of 1960 with the American Horticultural Council was the most significant event in the Society's first half century. Along with its already highly reputable *Magazine*, the merger brought a number of new programs and new talent. Programs on the environment and the Plant Records Center, for example, have brought a significant new dimension to the Society's sphere of influence. While individual membership continues to be the backbone of the Society, programs are aimed as much to the numerous horticultural organizations of the country as to the individual member.

It was never the object of the Society to function for science, but rather to let science function for the Society. Laboratory results *per se* usually have not been reported in the *Magazine*, yet it has always welcomed interpretative results from research that could be understood and used by the non-professional reader. The intellectual and scholarly approach of the professional continues to give much needed strength and backing to the Society, its publications, and programs.

It had been the original intent of the Editorial Committee to publish a complete history of the Society in this issue of the *Magazine*. Space limitations, however, precluded that possibility. The result may fall short of what might have been ideal. Yet the present account will be useful in that it provides an opportunity to bring together for the first time information from many scattered sources. Still missing are the minutes of the AHS from 1922 to 1926 and for a period from 1937 through 1948; otherwise, the complete minutes and Society publications have been perused in the preparation of this account.

In particular, we would like to thank Hamilton P. Traub, V. David Lumsden, Paul Bauer, Freeman Weiss, Ivan N. Anderson, Mrs. Francis Patteson-Knight, Mrs. Grace P. Wilson, Donald Wyman, Russell J. Seibert, Richard P. White, Fred C. Galle, George S. Slate, R. C. Allen, and John H. Walker for contributing valuable information and without whose help this short history could not have been written.

The past presidents of the Society should also be thanked, as well as relatives of deceased presidents for supplying photographs. This is the first time that photographs of all presidents, except two, have been brought together. Photographs of Furman L. Mulford and Wm. Holland Wilmer could not be traced.

It had been decided earlier to dedicate Volume 50 of the *Magazine* to some prominent individual or individuals of the Society. But this was not feasible, when, after all, the Society from the beginning has always been the product and the result of many individuals working together. Therefore, Volume 50 is dedicated to all those who in many capacities have given devoted and often sustained service to The American Horticultural Society, many of whom are mentioned in the pages that follow.



# Before the Merger of 1926

## **The National Horticultural Society**

Hamilton P. Traub was one of the prime organizers of The National Horticultural Society and the first editor of *The National Horticultural Magazine*.

Traub conceived the idea of a national organization in a series of articles published in the *Flower Grower* magazine, idealized under the title of Garden-Lore Society.

When the subject was explained to a group with similar interests, concrete steps were taken to organize what developed into The National Horticultural Society at Henning, Minnesota in 1922.

The original trustee officers of The National Horticultural Society were Axel A. Tervola, President; Hamilton P. Traub, Editor-Secretary; Eric B. Magnusson, Treasurer; John F. Traub, General-Counsel. The object of the society was for "the increase and diffusion of horticultural knowledge, and the stimulation of universal interest in horticulture." It was envisioned that the Society would take its place in America side by side with the National Horticultural Society of France and The Royal Horticultural Society of Great Britain.

The National Horticultural Society began with a number of grandiose plans, few of which were realized, primarily because of its early merger with a very similar organization which had been concurrently formed in Washington D.C. Thirteen regional vice presidents were established for all parts of the country, including Canada and the Philippines for the purpose of coordinating horticultural interests and to provide a source of material for publication in the *Magazine*. There was also an early effort to seek cooperation with state and local horticultural societies, such as the North Dakota State Horticultural Society, the Galesburg [Illinois] Horticultural Society and the Grand Forks Horticultural Society of Grand Forks, North Dakota.

The Society established two National Chapters, The Native Flora Chapter with headquarters in Cripple Creek, Colorado and a Nature Study Chapter in Utica, New York.

A committee was established on nomenclature, registration, and evaluation for the purpose of coordinating all plant registration in the country. According to this plan, national organizations, such as the rose, peony, and iris societies would register their own plant groups, and The National Horticultural Society would register all plants not registered by the national society. Registration was to include new plant species, as well as horticultural varieties. However, the only registrations actually recorded were two new species, *Rudbeckia intermedia* and *Dodecatheon lutescens* published in the *Magazine* according to the American Code of Nomenclature by which new plant species could be published in English without a Latin diagnosis.

The Society undertook to establish the John Bartram Medal honoring America's first great horticulturist. The obverse view, designed by Hamilton P. Traub showing an American elm was reproduced once in Volume 2, Number 4 of *The National Horticultural Magazine*, but the medal was never actually cast or awarded.

## **The American Horticultural Society**

Concurrent with the founding of The National Horticultural Society in Minnesota, the American Horticultural Society, was being formed in Washington, D.C. in 1922. In the early 1920's, a small group of dedicated horticulturists and plant scientists, some of them professional people and some of them amateurs, would gather once a month in the auditorium of the Old National Museum [Smithsonian Institution] in Washington, D.C., to hear a lecture on horticulture.



Faithful in attendance were the founders of the Society, Frederick V. Coville, botanist with the U.S. Department of Agriculture; David Lumsden, horticulturist with the Federal Horticultural Board and first secretary of the Society (1922-1926); D. Victor Lumsden (son of David), Peter Bisset and his son David, and F. L. Mulford, 2nd President of the Society, all horticulturists with the Bureau of Plant Industry.

Others were Freeman Weiss, plant pathologist with the U.S.D.A.; Otto Bauer, manager of S. S. Pennock, wholesale florist in Washington, D.C., and treasurer of the Society; Paul Bauer, horticulturist with S. S. Pennock; Joseph A. Herbert, Jr., real estate man and amateur horticulturist; David Griffith, breeder of lilies; and J. Marion Shull of the U.S.D.A. Others included A. F. Woods; Mr. and Mrs. Hurtle of Gunston Hall, Virginia; Captain and Mrs. Chester Wells of Land's End; Dr. and Mrs. Whitman Cross with their friend and gardener, Mr. Hanson, rosarians of note; William Gray, superintendent at Dumbarton Oaks in Washington, D.C., and Ivan N. Anderson, nurseryman and landscape architect in Arlington, Virginia.

Some of the Society's founders are no longer with us and others, such as Freeman Weiss, Paul Bauer, D. Victor Lumsden, and Ivan N. Anderson have since retired from official duties in horticulture or its allied fields but still follow horticultural activities.

Attendance at these early meetings grew to over a hundred. At the organization meeting in September 1922, a constitution and by-laws were drawn up. Fifty members paid dues. At the following meeting, the group voted for officers and accepted the constitution and by-laws. A. F. Woods, a distinguished agricultural scientist, then President of the University of Maryland, was elected President; David Lumsden, Secretary; and Otto Bauer, Treasurer.

Beginning in 1924, the Society staged its First Annual Spring Flower Exhibition. These annual shows were continued for several years and eventually became the outstanding flower show of the

year in Washington, D.C. The guarantors were always pleased that the Society absorbed all the expenses and there was often a little profit left for the Society.

The Fourth Annual Spring Flower Exhibition of 1927, held in the Ballroom of Hotel Washington, was of interest because, as Mr. Ivan Anderson relates:

"It was the year and the day, June 11, 1927, that Charles Lindberg came to Washington. Mrs. Grace Coolidge was supposed to open our show, and she insisted that she was going to go through with it in spite of the hub-bub.

"She notified us the morning of the show that she could give us about fifteen minutes for the opening ceremonies but that she would be two hours early. She appeared before we had the show in order and went through with the opening in spite of the fact that there was almost no one present but the workers rather than the more lovely crush of people expected to be in attendance for the opening ceremonies.

"The First Lady was most charming and sorry that she could not give us the full time that she had planned, but she had to go off immediately to the enormous celebration that had been worked out on the spur of the moment to honor Lindberg."

In 1928 the Society joined with the American Peony Society to stage a highly successful International Peony Show in Washington, D.C. Most of the garden clubs of the area used their allotted spaces to display various garden effects. Peonies that had been in cold storage for weeks before the show were brought in from all over the country. Someone had contacted Mrs. Pierre S. DuPont of Longwood Gardens, Kennett Square, Pennsylvania. She exhibited what the newspapermen tagged as a ten thousand dollar orchid. In addition she sent down quite a representative collection of unusual orchids that brought immense crowds to the Willard Hotel ballroom.

### **The Merger of June 15, 1926**

The union of the Minnesota and the Washington, D.C. groups had been planned shortly after each was formed in



1922. The January 1923 issue of the *Magazine*, for example, indicated that permanent headquarters would be established in Washington, D.C. A merger committee consisting of Hamilton P. Traub as Chairman, Fannie Mahood Heath, and A. L. Traux, was formed by The National Horticultural Society and a similar committee was formed by the American Horticultural Society. After much debate, with give and take on both sides, both organizations finally agreed to unite on the 15th of June 1926. The preamble of the new constitution jointly adopted, clearly stated the purpose of the union: "In order to further the best interests of American horticulture The National Horticultural Society and the American Horticultural Society have joined forces in a single organization to carry on the life and traditions of both organizations more effectively".

The new Society became the American Horticultural Society with headquarters in Washington, D.C. and *The National Horticultural Magazine* continued as the official publication of the Society. The title of the *Magazine* was retained so that the name "National" would be within the organization.

Following the merger the new Society started off with 500 members. Officers were Furman L. Mulford, President; Mrs. Fannie Mahood Heath, First Vice President; H. A. Fiebing, Second Vice President; D. Victor Lumsden, Secretary; and Otto Bauer, Treasurer.

With only 500 members, the Society desperately needed more recruits. As the Secretary D. Victor Lumsden indicated in Volume 5 of the *Magazine*, "It is by building up a large organization of persons in all walks of horticulture that the American Horticultural Society can become the power that it should be in this country." Until shortly before a later merger with the American Horticultural Council in 1960, the Society continued as a relatively small organization with few membership services. Its primary function was the issuance of *The National Horticultural Magazine*.

Finances were a constant concern as they have always been throughout the

Society's history. At the executive committee meeting of August 9, 1951, for example, C. O. Erlanson, then treasurer, recorded that the only way the Society could keep its finances from collapsing was to have a continuous membership drive lest the Society become financially defunct sometime within the next year. Somehow the Society survived. Financially, the Society always seemed to be in a state of distress. Had it not been for staunch friends like John Ferguson of the Monumental Printing Company in Baltimore, and others along the way, the situation might have worsened. In 1954, a legacy of nearly sixteen thousand dollars from the estate of Furman L. Mulford, second President of the Society, helped to stabilize the financial situation for a brief period. Someone, it seems, always has come to the rescue when the Society is down.

The Society, however, did have members, although never enough, a prestigious *Magazine*, a Board of Directors, several committees, plus a number of affiliated horticultural organizations. Also the Society loaned books from its library to members. The library in 1971 consists of about two thousand volumes.

In 1959, a seed distribution service was initiated mainly through the labors of Mrs. Francis Patteson-Knight of McLean, Virginia with the help of Mrs. Grace P. Wilson of Bladensburg, Maryland. Since the first distribution of 1959, the Society each year continues to distribute to its members, free, a limited quantity of seeds of plants, some quite unusual kinds, which are not found in the ordinary seed catalogues.

The Silver Medal, the oldest of the Society's medals, was awarded originally in 1938 and for a number of years thereafter, to the Garden Club of Virginia's annual Lily Show.

Special gold medals have been awarded only once in the Society's history, to B. Y. Morrison and to Frederic P. Lee for outstanding service to the Society. Mrs. Robert Woods Bliss of Dumbarton Oaks in Washington, D.C. had been an officer and supporter of the Society for many years, and it was largely through her



efforts that the gold medals were awarded. The ceremony took place during the annual meeting of the Society at Dumbarton Oaks on May 2, 1959. The awarding of the medals, specially cast for the occasion, was a highlight of the memorable affair.

### **The American Horticultural Council**

At the centenary banquet of the Pennsylvania Horticultural Society of November 1927, Dr. J. Horace McFarland announced a movement toward a union of all horticultural interests in this country under the name of "United Horticulture." The survey was conducted by a committee consisting of Mrs. Francis Crowninshield, Paul C. Stark, Alfred Hottes, David Burpee, J. C. Wister, and Robert Pyle, as Chairman. This led to the founding of the American Horticultural Council, Inc. at Cleveland, Ohio in 1946.

Liberty Hyde Bailey's keynote address at that First American Horticultural Congress in Cleveland sparked the drive which established the Council on a firm footing. Under the symbol for "United Horticulture" the Council was established to "unite by friendly association leaders in the American horticultural world." The Council intended through the coordination of their knowledge, experience, and ideas, not only to solve problems common to all but also to advance public appreciation of their material and spiritual values.

Membership in the Council would permit, for example, the Rose Society to communicate better with the Peony Society and with other plant societies across the country. L. H. Bailey expressed the hope "that a great United Horticulture might have a speaker signify what is best, get people together to talk matters over, to hear a speaker who can pronounce sound opinions with authority, to bring plants and compare them, what their merits and demerits are. It is a wonderful thing to bring together this harmony of understanding."

Mr. Robert Pyle, who had been President of The American Horticultural

Society from 1931 to 1935, became first president of the new American Horticultural Council in 1946. From 1948 until the end of 1959 the Council served as a forceful coordinating organization for horticulture in this country.

The Council was founded to benefit all horticulture, not just one segment. But unlike other organizations, the Council set about to be the parent organization of all horticultural interests generally in this country. The aim of the Council was to work for the organizational members. It was in effect, an organization of organizations, and counted among its members 120 associations which together had several hundred thousand members. There were only about 50 "individual" members. The aim of the Council was to work for the organizational members.

Once a year the Council announced its annual Congress, and at that time individual members from the various affiliated societies and organizations around the country would get together for several days for a grand pow-wow of horticulture. The operation of member organizations was never touched. It was through the Congress and various national programs that the Council exercised its influence most effectively. The numerous programs of the Council tended to pull all American horticultural organizations closer together.

The following programs were the principal activities initiated by the Council and all are functioning in current programs of The American Horticultural Society:

**The Annual American Horticultural Congress.** The first annual Congress was held in Cleveland, Ohio in 1946 and the 26th in Milwaukee, Wisconsin in 1971. Following the first meeting, the Congress has been held annually in cities from coast to coast as envisaged by Liberty Hyde Bailey "for the purpose of uniting all the various horticultural groups into one common body." The roster of speakers at the annual congresses have included the country's leading horticulturists and plant scientists—Liberty Hyde Bailey, Harold B. Tukey, Donald Wy-



# Medals of the Society

## LIBERTY HYDE BAILEY MEDAL

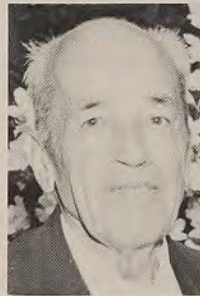
The Liberty Hyde Bailey is the highest honor the American Horticultural Society can convey to an individual. It is awarded to a resident of the North American Continent who has made a significant contribution in at least three of the following areas of horticultural activity: teaching, research, writing, editing, plant exploration, administration, art, business, and leadership. A pioneering spirit in service, rather than pure achievement, is given special emphasis in the selection of recipients. The award which was initiated by the American Horticulture Council in 1958 cannot be given more than once yearly.



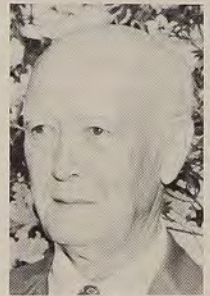
## RECIPIENTS



John C. Wister  
(1958)



Benjamin Yoe Morrison  
(1959)



H. Harold Hume  
(1960)\*



Henry Teuscher  
(1962)



Norman Taylor  
(1963)



Robert Moses  
(1964)



William C. Steere  
(1965)



Alex Laurie  
(1966)



Harold B. Tukey  
(1967)



George M. Darrow  
(1968)



George H. M. Lawrence  
(1969)



Aubrey C. Hildreth  
(1970)



Donald Wyman  
(1971)

\*The Liberty Hyde Bailey Medal was not awarded in 1961.





Frederic P. Lee



### **GOLD MEDAL**

The Gold Medal can be presented to persons **FOR OUTSTANDING SERVICE TO THE SOCIETY**. Only two presentations have been made in the history of the AHS. On May 2, 1959, during a memorable meeting held at Dumbarton Oaks, the medals were presented to Benjamin Y. Morrison and to Frederic P. Lee. The medals had been specially cast for the occasion.

### **SILVER AND BRONZE MEDALS**

The Society's Bronze and Silver Medals are offered at major flower shows of national, state, and regional organizations who are members of the Society. The awards are given for collections and not for arrangements.

The Silver Medal is presented at national flower shows for a collection of 24 cultivars or species. Each individual specimen must rate a blue ribbon. The oldest medal offered by the Society, it was first awarded in 1938.

The Bronze Medal is presented at state or regional shows for a collection of 12 species or cultivars, each of which must rate a blue ribbon.





man, Wm. J. Robbins, R. C. Allen, George H. M. Lawrence, Wendell H. Camp, Henry T. Skinner, Richard P. White, and Nobel Laureate, George W. Beadle, to mention a few.

**Proceedings of the Annual Congress.** This was a very important publication of the Council each year following the congress. The proceedings contained all that had been accomplished at the Congress, together with the names of participants and short reports from committees and member organizations. The proceedings formed the most important legacy of the Council as a testimonial of its accomplishments. Publication of Congress proceedings has been on an irregular basis since the 1960 merger.

**A.H.C. News.** At irregular intervals, the Council published a news bulletin which contained council news, plus items of national interest relative to activities of leading horticultural societies and personalities across the country.

**Affiliated Organizations.** Groups affiliated with the Council were the backbone of that organization. The purpose of the American Horticultural Council as a coordinating body was to bring together the multitudinous horticultural organizations in the country under the shield of one supra-organization. By 1960, the Council consisted of 120 affiliated organizations. In 1971, 177 horticultural organizations are affiliated with The American Horticultural Society.

**International Horticultural Activities.** The Council expected to be a liaison with horticultural activities abroad. In 1959 under the chairmanship of Dr. Russell J. Seibert, the Council participated in the "Floriade" in Rotterdam, Holland. Also in 1959, the Council, with Dr. Harold B. Tukey as Chairman, initiated action which resulted in the holding of the XVII International Horticultural Congress at College Park, Maryland in 1966.

**Awards and Citations.** The Council initiated the Liberty Hyde Bailey Medal in 1958, and the first recipient was Dr. John C. Wister of Swarthmore, Pennsylvania. The medal is the highest award of AHS and continues to be presented dur-

ing the annual Congress. The Council also presented citations to outstanding horticulturists beginning in 1953 and AHS has continued this awards program.

**Registration and Nomenclature.** A commission was set up in 1947 with J. Franklin Styer as chairman. The first report at the third American Horticultural Congress at Ithaca, N.Y. in 1948 was concerned chiefly with proposals on a revision of the International Botanical Rules related to horticulture. The next Chairman, Wendell H. (Red) Camp became heavily involved in background work that culminated in the International Code of Nomenclature of Cultivated Plants, published in 1953. The next Chairman, George H. M. Lawrence, worked diligently as the Council's American representative on the International Commission of Nomenclature and Registration of Cultivated Plants and the International Horticultural Committee. This work culminated in the International Code of Nomenclature for Cultivated plants which was published in 1961.

Following the AHS merger of 1960, the work of the old commission on registration and nomenclature was largely dispersed to other agencies. However, the Society has been most recently represented in these matters by Dr. Harold B. Tukey on the Council of the International Society for Horticultural Science, and by Dr. Mildred Mathias on The International Commission for the Nomenclature of Cultivated Plants of the International Union of Biological Sciences. Both representatives and their predecessors worked on matters relating to the International Code of Nomenclature of Cultivated Plants, published in 1969 and its earlier editions of 1961 and 1953. The Council and the Society have long served as American distributors of the Code, which has had a profound influence on procedures on names, naming, and registration of cultivated plants.

**Plant Hardiness Zone Map.** In 1953, a Council committee, with Dr. Henry T. Skinner as chairman, undertook the preparation of a plant hardiness zone map based upon recommendations of



the American Association of Nurserymen. The map proposed would be more detailed, especially for local areas of the country, than existing maps. The map, published in 1960 by the United States Department of Agriculture in cooperation with The American Horticultural Society, has become the standard of its kind for all parts of continental United States.

**Nickerson Color Fan.** This was first available on September 15, 1957 through a \$3,000 grant from the Longwood Foundation. The fan became a standard for general color evaluation and went through several printings, the latest in 1960, under the auspices of The American Horticultural Society. An earlier color chart, The Flower Color Detector, was published by the Council in 1954, and was based on the Wanscher Color Chart by a Danish color expert.

**Standards and Ethics.** This committee was formed by the Council to establish a code of horticultural standards for the country, and especially to oppose misrepresentation in horticultural advertising. The committee met with a modicum of success and the fight still continues. In 1968, under Mr. John Patek, this committee was helpful in setting up standards for the grading of peat.

Other activities of the Council inherited by The American Horticultural Society at the time of the merger, included committees on research, horticultural education, garden writers association, and long range planning.

The Garden Writer's Association of America, originally sponsored by the American Horticultural Council, was promoted originally by Robert Pyle who felt that such an organization would be useful in publicizing the Council's activities. The Garden Writers are still active at the annual Congress and continue to promote the best interests of the Society.

Ideologically, the Council did offer vast and worthy programs for the whole of horticulture in this country. It became increasingly evident, however, that more money would be needed than was coming in to accomplish all the projects contemplated. It was also evident that

adequate funding could not be derived from the organizational members. Individual membership offered more lucrative promise.

The Council was not set up to service individual members except on an altruistic basis. A parallel organization was more experienced in this area and dual members of the Council and of The American Horticultural Society began to discuss the merits of bringing these two organizations together.

### The Merger of 1960

Deliberations went on for nearly four years before it was decided to merge the American Horticultural Council and The American Horticultural Society. On January 6, 1960 a union was finally consummated under the continuing name of The American Horticultural Society.

Prior to the merger The American Horticultural Society had been primarily an organization of individuals with a number of affiliated societies and associations. Its primary function had been the issuance of *The National Horticultural Magazine*.

The new constitution and by-laws contained the best policies and most cherished ideals of the two organizations. The important concept "to promote and encourage national interest in scientific research and education in horticulture in all of its branches" continued as the aim of the Society. The motto "For United Horticulture" appears on the masthead of the *Magazine* in the spirit as originally proposed by Robert Pyle.

The Society is indebted to Mr. Frederic P. Lee for his legal advice in drawing up the document which led to the merger. A highly successful lawyer in Washington, D.C., he has been given credit for keeping the merger talks from bogging down, perhaps interminably. Mr. Lee served the Society, not only on legal matters, but also as a member of the Editorial Committee from 1956 onwards, and as a member of the Board of Directors for several years. Mr. Lee had developed a keen interest in horticulture and especially in azaleas. He is perhaps best known for his *Azalea Book*, first pub-



lished in 1958 with a second edition in 1965.

In general the merger was profitable in that it brought a spirit of completeness the Society had not formerly possessed—new programs and new talent to go along with the horticulturally esteemed *Magazine*. Also, the merger brought some modest new funding which helped temporarily.

A severe financial crisis developed in 1961 and Dr. Donald Wyman, who was then the President, came to Washington, D.C. to try to find a solution to the pressing problems. The one bright spot was that Mrs. Grace P. Wilson volunteered to run the office. She came daily to the Bladensburg Road headquarters, frequently with her husband and daughter Grace Murphy. Mrs. Wilson tended to the full load of Society business from 1962 to late 1967, without compensation other than expenses. Upon her retirement, a resolution recorded the unanimous appreciation of the Society's officers and directors.

The Society's most important project of the 1960's was the development of the Plant Records Center funded by successive grants from The Longwood Foundation. The idea for the Plant Records Center was developed during the XVII International Horticultural Congress held in August 1966 at the University of Maryland. At that time, Mr. Robert MacDonald presented a paper entitled "The Application of Electronic Data Processing Methods to Botanical Gardens and Arboreta Records."

At one time the American Association of Botanic Gardens and Arboreta was delegated the sponsorship of establishing a pilot project, which was initially funded by 12 botanic gardens. When the project was turned over to the Society at the 1967 Congress at Cleveland, Ohio, Dr. Richard A. Howard became Chairman of the Plant Records Center Committee. Two grants, the first for \$90,000 in 1968 and a second for \$286,230 in 1970 allowed the Society to establish the Plant Records Center at the Tyler Arboretum, with Robert D. MacDonald as Director. The project was the first of its

kind established for the documentation on computer tape of plant record files of the major arboreta and botanic gardens in this country.

In 1965, the Society became co-sponsor of the Colonial Williamsburg Garden Symposium at its 19th meeting at Williamsburg, Virginia. Co-sponsorship of the Clara B. Ford Garden Forum at Dearborn, Michigan began with the 9th Annual Forum in 1970. These affiliations with the best known garden symposiums in the country fit closely with the objectives of the Society and help bring about closer ties with people in horticulture and with horticultural organizations across the country.

In the area of international cooperation, the Society was one of the principal sponsors of the XVII International Horticultural Congress held at the University of Maryland at College Park, August 15-20, 1966. In the spring of 1959, Dr. Harold B. Tukey was chairman of an American Horticultural Council committee that invited the Congress to meet in the United States. Acceptance of this invitation by the International Committee resulted in the Congress being held in this country. Dr. Tukey was the Congress chairman under the auspices of The American Horticultural Society.

On December 1, 1967 Mrs. Elizabeth G. Eastburn became Executive Director, and her husband, Glenn, Finance Officer, shortly before headquarters were moved to Calvert House in Washington, D.C.

The Eastburns, with a vast store of organizational experience behind them, acted as catalysts, especially in revitalizing national Committee activities and in helping to establish important new programs. The Eastburns resigned toward the end of 1970 after receiving a Distinguished Service Citation at the 25th Congress in Miami Beach, Florida.

Mr. O. Keister Evans became the new Executive Director in late November, 1970 and is currently in charge of expanded headquarters in Alexandria, Virginia.

As the first 50 years come to a close, the image and direction of the Society are taking on new forms. The role of



horticulture in programs related to environmental quality and a better way of life for mankind has become an important influencing factor in the activities and directional trends of the Society.

Special emphasis on programs designed to mitigate urban visual pollution has generated widespread support in private and public areas. Because of a particular interest in this area, the Scaife family of Pittsburgh issued, late in 1970, a grant of \$75,000 to be used over a three-year period to expand the Society's programs related to environmental quality. Late in 1971, the Urban Mass Transportation Administration of the U. S. Department of Transportation awarded the Society \$29,900 to be used in developing a manual illustrating proper horticultural development of public transportation facilities with special emphasis on the environmental adaptability of plants to selected sites. The Society has received tentative approval for two other grants for the furtherance of specific environmental programs.

These and other grants; the publication of a special issue of the magazine devoted to plants and pollution and the role of the Society in the environmental crisis; the outstanding success of the 26th American Horticultural Congress; and, the sharp upward trend in individual membership experienced in 1971, all indicate a generally heightened interest in the far-reaching programs of horticulture in the United States.

### **Publications**

#### *Magazine*

The primary function of the Society before the merger of the American Horticultural Council in 1960, was the issuance of *The National Horticultural Magazine*. The Society, however, had issued yearbooks, handbooks (as part of the *Magazine*), and a news bulletin.

The first number of *The National Horticultural Magazine*, a publication of The National Horticultural Society of Henning, Minnesota, was first published in August 1922. It sold for 25 cents per

copy. Hamilton P. Traub was editor.

The *Magazine* was little more than a leaflet published irregularly, each issue consisting usually of four or up to six pages; altogether the first four volumes consisted of only thirty-six pages. With an impending merger (consummated in 1926) with the American Horticultural Society in Washington, D.C., hopefully, this would bring more activity along with an expanded publication.

Early issues of the *Magazine* consisted chiefly of short articles on gardening, garden notes about plants, and wild flowers. The lead article in Vol 1, No. 1 for 1922 was entitled "North Dakota Wild Flowers in Cultivation" by Fannie Mahood Heath of Grand Forks, N.D., the first Vice President and one of the founders of The National Horticultural Society.

In Washington D.C., the American Horticultural Society, founded in 1922 with objectives similar to those of The National Horticultural Society, had initiated various programs including lectures, flower shows, and a proposed journal. The lectures given in those early days of AHS were often papers based on original research. The worth of these studies was so well recognized that the Society hoped to publish as much of the material as its financial state would permit. Four bulletins were published before the 1926 merger: Bulletin No. 1, an illustrated monograph called "The Effect of Aluminum Sulphate on Rhododendron Seedlings" by Frederick V. Coville of the U.S.D.A., published March 24, 1923; Bulletin No. 2, "Roses For America" by F. L. Mulford, published April 1, 1925; Bulletin No. 3, "Insect Pests of Our Garden Plants and Their Control" by C. A. Weigel, published April, 1926; and Bulletin No. 4, "Soil Reaction in Relation to Horticulture," by Edgar T. Wherry, published in May 1926.

As these significant papers were presented and published, the Society began to plan for a journal to be issued at regular intervals and to present scholarly articles on horticulture. One of the problems in planning for such an undertaking was procuring a competent edi-



tor. In this regard, D. Victor Lumsden writes that "It is a source of satisfaction, that I was able to persuade B. Y. Morrison to undertake editorship of the proposed magazine."

The most important result of the merger was the retention of *The National Horticultural Magazine* under the new American Horticultural Society. In a completely new format, the *Magazine* resumed publication with Volume 5, under B. Y. Morrison, as chairman of the Editorial Committee. Others on the committee included V. E. Grotlisch, P. L. Ricker, L. Marion Shull, and John P. Schumacher.

When the AHS was organized in 1922, Ben Morrison had not become a member and was not even casually interested in the organization. The incident that brought him into the Society was typical of Morrison.

According to Mr. Ivan Anderson, a long-time friend and associate of Morrison, "Ben had been selected as a judge for one of the Society sponsored flower shows in Washington, D.C. As a judge he stood firmly on the classification of a certain peony and caused a little unpleasantness. The feelings of some of the people involved were hurt. Until that time, all efforts to get him interested in the Society had failed. But the peony judging incident helped make Ben realize that he could be of great help to the organization. His joining the Society in 1924 did smooth some of the feathers that had been ruffled."

Volume 5 of the new *Magazine* for 1926 consisted of only 16 pages. With Volume 6, the *Magazine* acquired Morrison's style and format which continued without a break or major change for 27 years. As an artist Ben Morrison excelled in his drawings of horticultural subjects. His linoleum block prints were the *Magazine's* hallmark and his line drawings of daffodils and other plants frequently used in the *Magazine* always lent a certain intimacy and charm to the publication.

The Board of Directors gave Ben all the support he wanted because this publication was looked upon as the principal

avenue of the Society's success as an organization.

Ben found a printer in Washington, D.C., but the shop was small and without adequate equipment and entirely without knowledge of horticultural or botanical names. Among other annoying problems it was often difficult to get the manuscripts proofread.

A more qualified printer was found in Baltimore—John Ferguson of the Monumental Printing Company. The Baltimore firm was aware of the Society's financial state, but was willing to take on the printing of the *Magazine*. That was in 1932. The Monumental Printing Company has printed every volume since that time.

In 1934 Society headquarters were set up in the Washington Loan and Trust Building where Ben carried on his editorial work in off hours from his official duties with the U.S. Department of Agriculture. He persuaded the American Iris Society to share office expenses and a part-time secretary was hired, whose salary Ben assumed for the most part.

The Editor spent long hours writing to people all over the country for *Magazine* copy. Ben was particularly interested in developing that section known as "The Gardener's Pocketbook" which was a popular feature. He accepted only material considered to be scientifically sound and original by people of experience and dedication to horticulture. He insisted that everything concerning the *Magazine* meet his standards, which extended to the chore of preparing the original linoleum cuts for the cover. Some of the cuts were used several times as cover subjects when his official duties left him no time to make new ones. It was Ben Morrison's high standards that set the *Magazine* apart from other horticultural publications in this country.

By profession, Morrison was a horticulturist and landscape architect. He took his undergraduate work at the University of California and a master's degree in landscape architecture from Harvard University in 1915. After a stint as a 2nd Lieutenant in World War I, he practiced landscape architecture in New York City



for a time. In 1920 he went with the U.S. Department of Agriculture as assistant to David Fairchild, and remained with the Department until retirement in 1951.

Ben Morrison showed talent in nearly everything he did or ever tried to do. He was articulate and a man of singular purpose and action. He was basically kind and could be charming and witty, but at times he could be quite intractable to those with whom he disagreed. And this trait often caused difficulties. Yet, he was loved and almost worshiped by many people who knew him well.

He gained an outstanding reputation as a breeder of ornamental plants, and his Glenn Dale and Back Acres azalea hybrids are now well known and widely grown in this country. He was interested in bulbs, especially *Narcissus*, and his drawings of these plants were often seen in the *Magazine*. The Daffodil Handbook of January 1966 was dedicated to him.

Under Morrison, the *Magazine* soon attracted the leading horticultural writers of the country. To read the back issues is like reading a Who's Who of horticulture. It would be hard to single out authors, but a few of the more frequent contributors included: Helen M. Fox (herbs); Mary G. Henry (trees and shrubs); Robert Senior (wild plants and Campanulaceae); Lester Rowntree (California natives); Bernard Harkness (rock gardens); Clement G. Bowers (azaleas and rhododendrons); O. F. Cook (palms); Donald Wyman (trees and shrubs); Frederic P. Lee (azaleas); J. L. Creech (shrubs and plant exploration); Edwin Menninger (tropical plants).

Morrison himself was a constant contributor and rarely missed an issue writing for the Gardener's Pocketbook. The high caliber of the *Magazine* soon placed it alongside research journals for thoroughness and accuracy of subject coverage. It is one of the few American horticultural journals which has been consistently referenced by the international Index Londonensis, a compendium of plant illustrations, published under auspices of The Royal Horticultural Society

of Great Britain.

The articles in the *Magazine* have always been "authoritative" as Ben Morrison would have said, and those of twenty and thirty years ago are still as good as the day they were written. Articles devoted to single plant groups have always been a feature, the first, "Acacias in California" by Katherine D. Jones, was published in the January 1933 issue. Often referred to as "portfolio" articles, plant groups such as *Acacia*, *Fuchsia*, *Campanula*, *Galanthus*, *Hosta* and conifers were chosen for photographic coverage with text material completing the photo story.

Morrison's charming linoleum block prints, which had been a cover feature of the *Magazine* for 27 years, were discontinued with completion of Volume 33. With Volume 34, the *Magazine* featured a new colored cover as background for black and white photographs or drawings of plants. Subject matter, however, was not changed. In 1955 a seal of the Society was established for use on all publications and other communications from the Society.

Mr. Morrison had requested on several occasions, to be relieved as Editor of the *Magazine*. As an unpaid employee of the Society, the work as Editor along with his official duties as Director of the U.S. National Arboretum, was altogether too demanding. To relieve the problem, an Editorial Committee consisting of C. O. Erlanson, John L. Creech, Frederick O. Coe, and Frederic P. Lee, Chairman, was established in 1956 to help Mr. Morrison. This arrangement continued until 1964 when Mr. Morrison retired to complete a span of 37 years as Editor of the *Magazine*. Since 1964 the Editorial Committee has assumed the full burden of Society publications. In 1968, Frederick G. Meyer became Editor and Chairman of the Editorial Committee.

Following Mr. Morrison's death in 1966, the U.S. Department of Agriculture established the B. Y. Morrison Memorial Lectureship in his honor. As First Lady, Mrs. Lyndon B. Johnson delivered the first Memorial Lecture on June 26, 1968 in Portland, Oregon. Her



subject was beautification. Subsequent lectures have been delivered by Patrick Horsbrugh at Cleveland Ohio, June 3, 1969; by Arie Van Haagen-Smit at Williamsburg, Virginia, April 24, 1970; and by Ian L. McHarg at Portland, Oregon, March 10, 1971.

### Handbooks

Handbooks have been one of the most attractive and informative features of the *Magazine*. These books are devoted to a single plant group, authored and edited by experts. To date the Society has published nine handbooks: *Penstemon* (Jan. 1951); *The Azalea Handbook* (Jan. 1952); *Vegetative Propagation* (Jan. 1954); *The Tree Peonies* (Jan. 1955); *Handbook of Hollies* (Jan. 1957); *Cultivated Palms Handbook* (Jan. 1961); *Daffodil Handbook* (Jan. 1966); *Daylily Handbook* (Spring, 1968); *Handbook of Hollies* (Fall, 1970). These useful handbooks have brought considerable prestige to the Society and are in common use by both amateur and professional horticulturists.

### Books

"The Peonies" edited by John C. Wister in 1962, was a book published separately by the Society. It covered both the herbaceous and tree peonies. Earlier a handbook on *The Tree Peonies*, by John C. Wister and Harold E. Wolfe, was published in the January 1955 issue of the *Magazine*.

The *Azalea Book* of 1958 and the second edition of 1965, by Frederic P. Lee, both published by D. Van Nostrand Co., Inc., have been of tremendous value through royalties to the Society. The book has been in constant demand as a standard reference on the subject of garden azaleas. The *Azalea Book* was an outgrowth of *The Azalea Handbook* published as the January 1952 issue of *The American Horticultural Magazine*.

### Yearbooks

The Society's Narcissus and Tulip Committee published the first American Daffodil Year Book in 1935 and for succeeding years through 1938. These

were followed in 1942 by a Year Book published in this country jointly by the AHS and The Royal Horticultural Society of Great Britain. The AHS Daffodil and Tulip Committee, on the other hand, was not directly responsible for the formation of The American Daffodil Society, founded in 1953, largely through an article in *Popular Gardening* written by Paul Frese.

In 1937 a Lily Committee, with George L. Slate as Chairman, was formed by the Society. The first American Lily Year Book for 1939, published under the Lily Committee's aegis, was edited by L. H. MacDaniels. The Lily Year Books for 1940, 1942, and 1946 were edited by George L. Slate. Following the 1946 Lily Year Book, the AHS Lily Committee was abandoned.

The North American Lily Society was the result of a spin-off from the AHS Lily Committee. In 1947 a group consisting of George L. Slate, L. H. MacDaniels, Samuel Emsweller, Robert Stewart, and Phil Brierly organized the North American Lily Society as an independent organization. In 1947 the Lily Yearbook was first published and has continued on a yearly basis to the present time.

### News Bulletin

The Society never had a news bulletin until the 1950's when it became apparent that new ways of communicating with the membership were needed. The *Magazine* was for another purpose. At one of the meetings in early 1957, Mrs. Francis Patteson-Knight of McLean, Virginia suggested that a small news letter be issued in the months not covered by the quarterly *Magazine*. The idea was accepted and the A.H.S. *Gardener's Forum* was established in January 1958, with John R. Deatherage as Editor. W. H. Youngman was editor from 1960 to March 1967, and Mr. Deatherage was again editor from May to December 1967.

The *Forum* appeared eight times a year and did what was intended, namely to report to the membership on current events, congresses, board meetings, and related matters. It was discontinued with Volume 10, Number 8 in December 1967,



# Presidents of the Society



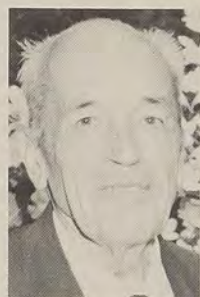
Albert F. Woods  
(1922-1926)\*



Frederick L. Atkins  
(1928-1930)



Robert Pyle  
(1931-1935)\*\*



Benjamin Y. Morrison  
(1937-1941)



Ezra J. Kraus  
(1941-1942)



D. Victor Lumsden  
(1942-1946)



Wilbur H. Youngman  
(1946-1947)



Henry E. Allanson  
(1947-1948)



Fred O. Coe  
(1949-1951)



Freeman A. Weiss  
(1951-1953)



John L. Creech  
(1953-1956)



Donovan S. Correll  
(1956-1957)



Stuart M. Armstrong  
(1957-1959)



Richard P. White  
(1959-1961)



Donald Wyman  
(1961-1962)



Henry T. Skinner  
(1962-1963)



Russell J. Seibert  
(1963-1965)



John H. Walker  
(1965-1967)



Fred C. Galle  
(1967-1970)



David G. Leach  
(1970-....)

\*Furman L. Mulford (1926-1928). \*\*William Holland Wilmer (1935-1936).



not because it was unsuccessful but for the purpose of making improvements.

The *Forum* was followed immediately by *News and Views*, a quarterly newsletter, first issued as Volume 11, Number 1 for Spring 1968. With Mrs. Elizabeth G. Eastburn as Editor, the newsletter appeared in a completely new format as a crisp, modern, and highly communicative publication of the Society. It is presently edited from the Society's Alexandria, Virginia headquarters, under the editorial management of Executive Director, O. Keister Evans.

### *Directory of American Horticulture*

A Directory of all horticultural organizations in this country was first published by the American Horticultural Council in 1945 and updated in 1958.

The 1971 Directory of American Horticulture was published by the Society in the summer of 1971 with a \$10,000 grant from the Fuller E. Callaway Foundation of LaGrange, Georgia. Mrs. Ernesta D. Ballard was Chairman of the Directory committee.

### CALENDAR OF EVENTS

Two parallel groups emerged in 1922 and later, (1926) united to form one organization, the American Horticultural Society. A later merger was consummated in 1960 with the American Horticultural Council.

- 1922 The National Horticultural Society formed in Henning, Minnesota, July 1.  
Volume 1, Number 1 of *The National Horticultural Magazine* published in August, 1922, Hamilton P. Traub, Editor.  
The American Horticultural Society formed at Washington, D.C. in September; Albert F. Woods elected President.
- 1923 Committee of the American Horticultural Society appointed to investigate uniting with The National Horticultural Society of Henning, Minnesota.  
Bulletin No. 1, of the AHS published March 24th.
- 1924 First AHS Annual Spring Flower Exhibition held in Hotel Washington.
- 1925 Second AHS Annual Spring Flower Exhibition. AHS Bulletin Number 2, published April 1st. AHS membership 139 with assets of \$446.
- 1926 Merger of The National Horticultural Society with AHS effective on June 15, with headquarters in Washington, D.C.  
Furman L. Mulford elected second President of AHS.  
Dr. Henri Correvon of Geneva, Switzerland addressed the Society on February 26th.  
Third Annual Spring Flower Exhibition held in Hotel Washington, opened by the First

Lady, Mrs. Grace Coolidge, June 8-9.

B. Y. Morrison becomes Editor of the *Magazine*.

AHS Bulletin No. 3 published in April; No. 4 in May.

- 1927 Society lecture by Frederick V. Coville on "The Cultivation of Ericaceous Plants," January 11th.  
Regular monthly meetings held in Smithsonian Institution.  
John C. Wister published "A Lilac Check List" (Jan. *Magazine*).  
Fourth Annual Spring Flower Exhibition, June 1 and 2.
- 1928 J. Horace McFarland announced a movement called "United Horticulture" headed by Robert Pyle (April *Magazine*).  
Frederick L. Atkins elected third President.  
Advertising accepted in the *Magazine* for the first time.  
Mrs. Pierre S. DuPont exhibited an outstanding display of orchids at the Fifth Annual Flower Exhibition in June.  
Four AHS sponsored public lectures by P. H. Dorsett, Knowles A. Ryerson, Edgar T. Wherry, and Marjorie Worner.
- 1929 Sixth Annual Spring Flower Exhibition held jointly with American Peony Society.  
Nine affiliate groups associated with Society.
- 1930 Seventh Annual Spring Flower Exhibition held jointly with the National Capital Dahlia and Iris Society.  
Henri Correvon published a series of articles in the *Magazine* on house-leeks (*Sempervivum*) translated from the French by B. Y. Morrison.  
L. H. Bailey's first contribution in the *Magazine*, a review of David Fairchild's book "Exploring for Plants."
- 1931 Membership 1,062 on January 1 with 9 life patrons, 11 honorary, 29 sustaining, and 22 affiliated members, represented by 42 states, Canada and 3 foreign countries.  
Annual meeting held in Interior Department at 18th & F Sts. N.W. on February 10th.  
Mr. Morrison cited for attaining high standards in the *Magazine*.  
D. Victor Lumsden, secretary since 1925, resigns.  
Robert Pyle elected fourth President.  
Lester Rowntree contributes her first article in the *Magazine* on "Some California Castillejas."
- 1932 Society incorporated, September 23.  
Monumental Printing Company of Baltimore takes on printing of the *Magazine*.  
AHS lecture on lilies by Helen M. Fox (November).
- 1933 43 Societies affiliated with AHS.  
The first long, illustrated article "Acacias in California" by Katherine D. Jones (Jan. *Magazine*).
- 1934 Illustrated article on "Fuchsias" by E. O. Essig (Jan. *Magazine*).  
Permanent headquarters moved to Washington Loan and Trust Building, 9th and F Streets, Washington, D.C.
- 1935 William Holland Wilmer elected fifth President.  
First American Daffodil Year Book published by Narcissus and Tulip Committee.
- 1936 Second American Daffodil Year Book published.  
Illustrated article on "Sweet Scented-leaved Pelargoniums" by Helen M. Clark (Jan. *Magazine*).



- 1937 B. Y. Morrison elected sixth President.  
Third American Daffodil Year Book published.  
Lily and Rhododendron Committees formed.  
*Amorophallus titanum* flowered for the first time in America on May 27th in The New York Botanical Garden (July Magazine).
- 1938 First AHS Silver Medal awarded Mrs. William R. Massie at the Garden Club of Virginia Lily Show.  
Fourth American Daffodil Year Book published.
- 1939 The first American Lily Year Book published, edited by George L. Slate.  
*Abelia* 'Edward Goucher' described (Jan. Magazine).  
Portfolio of *Crocus* by B. Y. Morrison (July Magazine).
- 1940 The second American Lily Year Book published.
- 1941 E. J. Kraus elected seventh President.
- 1942 Lily Bulletin for beginners published.  
Daffodil Yearbook published jointly with The Royal Horticultural Society of Great Britain.  
Third American Lily Year Book published.  
44 societies affiliated with AHS.  
D. Victor Lumsden elected eighth President.
- 1943 *Stenomeson morrisonii* from Peru named for B. Y. Morrison by Cesar Vargas.  
American azalea classification by Edgar T. Wherry published in Magazine (Oct.).
- 1944 *Camellia* classification by W. Harold Hume published in Magazine (Jan.).  
Advertising discontinued in Magazine.
- 1946 Fourth American Lily Year Book published.  
First American Horticultural Congress, Cleveland, Ohio (Oct. 8-10).  
"United Horticulture" of the American Horticultural Council, Inc. founded at Cleveland, Ohio (Oct. 8-10).
- 1947 Membership 2,385.  
W. H. Youngman elected ninth President.  
Second American Horticultural Congress, Cleveland, Ohio (Oct. 23-24).
- 1948 H. E. Allanson elected tenth President.  
Robert Pyle elected President, American Horticultural Council.  
Third American Horticultural Congress. Ithaca, N.Y.
- 1949 Fred O. Coe elected eleventh President.  
Donald Wyman lectured on azaleas at annual meeting at Smithsonian Institution on April 28.  
Cash on hand July 31, \$987.85; membership 1,169 on Dec. 31.  
Completion of the eighth installment in the Magazine on plant collecting in northern British Columbia by Mrs. Mary G. Henry, started in 1934 (July Magazine).  
Fourth American Horticultural Congress, New York, N.Y. (Oct. 30-Nov. 1).
- 1950 James R. Harlow becomes assistant editor of the Magazine.  
AHS sponsored lecture series initiated at Smithsonian Institution.  
The first color plate, *Camellia japonica* 'Laurie's Favorite' in the Magazine (Jan.).  
Wendell H. Camp elected President, American Horticultural Council.  
Fifth American Horticultural Congress, East Lansing, Michigan (Oct. 27-28).
- 1951 Freeman A. Weiss elected twelfth President.  
Annual meeting held in Takoma Park Branch Library, Takoma Park, Maryland (May 8).  
Membership 1,024; 1 patron, 42 life, 370 affiliate, 27 sustaining, 46 affiliate societies.
- "Penstemon" the first handbook of the Society (Jan. Magazine).
- 1952 Headquarters moved to 1600 Bladensburg Rd., N.E., Washington, D.C.  
Mrs. Lewis M. Hull elected President, American Horticultural Council.  
The Azalea Handbook (Jan. Magazine).
- 1953 John L. Creech elected thirteenth President.  
James R. Harlow appointed Managing Editor of the Magazine.  
Membership 1,242.  
Eighth American Horticultural Congress, Philadelphia, Pennsylvania (Nov. 4-7).  
The First International Code of Nomenclature of Cultivated Plants published in July through efforts of the American Horticultural Council.
- 1954 Azalea Check List & Registration Committee established with Frederic P. Lee, Chairman.  
Society acquires \$15,962.64 legacy from estate of Furman L. Mulford, second President (1926-28) of the Society.  
Handbook on "Vegetative Propagation" published (Jan. Magazine).  
Certificate from AHS presented by Wm. L. Hunt and Donovan S. Correll to The Royal Horticultural Society, Great Britain for Sesqui-centennial Celebration (July).  
October Magazine cover, the last using Mr. Morrison's linoleum block prints.  
Carl F. Wedell elected President, American Horticultural Council.  
Ninth American Horticultural Congress, Boston, Massachusetts (Oct. 27-30).
- 1955 James R. Harlow becomes Executive Secretary April 1.  
Society represented at 14th International Horticultural Congress in The Netherlands by George H. M. Lawrence and Samuel Emsweller. Membership 2,066.  
Handbook on "Tree Peonies" by John C. Wister & Harold E. Wolfe (Jan. Magazine).  
Seal of the Society and membership certificate established.  
Thirty-fourth anniversary issue of Magazine, edited by Frederick W. Coe.  
Tenth American Horticultural Congress, Washington, D. C. (Oct. 26-29).  
Donovan S. Correll elected fourteenth President.
- 1956 Discussion began on amalgamation of AHS with the American Horticultural Council.  
Editorial Committee established to assist Editor of Magazine.  
Philip Alampi elected President, American Horticultural Council.  
Eleventh American Horticultural Congress, East Lansing, Michigan (Oct. 21-23).
- 1957 Stuart M. Armstrong elected fifteenth President.  
The "Handbook of Hollies" (Jan. Magazine).  
Twelfth American Horticultural Congress, Denver, Colorado (Oct. 23-25).  
A. J. Irving elected President, American Horticultural Council.
- 1958 Vol. 1, No. 1 of the A. H. S. Gardeners Forum published in January, John R. Deatherage, Editor.  
Illustrated portfolio of snowdrop photographs (July Magazine).  
The Azalea Book, by Frederic P. Lee, published by D. Van Nostrand Co., Inc.  
Thirteenth American Horticultural Congress, Williamsburg, Virginia (Oct. 22-25).
- 1959 Gold Medals presented to B. Y. Morrison and Frederic P. Lee at annual meeting at Dum-



- barton Oaks on May 2.  
Society initiates free seed distribution to members.  
Richard P. White elected sixteenth President of AHS and also President of the American Horticultural Council.  
Membership reaches 5,000 and the Society is solvent.  
Proposed merger with American Horticultural Council approved by AHS on November 16.  
Fourteenth American Horticultural Congress, Rochester, New York (Oct. 6-10).
- 1960 Merger of The American Horticultural Society and the American Horticultural Council, effective Jan. 6. First directors meeting on January 18-19.  
19 national committees set up to serve the Society.  
W. H. Youngman succeeds John R. Deatherage as Editor of *The A.H.S. Gardeners Forum*.  
*Camellia grathamiana* flowers for first time in USA at Norfolk, Virginia (Jan. Magazine).  
Name of the magazine changed to *The American Horticultural Magazine*.  
Membership 5,284 on June 6.  
Second edition of Nickerson Color Fan available.  
AHC-AHS sponsored Plant Hardiness Zone Map, by H. T. Skinner published by U.S.D.A. (May).  
15th American Horticultural Congress at Pasadena, California (Nov. 10-12).
- 1961 Donald Wyman elected seventeenth President.  
"Cultivated Palms Handbook" (Jan. Magazine).  
International Code of Nomenclature for Cultivated Plants, published June, under sponsorship of American Horticultural Council and The American Horticultural Society.
- 1962 Henry T. Skinner elected eighteenth President.  
Hybrid of *Victoria amazonica* and *V. cruziana* described (Apr. Magazine).  
Society published "The Peonies", a book, edited by John C. Wister.
- 1963 Russell J. Seibert elected nineteenth President.  
18th American Horticultural Congress at St. Louis, Missouri (Oct. 9-12).
- 1964 B. Y. Morrison retires as Editor of the Magazine.  
19th American Horticultural Congress, New York, N. Y. (Sept. 29-Oct. 3).
- 1965 John H. Walker elected twentieth President.  
2nd Edition of *The Azalea Book* by Frederic P. Lee published by D. Van Nostrand Co. Inc.  
AHS joins Colonial Williamsburg as co-sponsor of 19th Garden Symposium, Mar. 19-26.  
20th American Horticultural Congress, Pine Mountain, Georgia (Oct. 12-15).  
AHS delegate, Russell J. Seibert, attends the White House Conference on Natural Beauty.
- 1966 B. Y. Morrison dies, January 24th.  
21st American Horticultural Congress held in conjunction with the XVII International Horticultural Congress at the University of Maryland, College Park, August 15-20.  
"Daffodil Handbook" published (Jan. Magazine).  
20th Williamsburg Garden Symposium (Mar. 20-25).
- 1967 22nd American Horticultural Congress, Cleveland, Ohio (Sept. 20-23).  
John R. Deatherage succeeds W. H. Youngman as Editor of *The A.H.S. Gardeners Forum*.  
Headquarters moved to Calvert House, 2401 Calvert St. N.W., Washington, D. C.  
Fred C. Galle elected twenty-first President  
21st Williamsburg Garden Symposium (April 9-14).  
Final issue of *The A.H.S. Gardeners Forum* (Dec.).  
Glenn B. and Elizabeth G. Eastburn join Society as Finance Officer and Executive Director, respectively (Dec. 1).
- 1968 A new quarterly news bulletin *News & Views* succeeds *The A.H.S. Gardeners Forum*.  
22nd Williamsburg Garden Symposium (Mar. 17-22).  
"Daylily Handbook" (May Magazine).  
AHS Plant Records Center established at Tyler Arboretum with a grant of \$90,000 from the Longwood Foundation. Robert D. MacDonald, Director.  
23rd American Horticultural Congress, San Francisco, California (Sept. 18-21).  
First U.S.D.A. sponsored B. Y. Morrison Memorial Lecture by Mrs. Lyndon B. Johnson at Portland, Oregon, June 26 (Summer Magazine).  
Frederic P. Lee dies October 2.
- 1969 Society designated official U. S. distributor of the International Code of Nomenclature for Cultivated Plants (published, July).  
Mrs. Robert Woods Bliss dies on Jan. 17, a life member on the Board of Directors for 33 years. The Society received a \$7,500 legacy from her estate.  
23rd Williamsburg Garden Symposium (Mar. 16-21).  
F. G. Meyer appointed Editor of the Magazine.  
Second U.S.D.A., B. Y. Morrison Memorial Lecture by Patrick Horsburgh, at Cleveland, Ohio, June 3 (Summer Magazine).  
24th American Horticultural Congress, Philadelphia, Pennsylvania (Sept. 16-20).
- 1970 24th Williamsburg Garden Symposium (Mar. 15-20).  
AHS co-sponsors the 9th Clara B. Ford Garden Forum, Dearborn, Michigan (Apr. 22-24).  
Third U.S.D.A., B. Y. Morrison Memorial Lecture by Arie Van Haagen-Smit, at Williamsburg, Virginia (Apr. 24).  
AHS awarded second Longwood Foundation grant of \$286,230 for expansion of Plant Records Center.  
25th American Horticultural Congress, Miami Beach, Florida (Nov. 1-4).  
David G. Leach elected twenty-second President.  
O. Keister Evans appointed Executive Director (Dec. 1).  
Society awarded a three year grant of \$75,000 by the Scaife Family of Pittsburgh.
- 1971 Headquarters moved to Alexandria, Virginia (Feb. 1).  
Fourth U.S.D.A., B. Y. Morrison Memorial Lecture, by Ian L. McHarg, at Portland, Oregon (March 10).  
25th Williamsburg Garden Symposium (Mar. 21-26).  
Directory of American Horticulture published by Society from \$10,000 grant from the Fuller E. Callaway Foundation (Summer).  
26th American Horticultural Congress, Milwaukee, Wisconsin (Sept. 18-22).  
The fiftieth volume of *The American Horticultural Magazine* completed.



# The Nursery Industry— Yesterday and Today

WILBUR H. YOUNGMAN\*

Recently, I visited a modern nursery where a substantial number of plants are growing in containers, where there were no weeds, and where the watering and fertilization were done scientifically. I could not help but recall the days when I, as a teen-ager, hoed weeds out of the nursery rows, where the cultivation was done with a one-horse cultivator and other practices of yesteryear.

The nursery industry has kept abreast of changing times, partly taking advantage of research, partly combating the rising costs incident to a large scale operation. Real estate taxes, for example, have forced many suburban nurseries to move out into the farming areas. More especially, labor costs have been a major factor in changing practices.

We also have the example of industrial developments such as that in the Mobile area of Alabama where specialists produced rooted cuttings and seedlings in considerable volume. A great many of these were shipped into the nursery growing area of Tennessee. There they were planted as lining-out stock in growing fields until they attained merchantable size. Today container-growing has replaced in part the former practice.

During this period, much attention was given to the rooting hormones, materials which are applied to the cutting and which stimulate rooting. This development has made it possible for many plants which were formerly available only through grafting and budding to be grown on their own roots. This is a rapidly growing field. We need only to turn back to the January 1954 issue of *The National Horticultural Magazine* and read the article by Dr. Vernon T. Stoutemyer on "Growth Regulators." His emphasis was on their usefulness in

rooting cuttings. Recently I asked Dr. Francis R. Gouin of the Horticultural Department, University of Maryland, about what might be used to root an Exbury azalea. He stated that there are several materials such as 2,4,5-TP, a widely used herbicide. He also mentioned other materials currently being tested for this purpose. One need only to follow the reports of the International Plant Propagators Society to realize this is an ever-growing field.

To express it another way, for a great many years the only way we could get named varieties of rhododendron was by layering or by grafting. Today a great many are grown from cuttings.

Along with this development in rooting cuttings, we have also had research on the use of synthetic growing media, such as the Cornell Peat-Lite mix and the U-C mix (California). These synthetic mixes, together with modern developments in fertilizers, have led to the extensive growing of nursery stock in containers, which began in the mid-1930's. The Monrovia Nursery of Azusa, California is probably one of the larger nurseries producing container-grown nursery stock, and it is reported to have some 350-400 acres largely devoted to this type of production. However, there are a number of nurseries in other sections of the country which specialize in this type of production.

It should have been mentioned earlier that the development of the mist system of propagation has been a major factor. The combination of misting plus rooting hormones and synthetic growing media permits the production of tens of thousands of plants in a comparatively short period of time.

It is amazing to see a greenhouse filled with thousands upon thousands of cuttings placed in 3-inch peat pots filled with a peatmoss-vermiculite mixture.

\* Garden Editor, *The Evening Star*, Washington, D.C.





**Fig. 1. Container-grown juniper.**

The misting device gives them a few seconds of fine mist every few minutes and under such conditions they root in a comparatively short time.

Once well rooted, the cuttings are transferred to containers of various sizes, depending upon the plant and its rooting habits. A second repotting into a larger container is the usual practice. During this time and for the ensuing growing period, the plants are spaced on plastic-covered soil—in the West in open fields. In the East, many of the container growers place them under a quonset type cover.

Through the center of each block of plants, there is a large plastic hose with a myriad of tiny "spaghetti" tubes, one of which is inserted into each of the containers. Watering and fertilizing is regulated from a central control panel.

All of this means that the actual labor in handling and growing these plants is kept at a minimum. Secondly, the area involved is small compared to that needed in nurseries a generation ago, and third, being grown in sterile media, there are no weed or insect problems, and for most kinds of plants disease problems are at a minimum.

Most gardeners today, I am sure, have seen the container-grown plants at their garden centers and nurseries and seldom realize the advantages in buying such plants. In the first place, there is practically no transplanting shock, especially if we compare a container-grown plant with one that is dug and balled in the nursery. Secondly, because of this lack of shock, our planting season may be safely extended far beyond the usual spring and fall periods. Another value is that these plants, being vegetatively propagated, are much more uniform than was possible years ago when many plants were grown from seed. One of the seldom appreciated advantages of container-grown plants is that today we may safely buy and plant kinds which formerly were exceedingly difficult to transplant. For example, the black tupelo (*Nyssa sylvatica*) and the scarlet oak (*Quercus coccinea*), until now, have been a problem for the home gardener because of the difficulty in transplanting. Undoubtedly, as the container-growing industry expands, still other difficult-to-transplant kinds will become available. We also gain another bonus from this modern development, namely, that new varieties and forms may be multiplied much more rapidly than was possible under earlier nursery practices.

Perhaps I should mention also that container-grown material may be shipped long distances with much less shock and deterioration than was heretofore possible.

The one disadvantage of the container-grown industry is that much of the stock sold is of the smaller size. This is not pleasing to many inexperienced people who are determined to buy the largest tree or shrub possible. This, of course, is possible only to a limited extent with today's methods of container-growing. Some 8, 10, and even 12 foot palms are being offered in California. Generally speaking, large or specimen-sized plants are seldom desirable for the inexperienced, since they suffer considerable transplanting shock, and it may take years for them to recover. Another possible disadvantage is that if plants are



kept in containers too long, they may become badly root-bound and unless given proper care may be slow in spreading their roots into surrounding soil.

This transition from field-grown to container-grown plants should not be taken to mean that nurserymen have given up entirely the field production of trees and shrubs. For instance, the production of fruit and nut trees is still pretty largely field-grown. Undoubtedly this is due in part to the fact that grafting and budding are still the standard practice for these trees. Most of our rose bushes are field-grown where they are "budded" on a root stock.

Other developments in the nursery industry include modern methods of weed control. This means that pre-emergence materials are mixed into the soil either before or after the woody plants are set out. In areas where nematodes are a problem, the soils are being treated with a nematicide. Modern mechanical equipment makes it possible to drop lining-out stock in furrows which are filled and firmed by the machine. Modern digging equipment lifts plants from the ground, puts them on a conveyor belt and loads them into trucks for transporting to the packing sheds. Such equipment is essential if top quality plant material is to be produced and handled with a minimum of labor costs.

It should not be assumed from the above that all nursery practices have



**Fig. 2. Container-grown rhododendrons.**

been updated to take advantage of modern techniques or research. They have not. We can still find growers who under special conditions are able to maintain their production in pretty much the practices of yesteryear. On the other hand, the gardener should recognize that in most cases he gains by progress within the horticultural field. It is quite likely that some modern selections, perhaps even plant species, may not be adapted to modern-day production methods. If they are not produced according to the older methods, they may be lost as plant materials for our landscaping needs.

## ANNOUNCEMENT

The current issue completes Volume 50 of *The American Horticultural Magazine*, the last bearing this label under your retiring Editor and Editorial Committee.

Beginning with Volume 51, the name will be changed to *The American Horticulturist*, under the new Publications Committee with Gilbert S. Daniels as Chairman and John P. Baumgardt as Editor.

*The American Horticulturist* will be published quarterly in a completely redesigned size and format. As in the past, content will be directed to the interests of the advanced horticulturist.

A cumulative index of the fifty volumes of *The American Horticultural Magazine* will be published in the very near future.



## Francis Meilland and the Rose Industry

S. B. HUTTON, SR.\*

It is only as we look back a few years on the career of Francis Meilland of France that we can fully appreciate the important part which he played in the development of the rose industry around the world.

The great accomplishment of his early life which made him world-famous was the creation of the rose 'Peace'. This was introduced in the United States in the Fall of 1945. Also, he produced many other fine roses which were distributed in many countries. In addition to creating new roses he developed new ideas in business which in the long run may have an even greater effect on the industry than his roses.

Francis was born February 20, 1912 at Lyon, France and died in Cap d'Antibes June 15, 1958. In his 46 years he accomplished more than many who lived the proverbial three score years and ten. He was the son of Antoine Meilland (1884-1971) known to all his friends as "Papa", and Josephine Claudia Dubrueil (1893-1933) and was the fourth generation in a family of rose growers. His parents were married in 1910, uniting two families of rose growers.

Who can say how much influence heredity may have had on the life of Francis, but there can be no question that the environment of his childhood was a powerful influence in directing his life work to roses.

On Antoine's return home after World War I he found that his wife had succeeded in keeping a foundation stock of roses from which to resume his rose nursery. He bought four acres on the edge of

Lyon where he developed a rose nursery and there Francis, as his father's helper, learned the rudiments of producing and selling rose plants.

When Francis was a small boy his father showed him how to gather peach seed and plant them, and the following year when they had grown into small seedling trees, how to bud them. He gave these young trees to Francis as his own enterprise and Francis was in the peach nursery business with less than 100 trees to sell the first year. He later developed the nursery so that he had several thousand trees and would take bicycle trips around the countryside to sell them.

When Francis was 17 years old his father received an invitation from Charles Mallerin, the most prominent rose hybridizer in France at that time, to bring his son and spend a day with him among his roses at Grenoble, about 50 miles away.

Mr. Mallerin took a liking to Francis. They became fast friends and kept in close touch with each other for the rest of Mr. Mallerin's life, sometimes exchanging as many as three letters a week. Francis returned from this visit with Mallerin and the next day set to work hybridizing roses.

In 1933 Robert Pyle of West Grove, Pennsylvania, looking for new roses in Europe, visited Mr. Mallerin who recommended that he should also see Francis Meilland. Mr. Pyle was so impressed with what Francis showed him that he immediately made an agreement with Francis to send his most promising new varieties to The Conard-Pyle Co., growers of Star Roses, in the U.S.A.

The first rose cultivar Francis sent to

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\* Chairman of the Board, The Conard-Pyle Company, West Grove, Pennsylvania 19390.





PHOTO, STAR ROSES

**Francis Meilland (left) of Lyon, France, originator of the 'Peace' rose, and Robert Pyle, who introduced the rose in the United States in 1945, standing in a field of 'Peace' roses in West Grove, Pennsylvania.**

America was called 'Golden State'. Introduced in 1937, it was adopted as the official rose of the San Francisco World's Fair. Rose 'Good News' followed two years later and numerous others in succeeding years.

### **'Peace' Rose**

The greatest success in rose breeding resulted from a cross made in 1935. One of these was so striking when it bloomed in 1938 that Francis propagated a number of plants from it and rushed budwood to nurserymen in Italy, Germany, and the U.S. Soon afterward World War II began. The area around Lyon was occupied by the Germans and all communications between Francis and his nursery associates in other countries were cut off.

This particular rose proved outstand-

ing in all qualities, not only in France but in the other three countries where he had sent it. The nurserymen who received it took steps to name it and put it on the market in their countries without being able to report to Francis. In France it was named 'Mme. A. Meilland' for his mother. In Germany it was named 'Gloria Dei' and in Italy 'Gioia'. In the U.S. it was introduced by the Conard-Pyle Company in 1945 as 'Peace'.

The parentage of 'Peace', as recorded by Francis, shows that in 1935 he made a series of crosses using 'Joanna Hill' as the female and an unnamed pollen parent. Fifty-five flowers of 'Joanna Hill' were pollinated and produced 52 seed hips.

From these, the following year they had 800 seedling plants. Fifty of these seedlings were selected as the most out-



standing and a few of each budded in the field for further trial and observation.

The seedlings varied in color from yellow and pale pink to brilliant copper and some bicolored reds. The one marked 3-35-40 had flowers quite marvelous in form and size with a greenish tinge warming to yellow, often suffused with carmine around the edges of the petals and particularly fine foliage.

None of the other 799 seedlings from that cross proved of merit and all were discarded. A few scions of 3-35-40 were brought to the U.S. for Mr. Robert Pyle at the outbreak of World War II.

Francis recalled, "The objective I had in view when I made this cross was to produce a rose of attractive color, great hardiness, with very long stems covered by strong, decorative foliage." 'Joanna Hill' was chosen as the seed parent because it was an exceptionally vigorous, upright plant that was extremely hardy. Its flower was yellow and its buds and blooms were well-shaped, a dominant hereditary trait inherited from 'Ophelia'.

The male parent which was an unnamed seedling identified as 103-32-A was a seedling of 'Charles P. Killam' and 'Margaret McGredy'. It was a vigorous plant with a brilliant bicolored flower that had much merit but many faults.

Was 'Peace' rose the result of good judgment in selecting the parents from which it came, or was it good luck? Probably, both were important. When we realize that only one seedling from many thousands resulting from a cross may be sufficiently outstanding to justify placing it on the market, it is evident that luck is a vital factor. Francis demonstrated his good judgment in selecting parents in the many worthwhile varieties that he developed throughout his lifetime.

The impact of 'Peace' on the rose world was tremendous. The plant was vigorous and healthy; the foliage glossy and attractive; the blooms were very large with ample petals of good substance and an attractive combination of color shades. Many roses do well in one particular climate or location and are not outstanding in other areas. 'Peace' is

unique in that it has been outstanding in almost every place where it has been grown.

The value of 'Peace' was even greater than it would have been under normal conditions, because it was introduced at the close of World War II following a period when there had been few introductions and most hybridizers had greatly reduced their work because of the war. Francis had been excused from military service because of his health and was able to continue his work with roses on a reduced scale through the war years. Therefore, 'Peace' became available at a time when there were very few new roses on the market. With its outstanding qualities, it received even more attention and became more quickly known than if there had been competition from other new cultivars. While no statistics are available there seems little doubt that more 'Peace' roses have been sold in the world than any other rose ever produced.

### New Vistas

The success of 'Peace' and his other cultivars persuaded Francis that he and his father should give up the operation of their nursery and concentrate on the development and distribution of new roses. They, therefore, arranged to take Francisque Richardier into partnership to operate their nursery near Lyon in central France. The nursery was renamed Meiland/Richardier, and the partners began to concentrate their work on developing new rose varieties.

In 1938 Francis had married Marie-Louise Paolino, known to all her friends as "Louissette." She was the daughter of Francis Paolino, a grower of roses and ferns for florists at Antibes on the French Riviera.

Francis decided that the climate at Antibes where there is little frost in the winter and almost no snow, would be ideally suited to this work. It is a region with many greenhouses for producing cut roses which are shipped all over Europe. The climate is so mild that many of these greenhouses are heated only by the sun. He bought a greenhouse property with





PHOTO, UNIVERSAL ROSE SELECTION

**Francis Meilland and his friend, Charles Mallerin, examine some of Mallerin's new seedling roses at Mallerin's home at Varcès-Allières-et-Risset (Isère) France. About 1957.**

land for expansion on a high hill overlooking the Gulf of Juan in one of the beauty spots of the world.

He moved to the Riviera with his family and his widowed father and with the income from 'Peace' built additional greenhouses, a beautiful home, an office and residences for key staff members. Later, he purchased a farm some 50 miles from Antibes that provided space for the outdoor trials of his new roses and which produced the rose propagating material needed to carry on his business. On the Riviera, Francis, with his wife, Louisette and his father, "Papa", built up the family business of hybridizing roses. After Francis' death his son, Alain became head and now carries on. In the winter the family members spent many hours planning the crosses to be made because the results depended upon the wise and experienced selection of parent plants.

### Protection

His experience in selling 'Peace' and other cultivars in the U.S. where a Plant Patent law was in operation, demonstrated the importance of having a patent or

other "protection" for the developer of new plants. It also gave the developer complete control of the sale of the cultivar for the term of the patent. It made possible the licensing of other nurserymen to grow and sell the patented cultivars—with the payment of a royalty to the owner of the patent.

To achieve "protection" Francis developed an ingenious method of obtaining a trademark on the name of the plant which would not permit anyone else to use the name. This method could be used under the laws of many countries in continental Europe but was not applicable under the laws of England or the U.S. The method was to use a code name which would not be easily remembered and to register this as the official name of the variety. He then gave it an additional name which he registered as a trademark, which could not be used by anyone else without his consent. Some examples of such names are:

Code Name—MEIkans; Registered  
Trademark—'Fire King'  
Code Name—MEIbel; Registered  
Trademark—'Pink Peace'



Other nurserymen soon adopted the same method. For example, the Georges Delbard nursery used the following:

Code Name—DELkrum; Registered Trademark—'Divine'

Francis also did extensive research into the possibility of obtaining a patent on a new plant in France without the necessity of a special law. He personally looked up the patent laws of France, and found a provision in a law over a hundred years old that he thought could be applied to plants. He took this to his patent attorney, who confirmed Francis' conclusion and it became possible to obtain a patent on a new variety of plant in France.

In succeeding years Francis, working through his associates in other countries of Europe and with the example of the benefits of plant patents in the U.S. and France, spread the idea of "protection" in a number of countries. In some of these it was broadened to include sexually reproduced plants, as well as those asexually reproduced.

In the United States this has resulted in the providing of "protection" for many kinds of new plants that are sexually reproduced from seed. The realization of the importance of "protection" to plant hybridizers was one of the chief impacts Francis made on the world, not only for roses but for many other plants. It has provided an incentive to hybridizers to work for the improvement of plants and to be able to realize sufficient income from the sale of new varieties to repay them for the expense incurred and the many years of work required to develop a new cultivar. This has benefited not only the hybridizers but the general public has had the benefit of new cultivars of ornamentals and home fruits.

### **Universal Rose Selection**

Francis now saw the need for arranging a method for the orderly distribution of his new roses in the important rose growing countries of the world. To obtain the desired distribution he organized Universal Rose Selection (URS) composed of a leading rose nursery from each of a number of countries of the Western

world where roses were popular. He got the idea of URS from observing the operation of All-America Rose Selections in the U.S. Each member served as the exclusive representative for introducing new Meilland cultivars in his own country. The representatives could arrange for sublicensing other nurseries to grow the Meilland cultivars where this was desirable. These URS members met annually at the Meilland establishment in Antibes at the height of the rose blooming season to evaluate the new roses under trial and to discuss business matters and common interests.

Later, after URS was in successful operation, additional meetings were scheduled at different times during the year for members with special interests such as the distribution of roses for cut flower production in greenhouses and for the preparation of the common mail-order catalog.

With channels for international distribution arranged it became evident that to achieve maximum sales it would be desirable to have a catalog with the best possible color illustrations of these new roses. Francis, therefore, looked up one of the finest producers of color printing in Europe, who was not already producing color catalogs of roses, and made an agreement with him for the exclusive printing of color pictures of roses for URS.

He then designed a catalog containing only Meilland varieties for the use of URS members in Europe so that a uniform catalog of roses with excellent color illustrations was in use throughout Europe. The text of the catalog was, of course, in the language of the country in which the catalogs would be distributed. This meant that each member was selling all the Meilland rose varieties illustrated in the catalog.

It was the first European catalog illustrating rose varieties with color pictures of such excellent quality and served to place Meilland roses in the foreground throughout Europe. This catalog was not used in the U.S.A. because it was found that some of the cultivars that were outstanding in Europe were not especially



adapted to the U.S.A. because of differences in tastes in roses and because of climatic differences. Conversely some rose cultivars which were not especially suited for Europe were excellent in the U.S.A.

### **Greenhouse Roses**

As Francis achieved outstanding success in developing new roses for the garden, he became aware of the need for better kinds for producing cut roses under glass. The immense demand for roses by florists in Europe was an important industry to the French Riviera, where he lived. Rose blooms were shipped to all the principal cities of Europe.

As a rule, roses that do well in the

garden are not especially good when grown in greenhouses for cut flowers and, equally true, the roses most suitable for florists' use are not outstanding in the garden. He, therefore, undertook the production of new cultivars for cut flowers.

His first outstanding cultivar for florists was 'Happiness' ('Rouge Meilland' in Europe) introduced in 1949. Then in 1954 he introduced 'Baccara', a bright geranium-red with medium size flowers, with blooms that last much longer than most others after they are cut. This was an outstanding success and within a few years more than half the roses grown in Europe for cut flower production were 'Baccara'.



PHOTO, UNIVERSAL ROSE SELECTION

**Mrs. Louise Meilland, widow of Francis Meilland, with her son Alain, examining new roses in the fields, establishment of Meilland, Cap d'Antibes, France.**



## New Garden Ivies

In a lifetime of collecting ivy, we have brought together an assortment of about 150 named kinds. Literally, the country has been combed for ivy (*Hedera*). A few have been named that appeared distinct to us, and these have been distributed widely in various parts of the country.

In the past decade the following additional selections have been added to our collection. These are now described formally for the first time.

### Descriptions of New Ivy Cultivars

*Hedera helix* L. 'Anchor' n. cv. (Fig. 12)

'Anchor' is a self-branching clone. Leaf blades ca.  $2\frac{1}{4}$  in. long and as wide, with very narrow lobes, the middle lobe long-pointed, anchor-shaped, and lustrous green. The typical leaves usually occur on the short branches, rather than on the leaders. Resembles *H. helix* 'Pedata'. It was seen growing on a garden wall near Dumbarton Oaks in Washington, D. C.

*Hedera helix* L. 'Carolina Crinkle' n. cv. (Fig. 1) syn. *H. helix* 'New Ripples'

'Carolina Crinkle' came unlabeled from Oregon to a greenhouse in New England and then on to us. Leaf blades variously undulate-crinkled and deeply cut, shiny light green, nearly round, ca. 3 in. wide and nearly as long, the sinuses are relatively deep; veins mostly parallel and fairly prominent; petioles as long as the blades. Possibly our most handsome ivy, becoming more beautiful with age. Resembles *H. helix* 'Fleur' and 'Manda's Crested'.

*Hedera helix* L. 'Freed's Miniature' n. cv. (Fig. 2)

'Freed's Miniature' is a small-leaved ivy I found growing in a huge urn on a modern patio. It was named after an old

family friend in Columbia, South Carolina. Leaf-blades on the new growth ca.  $1\frac{1}{2}$  in. long and as wide, the lower ones  $\frac{3}{4}$  to 1 in. long and as wide, 3-lobed, shield-shaped, light green, veins prominent. It resembles *H. helix* 'Minima' and 'Roehr's Minor'.

*Hedera helix* L. 'Green Finger' n. cv. (Fig. 4)

'Green Finger' is so-named because of the small leaves some with heel-like lobes at the base, resembling the pinnae of the Christmas fern (*Polystichum acrostichoides*). Plants are very slender, the new twigs purplish. Leaf blades  $\frac{3}{4}$  to  $2\frac{1}{4}$  in. wide, with narrow pointed lobes. Some of the leaves are narrowly elliptic and unlobed. A sport of *Hedera helix* 'Star' found in our garden. Resembles *H. helix* 'Irish Lace'.

*Hedera helix* L. 'Nagud' n. cv. (Fig. 5)

'Nagud' is an anagram of Dugan, the name of the man in whose garden in Columbia, South Carolina the original material was collected. It is a sport of *H. helix* 'Deltoides'. Leaf blades ca.  $1\frac{1}{2}$  in. wide and as long, veins prominent, the terminal lobe broad near the tip, resembling *H. rhombea*, the basal lobes overlapping and resembling *H. helix* 'Deltoides'.

*Hedera helix* L. 'Permanent Wave' n. cv. (Fig. 6)

'Permanent Wave' is a beautiful crested-leaved ivy we brought from the Fruitland Nursery in Augusta, Georgia, and although selected by them, it was never introduced. Leaf blades ca. 3 in. wide, ca.  $2\frac{1}{2}$  in. long, 3- to 5-lobed with deep sinuses or not lobed and strongly crested and undulate, light green. Resembles *H. helix* 'Fleur' and 'Manda's Crested' but more robust. Leaves with



deeper convolutions and much darker green.

*Hedera helix* L. 'Preston Tiny' n. cv.  
(Fig. 7)

'Preston Tiny' was found in the abandoned garden of the Hampton Preston House in Columbia, South Carolina. This was one of the finest gardens in town a hundred years ago. Leaf blades ca.  $1\frac{3}{4}$  in. wide, ca. 2 in. long, 5-lobed, the middle lobe longest and prominent, truncate at base, with strong light colored veins; petioles white. Plants have proven stable. The small leaves are distributed along a wiry flexible stem.

*Hedera helix* L. 'Teena' n. cv. (Fig. 8)

'Teena' is a reversion of *H. helix* 'Gold Heart'. Leaf blades ca. 2 in. wide and as long in the largest, but only  $\frac{1}{2}$  to 1 in. wide in the smaller ones, shield-shaped, shallowly 3-lobed, broadly tapered to an acute tip.

*Hedera helix* L. 'Trustee' n. cv.  
(Fig. 3 & 9)

'Trustee' was found in the part of Savannah, Georgia known as the Trustee's Garden. This garden was the first Experiment Station in America where many useful plants were first introduced. 'Trustee' was selected from an old ivy branch found growing over old walls of English stones which had come to America as ballast under white bulging sails. Leaf blades variable, up to 4 in. long and as wide, prominently 3-lobed to remotely so and smaller, sometimes ca.  $1\frac{3}{4}$  in. long and as wide, deep green with prominent veins. A robust grower. Resembles *H. helix* 'Scutifolia'.

*Hedera helix* L. 'Yalta' n. cv. (Fig. 10)

'Yalta' was collected by Dr. John L. Creech in damp wooded hills above Yalta, el. 1200 ft. in the Crimea, U.S.S.R. Introduced under P.I. 293883. A robust growing plant with remotely 3-lobed leaves; leaf blades up to  $2\frac{1}{2}$  in. wide and as long, somewhat cordate at the base and with a middle lobe blunt-tipped, dark dull green with strong light green veins.

### Some Earlier Ivy Introductions

In 1961 I named seven new cultivars of ivy (*Hedera helix*), all of which have been rather widely distributed in this country, although they are still not as well known as they might be. Several we consider to be quite outstanding. Descriptions for all seven are provided here with some additional observations on the plants in the years since they were first described. These cultivars were originally published in *Garden Club of South Carolina Bulletin* 77, p. 21. 1961:

'Cathedral Wall' (Fig. 11)—Leaf blades light moss green,  $1\frac{1}{4}$  to  $1\frac{1}{2}$  in. wide and as long, unlobed, cordate at the base, and tapering to a blunt tip, veins prominent. A gift of Mr. A. Rosenbloom, gardener at the Washington Cathedral in Washington, D. C. Resembles *H. helix* 'Scutifolia'.

'Ferney' (Fig. 16)—Twigs very leafy; leaf blades  $1\frac{1}{4}$  to  $2\frac{1}{2}$  in. wide and as long, usually 5-lobed, the middle lobe half again as long as the adjacent lateral lobes, cordate at the base, veins whitish and prominent. Belongs to the *Ramosa* complex in which many shoots are produced in the axils of the twig and stem leaves. A fine ivy with a fern-like appearance. Resembles 'Star' on a larger scale.

'Four Square' (Fig. 13)—Plants with long runners, nonbranching, leaf blades  $2\frac{1}{4}$  in. to 4 in. wide,  $1\frac{1}{2}$  in. to 3 in. long, shallowly 3-lobed, very dark green, with very strong veins. A very attractive selection because of the bold squarrose leaves with a sculptured aspect. Found in an old overgrown garden where it rambled about under weeds and brambles.

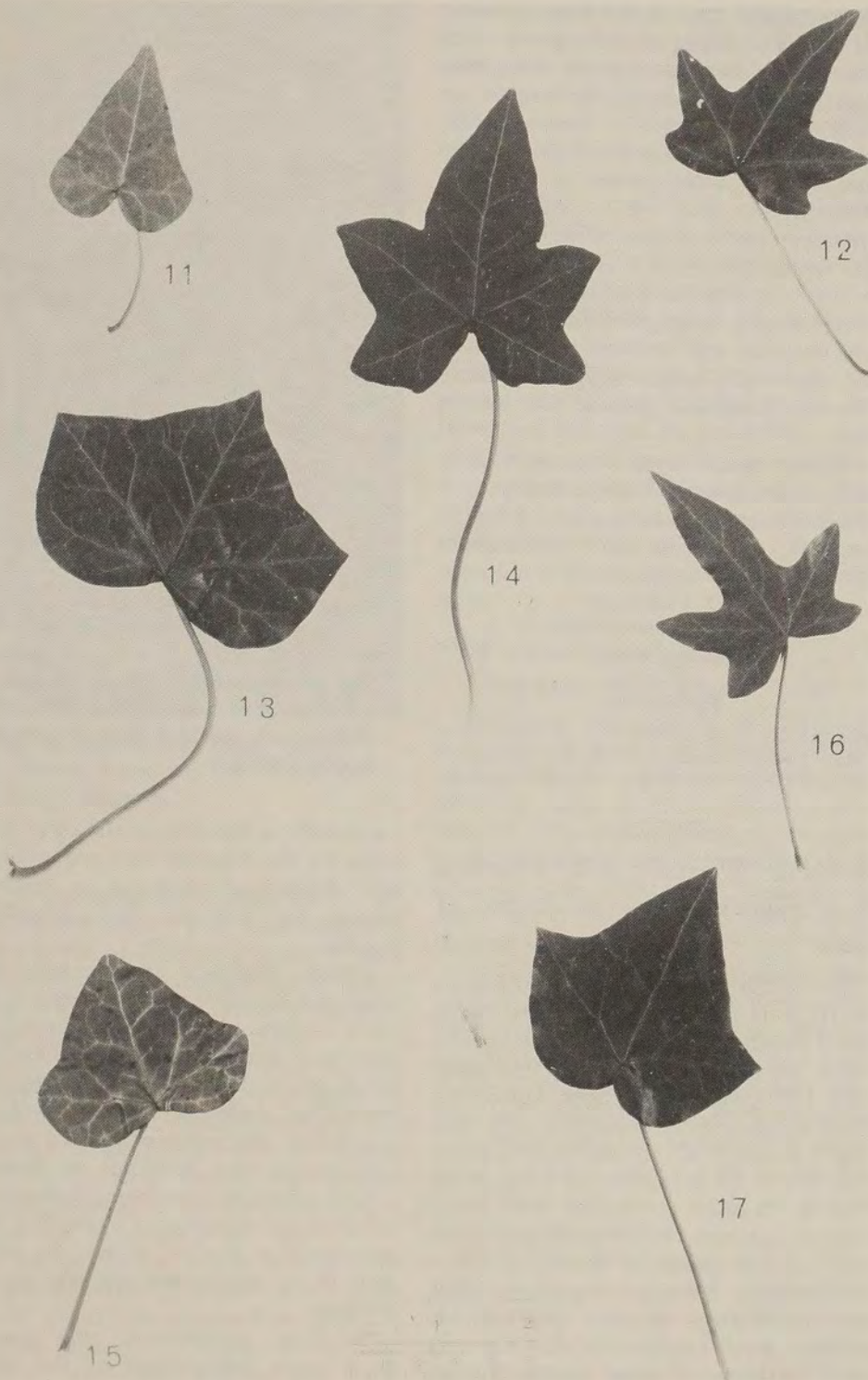
'Gladiator' (Fig. 17)—Leaf-blades large and shield-shaped,  $2\frac{3}{4}$  in. to  $3\frac{1}{4}$  in. wide and  $2\frac{1}{2}$  in. to  $4\frac{1}{2}$  in. long, shallowly 3-lobed or sometimes with only one lateral lobe, medium green, veins not very prominent. A useful ivy of good effect if trained over the lower limbs of a tree and allowed to fall in a curtain of bold texture. Found in an old garden in the Deep South.

'Mount Vernon' (Fig. 14)—Leaf blades strongly 3-lobed, often with 2 auricles at the base, deeply cordate, the middle lobe longest, some of the leaves near-









1. *Hedera helix* 'Carolina Crinkle', 2. 'Freed's Miniature', 3. 'Trustee', 4. 'Green Finger', 5. 'Nagud', 6. 'Permanent Wave', 7. 'Preston Tiny', 8. 'Teena', 9. 'Trustee', 10. 'Yalta', 11. 'Cathedral Wall', 12. 'Anchor', 13. 'Four Square', 14. 'Mount Vernon', 15. 'Rubaiyet', 16. 'Ferney', 17. 'Glad-iator'.



ly star-shaped,  $2\frac{1}{2}$  in. to  $3\frac{1}{4}$  in. wide and nearly as long, medium green with prominent veins. A selection from the home of Gen. George Washington at Mount Vernon, Virginia. Resembles *H. helix* 'Scutifolia' except the leaf lobes are more angular. A fast grower.

'Rubaiyet' (Fig. 15) (misspelled 'Rubauyet' in the original description) — Leaf blades shallowly 3-lobed, shallowly cordate,  $1\frac{3}{4}$  in. to  $2\frac{1}{4}$  in. wide and nearly as long, veins green on the upper side, purplish red between the veins in cold weather. Cuttings originally came from the Brooklyn Botanic Garden in 1960.

Voucher specimens to document all of the cultivars described in this account are on deposit in the herbarium of the U.S. National Arboretum in Washington, D.C.

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### *Dombeya* 'Perrine' and *Dombeya* 'Pink Clouds'—New Cultivars of Merit

The genus *Dombeya* has been known for 70 years in the United States, for at least 150 years in England, and longer in India, yet surprisingly few of the more than 100 species have been cultivated. Until recently only one species, *D. wallichii* (Lindl.) K. Schum., had become well known to gardeners in these countries or in other countries with more tropical climates. When we began working with the genus at the U. S. Plant Introduction Station, Miami, in 1960, one hybrid *D. × cayeuxii* had been reported. Brief mention of the horticultural qualities of some species in this large genus has been made by various authors over the years; a few have been condemned, but more have been praised. No studies other than those in Miami are known to have been carried on to evalu-



PHOTOS BY AUTHOR

**Fig. 1. *Dombeya* 'Pink Clouds'. Clusters of pale pink flowers stand out against the medium-green foliage.**

ate *Dombeya* species populations and hybrids for the selection and production of new flowering, landscape or container plants for tropical and subtropical regions.

Fifteen identified accessions of *Dombeya* and 12 unidentified accessions have been introduced by the U.S. Plant Introduction Station from Africa where *dombeyas* are indigenous. These are being evaluated under Florida's subtropical conditions, but most of them are of recent receipt and have not yet flowered.

One selection, *Dombeya* 'Rosemound'<sup>1</sup> released and distributed by the U.S. Plant Introduction Station, Miami, in 1967, is now being propagated for sale by nurserymen.

Seedling populations that resulted from open pollinations of the earliest introductions have produced individuals with outstanding horticultural qualities,

<sup>1</sup>Soderholm, Paul K. 1967. *Dombeya* 'Rosemound' a new cultivar. *American Horticultural Magazine*, 46: 91-92.





**Fig. 2. *Dombeya* 'Pink Clouds'. A closer view of the delicately colored flowers.**

such as flowering habit, bush form, and leaf characteristics. Two new cultivars, 'Pink Clouds' and 'Perrine' recently have been released to nurserymen for propagation and further distribution to the public through commercial channels.

Both cultivars grow as well on the slightly acid soils of the west coast of Florida as on the alkaline soils of the lower east coast. Their fertilizer requirements are similar to those of the hibiscus. For best plant form and the finest bloom they should be grown in full sun.

In South Florida, where winter rains are scarce, both 'Perrine' and 'Pink Clouds' should be irrigated periodically in order to keep the foliage in the best possible condition during the cool weather.

### Propagation

Four to six inch tip cuttings can be rooted any time after the new flush of

growth appears in March. 'Pink Clouds' will root readily by placing cuttings directly in a mist propagation bed. However, 'Perrine' requires a presoaking in a water solution of 75 p.p.m. indolebutyric acid to which has been added 1 1/2 grams of a soluble plant food to each liter of solution. We have found that an 18-18-18 fertilizer, with minor elements, promotes excellent rooting when the basal half of the cuttings are soaked in this solution for 24 hours. Plants started in March and grown in a full sun from July 1 on, will be 2 to 3 feet tall by September and can be flowered in the container for fall sales by nurseries.

Short compact potted plants of *Dombeya* 'Perrine' produce an excellent show of color during the normal flowering season, indicating that this cultivar is useful as a blooming pot plant for florist sales.

### Descriptions

#### *Dombeya* 'Pink Clouds' n. cv.

*Dombeya* 'Pink Clouds' (P. I. 347623) was selected from a population of 200 open-pollinated seedlings of *Dombeya tiliaea* (E. Mey. ex Endl.) Planch. (P. I. 221175). The pollen parent of this group is undetermined but putatively it is the original plant of *D. sp. aff. D. burgessiae* Gerr. (P. I. 205654) from which 'Rosemound' was derived.

The ascending multiple stems of 'Pink Clouds' form a moderately dense shrub 10 feet tall and 10 feet wide. The leaf blades are 5 to 6 inches long and 4 to 5 inches wide; margins are lobed, dentate, and resemble those of 'Rosemound' more than the seed parent. The foliage turns red for a short period during February followed in a week or two by luxuriant new growth.

Individual flowers are 1 3/4 inches across, light purplish pink (Munsell hue 2.5RP 8/5), and are carried in large clusters well above the foliage, scattered over the entire bush. In southern Florida they start opening in early October and continue through mid-November presenting an extended and excellent show of color (fig. 1 and 2).

'Pink Clouds' resembles its parent, *D.*



*tiliacea* only in size and shape of the flat, spreading flower. It may be used effectively either as a single specimen plant or grouped for background or screening effect.

***Dombeya* 'Perrine' n. cv.**

*Dombeya* 'Perrine' (P. I. 347622) is an open pollinated seedling derived from *Dombeya* 'Rosemound'.

'Perrine' has attained a height of 8 feet and a spread of 10 feet in 6 years. It is hemispherical in shape, with dense foliage that sweeps the ground. The leaf blades are 5 inches long and 4 inches wide with dentate margins, lobed, similar to those of *Dombeya* 'Rosemound'.

The flowers are moderate purplish pink (Munsell hue 2.5RP 7/8), shading to a slightly lighter pink at the outer edges of the petals, imparting a pleasing, frosted effect. The flowers are carried in large moderately dense upright clusters well above the foliage (fig. 3).

The foliage remains green throughout the winter in the Miami area except under the most extreme conditions of combined drought and cold. 'Perrine' is most effective when displayed as a single specimen, yet where the situation requires and space is available, it is outstanding when planted in a row, or clustered at a spacing, so that the individual plants just touch at maturity.

The name Perrine is of considerable local historical significance in that it commemorates the unincorporated community that lies about midway between Miami and Homestead along Florida's southeast coast. The community lies within a township that was granted in 1838 by the Federal Government to Dr. Henry Perrine for the purpose of growing newly introduced plant species. Dr. Perrine, a pioneer in South Florida,



**Fig. 3. *Dombeya* 'Perrine'. These pollen and nectar-laden flowers are especially attractive to bees. *Dombeya* honey is of very high quality.**

was the first to actively engage in introducing exotic tropical plant species into the area. Unfortunately, he did not live to enjoy the fruits of this labor of love—he was killed in an Indian raid even before he was able to make use of the large tract of land for the purpose intended.

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### Common Yellow Woodsorrel

Common yellow woodsorrel (*Oxalis stricta* L.) is a weed that is appearing in our gardens and edges of lawns with increasing frequency. It is a perennial herbaceous plant that reproduces by seeds and prostrate rooting stems. The three heart-shaped and slightly folded leaflets on long petioles, and the five yellow petals of the flowers are easily recognized. Plants are 3 to 6 inches tall except when growing in competition with other plants when they may reach a height of 12 inches or more. Large numbers of seeds are produced in numerous cylindrical, pointed capsules on each plant. It grows in every state of the continental United States.

Woodsorrel is one of our most severe weed problems in commercial greenhouses, flat houses and field plantings for transplant production. Prevalence of the weed is due to our inability to control it easily with selective herbicides that will not injure ornamental plants. We must rely on hand pulling, hoeing, and sickling when infestations occur. We can minimize the spreading of woodsorrel by removing the plants before seeds are



**Common yellow woodsorrel (*Oxalis stricta* L.)** A. Habit; B. Leaves showing 3 leaflets; C. Flower structure; D. Capsule; E. Seeds.

formed. Introduction of seeds and plants from outside sources can be reduced by making sure that top soil, peat moss, and other organic materials are sterilized before use in the garden.

Potted plants should be examined before purchasing them to be certain that seedling woodsorrel plants are not present in the soil.

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## Garden Notes

### The Haleakala Silversword

The Haleakala silversword, *Argyroxiphium sandwicense*, is found only in a few places in the Hawaiian Islands. Unprotected until recently, this very unusual plant's existence was threatened by extinction from the thoughtless acts of man and the grazing of animals. This plant, which belongs to the Compositae (sunflower family), is now protected in the Haleakala National Park on the Hawaiian island of Maui.

Carlquist (1965) discusses the silversword in his book "Island Life" in this manner: "They are among the world's most unusual plants, evolutionary products one could never have predicted by looking at their tarweed ancestors in California. Looking like a fantastic silvery yucca on the vermilion and purplish cinder cones of high Maui, the Mt. Haleakala silversword, *A. sandwicense*, (sic) is one of the few plants which can withstand the rigors of this inhospitable crater. Within the crater, bare lava or cinders are seared by alpine sunshine; the rainfall which drenches lower elevations is shut out by the crater walls; and at the altitudes of nine thousand feet, extremes from heat to snow make for a punishing alpine regime. The Haleakala silversword has found ingenious answers to these problems.

"Leaves of the silversword are covered with a mat of fiber-glass-like hairs which, microscopically, are so formed that they act as mirrors, reflecting the excessive alpine sunshine. . . . In addition to the hairs, the leaves show other adaptations. They are thick and extremely condensed in form; if a leaf is broken open, a sort of jelly can be squeezed out. This substance, also found in the leaves of many Californian tarweeds, serves to retain water, a mechanism useful in the face of alpine aridity."

Rhule (1959) in his "Haleakala

Guide" describes the Haleakala silversword as follows: "The Haleakala silversword has a short, simple, woody stem 2-3 inches in diameter crowded with thick, dagger-like leaves arranged spirally around it. After growth from 7 to as many as 20 years, a foliose raceme 3-8 feet high develops on which 100-500 flowerheads nod. Each has a central disk of hundreds of bright yellow florets surrounded by a score of reddish-purple ray florets. The flowering season is from June through October. The whole plant dies after flowering but once."

Attempts to cultivate this plant have generally not been successful; however, this unusual and fascinating plant has been cultivated with varying degrees of success for about the last 10 years at Longwood Gardens.\* During this period of time we have become more and more knowledgeable to the cultural requirements of this remarkable plant.

Propagation has been almost exclusively from seed obtained from the Haleakala National Park. No pretreatment of the seed seems to be necessary. Our experience has shown that they may be sown in the same manner as any other seed. Kept in a 70° F greenhouse they show good germination. Germination occurs in 3-4 weeks. This, no doubt, will vary from one seed lot to another.

Growth is fairly rapid in the beginning and the plants soon take on their characteristic form.

Apparently, if branching could be induced in this plant, then propagation could be done by vegetative means. On one occasion a plant with a rotted crown produced a side shoot. This side shoot was cut off and rooted, producing a new plant. This phenomenon has never been observed to happen again and may have been one of those rare events that do occasionally happen.

Contrary to some reports and beliefs, these plants do not seem to mind repotting. It has been our experience that repotting tends to stimulate these plants into faster growth.

\* The plant is occasionally cultivated in California and in greenhouses, but it has never flowered outside of Hawaii (Ed.)



The potting mixture used is an extremely porous one. It consists of 6 parts Turface (a baked clay product), 7 parts sand, 1 part peat, and 1 part loam.

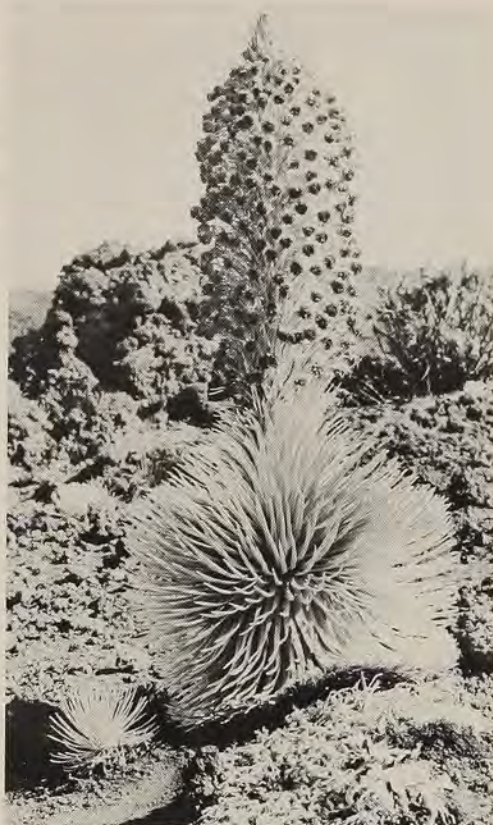
These plants seem to have definite likes and dislikes as far as climate is concerned. We have grown them with success in a greenhouse cooled with refrigeration and plenty of air movement over the plants. The greenhouse is held at a constant 70° F in the summer and dropped to 50° F during the winter; the humidity in the house is generally fairly low except during the transition periods of spring and fall. It is at these times that a crown rot will develop unless plenty of air is kept moving over the plants to prevent the formation of water droplets in the axils of the leaves.

When grown in a greenhouse where the temperature and humidity cannot be controlled during the summer, the plants grow very little and become weak and sick looking with the crown rot developing, resulting in the death of the plants.

Evidence seems to indicate, however, that the whole plant need not be kept cool. When these plants were grown in a non-cooled greenhouse where their roots are held at 60° F by plunging the pots into sand maintained at 60° F, the plants grew just as well if not better than in the refrigerated greenhouse. Crown rot does develop under these conditions but can be stopped or prevented by providing rapid air movement over the plant with a fan. The sand is kept cool in the bench by the fact that the bottom of the bench is really the expansion plate of a refrigeration system much the same as that found in the refrigerated shelves at a grocery store.

The root systems when grown under these cool conditions are healthy looking, heavy and white. When grown warm they are thin and dark. In fact the roots tend to grow toward the cooler temperatures even in the refrigerated bench. The temperatures are naturally cooler near the bottom of the sand than at the top.

The most critical point concerning watering seems to be how it is done. The amount is not critical as long as the



PHOTO, SHERWIN CARLQUIST

**Haleakala silversword (*Argyoxiphium sandwicense*), Haleakala Volcano, Island of Maui, Hawaii.**

growing medium is thoroughly wet each time, taking care not to get water on the foliage, and preferably with non-chlorinated water. Allowing a plant to wilt is not harmful as long as the plant is not allowed to wilt too long.

The regular application of a fertilizer does seem to stimulate growth. About one-half tablespoon of a soluble 20-20-20 fertilizer per gallon of water every two weeks is adequate during the summer months. Most excess fertilizer is leached out in subsequent waterings.

These plants will actually tolerate very low light conditions and still live, but growth is slow. One was sustained for a year under fluorescent lights, but it grew hardly at all. When placed back into the sun and given the proper treatment it commenced to grow again with no apparent permanent ill effects from the low light treatment. This plant while under



the lights was kept fairly cool and the humidity was also quite low.

Apparently these plants are not bothered by any of the common greenhouse pests, since none have been observed on the plant. The covering of hair found on the leaves probably discourages most pests.

So far none of the plants have bloomed. The oldest ones are now about 6 years old. An attempt was made to stimulate bloom by injecting a plant with Gibberellic acid, but this merely deformed the new leaves for a period of time after the treatment.

The conclusions are that the Haleakala silversword can be cultivated if the right environmental conditions can be maintained. These are: 1. Cool temperatures, especially for the roots (ca. 60° F). 2. Low humidity or in lieu of this brisk air movement over the plant. 3. High light intensity if possible. 4. Very porous potting mixture. 5. A regular fertilization program.

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### *Zelkova sinica*

*Zelkova*, a name with a pleasant-sounding combination of syllables, stimulates interest. Just about everything this shade tree has to offer is good, and words of recognition are long overdue.

*Zelkova sinica* is a modest-sized deciduous tree that grows to a height of 55 feet. Elm-like in appearance, its upright, spreading and arching branches create a cathedral-like atmosphere for those who walk beneath it. The trunk separates into several main limbs a few feet above head-height, and then sends out numerous slender branches that complete the structural picture.

From a distance the foliage presents a medium-green fine-textured appearance. Leaves are elm-like, but unlike elm

leaves, they are symmetrically formed, ovate-oblong, and rounded or broad cunate at the base, with a crenate-serrate margin, and a length of  $\frac{3}{4}$  to  $2\frac{3}{4}$  inches. They are alternate and firm to the touch, and their surfaces are dull, with a slight coarse or roughened surface.

The flowers are insignificant and not showy, polygamous, with perfect and staminate flowers in the leaf axils. The fruit is also insignificant unless one chooses to look for the small  $\frac{1}{8}$ -inch nut-like seeds in the fall months. The bark is smooth, pale and gray, exfoliating from the trunk and limbs in thin, roundish flakes (up to 3 inches in diameter) which leave many interesting brown scars.

*Zelkova sinica*, is indigenous to central and eastern China. It is adaptable in the United States as far north as climatic zone VI. Rehder reported that this plant was introduced into America in 1908; no doubt he referred to an accession collected in October 1907, by E. H. Wilson during a plant exploration sponsored by the Arnold Arboretum. In June 1920, Professor C. S. Sargent, director of the Arboretum, presented seeds from the resulting plants to the USDA. The Office of Foreign Seed and Plant Introduction assigned the entry P.I. 50530 to the accession. A few years later, seedlings were established at the U. S. Plant Introduction Station at Savannah, Georgia.

More recently, plants of *Z. sinica* (P.I. 312357) were received in March 1966 from Hillier and Sons in Winchester, England. On November 27, 1967, the U. S. Plant Introduction Station at Glenn Dale, Maryland, forwarded material from this accession to the Arnold Arboretum.

This tree needs very little care. It is not particular as to soil and position and will persist even in sandy soils of little fertility. An occasional branch should be removed to retain a well-balanced branching pattern. Spraying is seldom necessary because resistance to disease and insects is relatively high.

WALTER O. HAWLEY  
*Horticulturist*  
*Plant Introduction Station*  
*ARS U.S. Department of Agriculture*  
*Savannah, Georgia*



**Charles Sprague Sargent and the Arnold Arboretum**

S. B. Sutton. Harvard University Press, Cambridge, Mass. 1970. 382 pages. \$10.00. (Library).

This book was commissioned by the administration of Harvard's Arnold Arboretum in partial celebration of this notable institution's hundredth anniversary in 1972, and has been billed as "both a biography of Sargent and a history of the institution's growth." But it is not quite that, either in actuality or in the author's evident intent.

Professor Sargent (a cousin of artist John Singer Sargent) was the gifted, energetic, forceful, colorful, and somewhat dogmatic member of Boston's turn-of-the-century aristocracy who established the Arnold Arboretum. It was Sargent, as first Director, who charted its course and fought its financial and administrative battles over a 55-year period. A figure of national and international repute, a contemporary of Harvard's Asa Gray, and a non-teaching Professor of Arboriculture in Harvard University, Sargent surrounded himself with a small but eminently effective staff. In accordance with a pattern which Sargent himself described, with notable modesty, in his own story of *The First Fifty Years of the Arnold Arboretum* (*Journal Arn. Arb.*, Vol. 8, No. 3), and with the dedicated assistance of this staff, he brought "his" institution to a position of unique horticultural-botanical eminence.

As biographical reading, Miss Sutton's book excels. Personal and historical details are copious, accurately researched, and so delightfully presented that a new generation has the means of better understanding this aloof and interesting figure than did most of his contemporaries outside of his immediate family.

As an institutional history, and aside from the Foreword by Director Howard, coverage of the development of the Arboretum itself is primarily limited to the 50 years of Sargent's tenure. Even within this period, there are many questions relating to the physical plant, the collections, and the full complement of staff which remain unanswered.

In the interest of institutional history at this 100-year juncture, it seems also a pity that individuals peripheral to the main story

have sometimes suffered from excessive lightness of treatment, particularly in terms of their actual weight or contributions. Camillo Schneider is mentioned, but not for his consequential studies or publications. The explorations of "Chinese" Wilson are excellently handled but with less reference to his work at home. Apart from his books, Ernest Wilson, when at home, was also both a prolific magazine writer and a lecturer in constant demand at horticultural gatherings near and far. Alfred Rehder (of the highly atypical portrait of page 326) enters the story at several points. He is accorded generous recognition for his untiring labors on the Bradley Bibliography and on taxonomic aspects of several Sargent- or Wilson-related publications, yet we find no mention of his own excellent monographs, or of the *Manual* and the *Bibliography of Cultivated Trees and Shrubs* of joint international horticultural-botanical fame. Although the Bibliography did not follow until later, the basis of all of these was essentially of the Sargent era. William Judd, an outstanding propagator, is briefly cited as an "efficient plantsman and a popular public speaker despite his grammatical lapses." Whether or not his "grammatical lapses" would be conspicuous within a university community of our modern era (a doubtful point), "Billy" Judd was also on constant call for his horticultural advice and for identifying the plant holdings of many a nursery and of many an estate of the wealthy. Anyone who knew these men, or others of the staff of the later Sargent period, will also be aware of the broad extent to which all of them deserve credit as joint forgers of the Arnold Arboretum's scientific and popular reputation.

A peripheral figure, not of the Arboretum staff, is USDA plant explorer Frank Meyer. Professor Sargent was apparently irritated with David Fairchild and the Federal government over, among other things, their connections with a plant quarantine law which complicated his own introduction program. This point is made evident, but in absence of any qualification from the author, the Sargent-colored residual impression of Meyer—an introducer to this country of upwards of 2,000 kinds of food, forage, forest, and ornamental plants—is indeed a strange one.



But it is easy to be critical. This is an absorbing story both of a nationally unique figure and of the country's oldest, equally unique and internationally famed arboretum. It is highly recommended.

HENRY T. SKINNER

### ***Container Gardening Indoors and Out***

Jack Kramer. Doubleday and Co., Inc. Garden City, New York, 157 pages, illustrated, \$6.95 (Library).

Clay pots are one of the oldest containers for the growing of plants. The special feature of this book is its illustrations and descriptions of many kinds of containers that are suitable for almost every location. The author gives directions for making your own containers from wood, concrete, sheet metal or by adapting clay pipes or flue tiles. Window boxes or permanent planters may be a feature of the architecture. He describes or suggests other containers that may be available such as wooden tubs or barrels, fiberglass containers, self-watering kinds or the adapting of such natural materials as large logs, porous stone or rocks.

He considers the culture and selection of kinds suitable for both indoor and outdoor use. A brief description is given of each plant suggested and these are divided into groups based on the type of plant. Suggestions are given of plants suited for special uses. These lists serve as a guide, and will have to be adapted to each location. Certain of the woody plants are listed as being hardy but the reader should really check the suitability of that plant for the specific area in which it is to be grown.

CONRAD B. LINK

### ***Gardening Indoors Under Lights***

Frederick H. and Jacqueline L. Kranz. The Viking Press, Inc., 625 Madison Ave., New York, N.Y. 10022 242 pages. Illustrated \$7.95 (Library).

Indoor culture of plants is a challenge to many but with the use of lights even more opportunities are opened. This book is a revised edition of one first published in 1957 to which the authors have added more of their own experiences in growing plants under lights. They describe newer equipment developments and results from recent research and commercial application.

Growing plants under lights is not just for the decorative plants. It is also useful for those whose hobby is the culture of certain kinds of plants or for the year around indoor project of growing many kinds of plants. The authors first consider the equipment that is needed, especially the lights and the several ways in which they may be installed for use as an aid to plants in the window or in a complete indoor greenhouse.

Culture of plants is next considered, with special reference to those features that are influenced by the lights. In many ways the general culture indicated is equally adaptable for the growing of plants indoors although the use of lights enlarges this type of culture.

Special cultural directions are included for certain plants that adapt well: the orchids, african violets, begonias, or groups of plants such as gesneriads, spring flowering bulbs and foliage plants. This is a most practical book for the "gardener under lights."

CONRAD B. LINK



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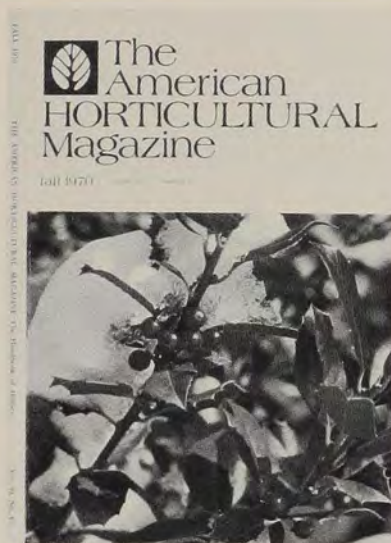
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