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PENNSYLVANIA GARDENS

John Wister on Lilacs

A Quarterly—Issued by
THE PENNSYLVANIA HORTICULTURAL SOCIETY

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PENNSYLVANIA HORTICULTURAL SOCIETY

1600 Arch Street, Philadelphia

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PENNSYLVANIA GARDENS—*A Quarterly*

Subscription price: 50 cents the year to members of the Pennsylvania Horticultural Society (as included in $3 annual dues); others, $1 the year. To obtain the remaining three quarterly issues of 1937, members need only to fill out and mail the enclosed prepaid card—no postage required.

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The June Number *of Pennsylvania Gardens will touch upon Roses and the early Perennials.* The September Number *will present the newer Chrysanthemums and late Perennials.* The December Number *will take the garden through the winter.*

A Message from President Stout

IN THE year 1827, The Pennsylvania Horticultural Society was founded "for the purpose of improving the growth of vegetables, plants, trees, fruits, and flowers, and introducing into our country new varieties and species." Throughout its long and honorable life, these purposes and aims have been religiously maintained, and only through the varying economic conditions that have, in turn, faced each successive generation have its efforts been affected or modified.

Today, the Society is as virile as it has ever been, and the executive management is constantly on the alert for methods by which it may better fulfil its mission. In one sense, the Society's influence can be measured by the size of its membership, as well as by the number of people who take advantage of the vast amount of helpful horticultural knowledge and direction it has to offer.

It is to this end of increasing our helpful influence over our fellow-citizens of Pennsylvania that Pennsylvania Gardens is being issued, as another voice of the Society, to help blaze the way for greater accomplishment. In no sense is this publication competitive with the most excellent semi-monthly edition of *Horticulture*, but is rather a supplement, with knowledge and information applicable to our state.

Pennsylvania Gardens will be an entirely different type of publication from the Society's Yearbook, which will go to members, as usual, in March. A feature of the 1937 Yearbook is a live article of real horticultural value on "Hardy Chrysanthemums at Swarthmore," by our Secretary, John C. Wister. Mr. Wister classifies the flowers in an appended list under many useful headings, and to those who are interested in growing these delightful and satisfactory fall flowers, the list will be of the greatest value.

My thanks and appreciation go out to the editor of Pennsylvania Gardens, Dr. J. Horace McFarland, and to the members of the Extension Committee, as well as to all of our members who may contribute toward our gaining an increased and more active membership by the exercise of their personal and helpful interest.

C. Frederick C. Stout

A New Departure

PENNSYLVANIA GARDENS makes its quite humble but very cheerful bow to the members of the Pennsylvania Horticultural Society, whom it will visit quarterly.

If an equivalent smile comes from the membership, the publication may grow in size, and may come more frequently—even six times a year. (*But the enclosed card must be signed and mailed.*)

The comprehensive record in the Society's Yearbook is not interfered with at all by this presentation of its current functions. These activities can become more vital to horticulture in the Keystone State as the members of the Society make use of its facilities, and extend its influence to others who need to know more about Pennsylvania gardens, and more about what this venerable but very lively Society means to those gardens.

It is true that Benjamin Franklin did not start the Pennsylvania Horticultural Society. It is doubtless true that he would have done so if he had been so fortunate as to have lived in Philadelphia a century later, for he was just that kind of man, and the United States as a nation has reacted to his forward-looking vision that was manifested so many years ago.

But this introductory statement is by no means an attempt at a historical résumé. It does want to say that the Society will welcome comments, criticisms, and particularly suggestions that will help to make each number of Pennsylvania Gardens more interesting and more useful to the organization and to its members.

It will be observed that the various committees, active, energetic, and helpful, are ready to serve. It will also be observed that the new Field Secretary stands waiting to do her uniquely valuable work whenever she may be called, upon the equitable basis that has been established.

So it is with these words of greeting, of participation, and somewhat of entreaty that members of the century-old Pennsylvania Horticultural Society are asked to read, consider, and respond.

Subscriptions, etc., go to the Philadelphia office; editorial matter should be addressed to Box 687, Harrisburg, Pa.

J. HORACE MCFARLAND, *Chairman* THE EXTENSION COMMITTEE

Mr. Wister on Lilacs

WE HEAR much about *new* Lilacs and of the slowness of gardeners to appreciate them and to add them to their collections. The term *new*, however, is regarded as an elastic one in horticulture. Invariably, the catalogue maker adds it to his description the first year he lists the variety. Then every year after that, *ad infinitum*, the printer gaily copies this word until it comes to mean just exactly nothing; so do some other catalogue adjectives such as "large," "beautiful," "distinct," as well as that wonderful phrase "one of the best." In some trade-lists, indeed, the term *new* after a Lilac means anything beyond the old purple *Syringa vulgaris*, or its old, tall, straggly white form.

The named French or Hybrid Lilacs are supposed to be new, yet many of them have been catalogued and sold for more than a century. Indeed, American catalogues are still listing Alba grandiflora and Charles X, which are more than 105 years old. Far be it from me to advise anyone to buy them. Why buy old kinds when new ones which cost no more are better? But, which are old and which are new?

For the purpose of this discussion let us call any Lilac old that was originated and put into commerce before the beginning of this century. The Lilacs of the nineteenth century were raised by many forgotten breeders, among them Billiard, Briot, and Cochet in France; Brahy-Ekenholm, Libert-Darimont, and Jacob Makoy in Belgium; and Eichler in Germany. They laid the foundation for Späth in Germany, Stepman de Messemäker in Belgium, and Baltet, Morel, and, finally, the two great Lemoines in France. I consider that among the nineteenth-century Lilacs surviving today, the best three are Macrostachya (1844) with a lovely pale pinkish flower; Lucie Baltet (about 1888), which is still the pinkest variety of all; and Morel's great masterpiece, one of the greatest of all Lilacs, Mme. Francisque Morel (1892). Next perhaps would come Marie Legraye (1879), Souv. de Ludwig Späth and Frau Bertha Dammann (Späth, 1883) and Bleuâtre (Baltet, 1897).

Victor Lemoine began his work in Nancy, France, about 1870, and his son, Emile, still continues to breed Lilacs and other plants

today. The late Theodore A. Havemeyer, President of the Horticultural Society of New York, and our greatest grower of Lilacs, used to say that all worth-while Lilacs raised by all other breeders put together could be counted on the fingers of one or, at the most, two hands. I shall try to determine later how true that saying is today.

I still grow the first Lemoine Lilac of which there is record, Jacques Callot (1876) and also Président Grévy (1886), Virginité (1888), Belle de Nancy (1891), and Congo (1896), because I like them, which is a good enough reason, and because I know of no new ones which are better in these types, which may be a still better reason. I no longer grow Michel Buchner (1885), Lamarck (1886), Mme. Lemoine and Président Carnot (1890), Mme. Casimir-Périer (1894), Charles Joly (1896), Marc Micheli (1898), Comte de Kerchove, Negro, Volcan, and William Robinson (1899), but I see them in other gardens where they are still (possibly deservedly) cherished.

So much for the old Lilacs of the past century. Let us now consider the new century up to America's entrance into the World War. Back in 1908, a Belgian, Stepman de Messemäker, introduced Dr. Charles Jacob, J. de Messemäker, Mme. Florent Stepman, Roi Albert and Reine Elisabeth. In 1916, a Dutchman, Jan Van Tol, introduced a white variety which he named for himself; while very handsome at its best, it has not yet won a permanent place in American gardens. I can get along without these varieties in my garden if I have the Lemoine introductions from 1900 to 1916, for in every one of these years, except 1908, the great Frenchman introduced one or more indispensable Lilacs. After so many years they can hardly be called new, but let us call them good *standard* kinds. These fine Lilacs include:

1900. Georges Bellair. (Dwarf; a good double red.)
Président Viger.
1901. Président Loubet.
1902. Jeanne d'Arc.
1903. De Mirabel. (A unique slate-blue.)
L'Oncle Tom.
Miss Ellen Willmott. (The best double white.)
1904. Réaumur.
Waldeck-Rousseau.
1905. Charles Sargent.
Christophe Colomb.
Duc de Massa.
Montgolfier.
Olivier de Serres. (Fine double blue.)
René Jarry-Desloges.
(What a year!)

Lemoine's Hybrid Lilac, Decaisne, growing at Breeze Hill

Flowering bulbs are the highlights of the spring garden

1906. Victor Lemoine.

1907. Jules Ferry.
Léon Gambetta.
Montaigne.

1908. ————

1909. Hippolyte Maringer.
Mme. Antoine Buchner. (My favorite among double pinks.)

1910. Cavour. (A violet-blue.)
Decaisne. (Always glorious; see illustration, p. 5.) Maréchal Lannes. (One of the largest of all Lilacs.)

1911. Gilbert.
Président Fallières.

1912. Henri Martin.

1913. Marceau.
Monge. (The strongest growing deep purple.)
Président Poincaré.
Thunberg.
(Another vintage year!)

1914. Magellan.

1915. Emile Gentil. (The bluest double.)
Paul Thirion.
Mont Blanc. } Still our two finest single white forms.
Vestale. }

1916. Edith Cavell. (Creamy white double.)
Vésuve. (Dwarf purple.)

These, then, are desirable, standard, thoroughly tested kinds, yet they are new to thousands of American gardeners, and even to blessed Pennsylvania, home of those American nurserymen pioneers of better plants, J. Wilkinson Elliot and Bertrand H. Farr. They brought them to this country, offered them to an unappreciative public, and lost many of them.

Mr. Havemeyer always said it was unfair to judge a Lilac until a good, strong, ten-year-old plant could be seen. Acting on this principle, I shall next consider as *newer* Lilacs those varieties that are more than ten but less than twenty years old, namely the introductions of 1917 to 1927 inclusive. In this group, for the first time, American varieties appear. Of these my two favorites are Mrs. W. E. Marshall (Havemeyer, 1924) because it is so red, and President Lincoln (Dunbar, 1916–28) because it is the bluest of all Lilacs. Three others of the late John Dunbar's varieties, Adelaide Dunbar, General Sherman, and William C. Barry, are considered to have been introduced into commerce between 1916 and 1928, but no more definite record apparently exists. These and A. B. Lamberton, Calvin C. Laney, Elihu Root, and Joan Dunbar are all to be seen at Highland Park, Rochester, N. Y. They are fine varieties, but with the exception of President Lincoln do not seem to be distinct enough from the older Lemoine introductions to warrant their being named and sent into commerce. Since these hybrids have not won any recognition during these past ten years, I doubt if they are ever going to become popular.

Undoubtedly, the Lemoine varieties of the same period are far superior. Considered year by year, they are:

1917. Maurice Barrès.
1918. Carmen.
1919. Boule Azurée.
Capitaine Baltet.
Rochambeau.
1920. ————
1921. ————
1922. Katharine Havemeyer.
Le Notre.
Mrs. Edward Harding.
1923. Archevêque.
Marie Finon.
Marengo.
Masséna.
1924. Général Pershing.
Maréchal Foch.
Paul Deschanel.
1925. Capitaine Perrault.
1926. ————
1927. Etna.

Ruhm von Horstenstein (Wilke), from Germany, and the Dutch variety Hugo de Vries (Keesen) were introduced in 1927; but not having seen them, I can offer no report.

Following Mr. Havemeyer's dictum, it would probably be unfair to try to form any distinct or final opinion of varieties introduced from 1928 to 1936, because they are not yet ten years old. Brief comments on them, however, are in order. In 1928 and 1929 a new American breeder, Mrs. Hulda Klager, of Woodland, Wash., appeared on the scene with Abundant Bloomer, Alice, Clara, Mrs. Morgan, My Favorite, Ostrander, R. W. Mills, and, possibly, other varieties. These may yet make their mark, but to me it seems extremely unlikely. This assumption is made because all reports on them that have reached me have been either noncommittal or unfavorable.

For a period of ten years, Mr. Havemeyer, in Long Island, produced a great many seedlings. The varieties Moonlight, Night, Sarah Sands, True Blue, and Zulu are extraordinarily fine as seen in his nursery. If they do as well elsewhere, they are to be reckoned with in the future. Several of them are now under test at Swarthmore College, but I have no information as to whether they have been or will be sent into commerce.

We come now to the Lemoine novelties. With the long and honorable record of Emile Lemoine, we may feel confident that all the varieties he introduces must have great merit in his garden. How they will adapt themselves to a new country is quite another matter; the following kinds should be tried, realizing that all of them may not be satisfactory growers under our conditions.

1928. Madeleine Lemaire.
Prodige.
1929. ————
1930. Ambassadeur.
Crépuscule.
Diplomate.
1931. Candeur.
1932. Firmament.
Rosace.
1933. Amy Schott.
1934. Monument.
1935. Savonarola.
1936. ————

Now I will go back to my promise to list the best varieties raised by other breeders than Lemoine. I would like to begin with Macrostachya, Lucie Baltet, and Mme. Francisque Morel, and then add President Lincoln and Mrs. W. E. Marshall. That finishes the fingers of one hand, and then I do just what Mr. Havemeyer always did, cough, sneeze, and apologize for not being able to think of five more. Perhaps Mme. Florent Stepman, Jan Van Tol, Ruhm von Horstenstein, Night, and True Blue belong on the other hand, but please don't say I said so; I don't know! I think they ought to be tried with an open mind.

My list of indispensables grouped according to color is:

	Single	*Double*
WHITE:	Marie Finon Mont Blanc Vestale	Edith Cavell Jeanne d'Arc Miss Ellen Willmott Virginité
VIOLET, BLUE, AND BLUISH LILAC:	Cavour De Mirabel Decaisne President Lincoln Boule Azurée Maurice Barrès	Emile Gentil Maréchal Lannes Olivier de Serres Président Viger René Jarry-Desloges
LILAC:	Vulgaris Marengo Masséna Maréchal Foch	Henri Martin Hippolyte Maringer Thunberg Victor Lemoine
PINKISH:	Lucie Baltet Macrostachya	Mme. Antoine Buchner Waldeck-Rousseau
MAGENTA TO RED:	Congo Mme. Francisque Morel Mrs. W. E. Marshall	Georges Bellair Paul Thirion
PURPLE:	Capitaine Baltet Monge Rochambeau Vésuve	Archevêque

There are 22 singles and 18 doubles—that is enough for one day!

Have You Tried These?

By ANNE B. WERTSNER

SOME of our most worth-while plants are seldom seen in gardens. Is it because they are not known at all, or because we hesitate to try those we do not know well?

A few years ago, while visiting at Kew and Wisley Gardens, I was impressed with some plants which I had never seen growing in the United States. They were unusually attractive, and I was prompted to grow them at the School of Horticulture, Ambler, Pa., where they proved very satisfactory. Now the plants are available from nurserymen, and seed can be obtained from Rex D. Pearce, Merchantville, N. J., Sutton & Sons, Ltd., Reading, England, or Thompson & Morgan, Ipswich, England; it only remains for garden-lovers to try them.

Nierembergia frutescens is a plant from tropical America, somewhat resembling *Linum perenne* (Flax) in appearance, and it blooms almost continuously in the garden. Since it is not hardy, it can be potted in the fall, taken into a greenhouse or sun-porch, pruned lightly, and kept until spring. Cuttings, which root readily in sand, can be made from the new shoots when they are about three inches long. Pinch the new growth several times before planting out, to induce branching. The plants come into bloom about the end of June, and are covered with pale lilac to white flowers nearly an inch in diameter, presenting an airy, cool aspect throughout the season. Plants may be grown from seed also.

Nierembergia hippomanica, a half-hardy annual, may be treated as a conservatory plant or as a companion to White Cup, *N. rivularis*, in the rock-garden. This little gem, with its lavender flowers accentuated by clear yellow eyes, and borne in great profusion, is awaiting the acclaim of critical gardeners.

From the Himalayas came *Amphicome arguta*, a delightful greenhouse plant of herbaceous growth. Terminal racemes of delicate rose-colored, trumpet-shaped flowers are a striking feature of this three-foot plant. The blossoms are valued for their keeping qualities, and the foliage remains attractive throughout the year. More desirable winter-blooming plants like *A. arguta* are needed to brighten dull days.

Sages are getting their share of attention, and I would like to point out *Salvia pratensis Tenori*. It is well to remember that many of the sages have crowns of fleshy growth which demand well-drained positions in the garden. Flowers of lavender-blue on spikes of a desirable length for cutting arise from a luxurious growth of foliage. Here is a plant for June and July, two feet tall, that should be added to the list of blue tones which are most essential in any well-planned garden.

Our Field Secretary Serves

VERY diversified is the list of lectures now offered by Miss Anne B. Wertsner, Field Secretary. Colored lantern slides are used to illustrate the following talks: The Spring Garden; Perennial Gardens; The Shaded Garden; The Wild Garden; How Roses Are Produced, and Their Care; Some Lovely Gardens in the Vicinity of Philadelphia; Gardens and Plants from Here and There; Rock, Wall and Moraine Gardens.

Demonstrated talks are given on Flower Arrangement; Plant Propagation; Seed Sowing, Pricking and Potting; Making Christmas Wreaths or Holiday Decorations. Other practical talks available are: Spring Work in the Garden; Continuous Bloom in the Garden; Annuals and Perennials; Bulbs in the Garden; The Forcing of Bulbs for Winter Bloom; House Plants; Good Garden Books and Catalogues; Vines; Preparing the Soil in the Garden; Manures and Fertilizers for the Garden and Pot Plants; The More Prevalent Insect Pests and Diseases; Hotbeds and Coldframes; Plants for the Cool Greenhouse; The Lawn and Its Care; Shrubs, Their Use and Care.

It is possible for a garden club or clubs in the same vicinity to arrange to conduct short courses or a series of three or four talks on consecutive days. These are offered at considerably lower rates, to the advantage of the club. Miss Wertsner will be glad to assist with the organization of garden clubs, and the planning of programs.

Circulars concerning fees will be sent on request. Please feel free to make inquiries about this service, and use it as much as possible. (Write the Philadelphia office.) Your coöperation is asked.

What Is a Flower Show for?

NOT a few of the many thousands of people who view the great 1937 Philadelphia Flower Show will return home exclaiming, "Ain't nature wonderful?" Undoubtedly, the sentiment is a true one, and yet, there is something far more significant about any attempt to reproduce a natural landscape or to portray a trained horticulturist's idea of a garden. In short, any well-planned exhibition of plants is conceived with the idea of imparting knowledge and offering suggestions. Every garden enthusiast is eager to create vistas which will make this confused world of ours a more habitable place in which to carry on. It is, then, with the idea of acquiring knowledge in addition to satisfying our esthetic sense that we meander through crowds of people to study and to enjoy a flower show.

It may be that we are searching for new and unusual plants, or, perhaps, we are looking for ideas for a new garden plan, or it may be that we are engrossed in the study of flower arrangement. We may even be intrigued by new garden gadgets. Whatever the interest, we ride it hard, as every real hobby should be ridden.

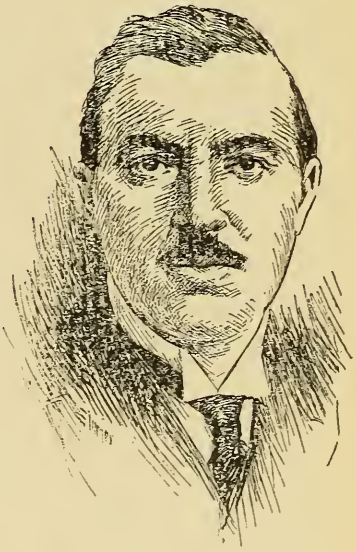
A small notebook will prove invaluable for jotting down notes or sketches at the Flower Show. It is not so much that we expect to refer to those notes as it is that we have registered a thought or an impression. There is always so much to see and so much detail to absorb that some form of record is worth while.

Let us hope that garden lovers are not so lacking in ideas as to attempt an exact reproduction of a garden picture seen at a flower show. On the contrary, we must be able to capture the spirit of what we see. Then, it remains for us to inject our own personality into the new garden we are making or changing.

Frequently, plant adaptability is not considered; we need to use common sense. Plants at a flower show are displayed and, for that matter, have been nurtured under ideal conditions. We need to combine the use of what we have with this same common sense.

What is a flower show for if it is not the unfolding of a growing book of knowledge, to inform and inspire all who know the joy of gardening?

The Philadelphia Flower Show



It is hardly necessary to stir the imagination of the members of The Pennsylvania Horticultural Society with glowing descriptions of the plans that are being perfected for the great exhibition which will take place on March 8 to 14 at the Commercial Museum. The distinguished British horticulturist, Lord Aberconway, president of the Royal Horticultural Society (whose portrait appears here), is to be our guest. A dinner to him will be given at the Penn Athletic Club at 7 P.M. on March 9. (Get busy for tickets!) His plans also provide for visits to the exhibitions at New York and Boston.

The Boston Flower Show

On March 12 to 18, our sister Society in New England will present the New England Spring Flower Show, at Mechanics Building. The best these plant-loving friends can prepare for an increasingly interested and acute public is anticipated. It is obvious that interest in flower shows is increasing, not only in extent but also in quality—a fine thing for horticulture in America.

Our Boston friends will do themselves proud with a dinner and reception for the members of the Massachusetts Horticultural Society and their friends in Horticultural Hall at 7 o'clock on the evening of Saturday, March 13. So heavy is the advance demand for this event that a limitation of three tickets to each member has been established.

The New York Flower Show

This tremendous exhibition will use four floors of New York's Grand Central Palace, March 15 to 20. It will include many distinctive features. Who of us dares miss it?

A Garden of Native Charm

IT IS not with the hope of recognition that true garden-lovers set out to make unique gardens, but rather with the idea of improving some unsightly or commonplace vista. However, the Pennsylvania Horticultural Society is never slow in recognizing the exceptional achievement of enthusiastic amateurs. Accordingly, the Committee on Garden Awards selected ten outstanding gardens for the year 1936. Were it possible, we would describe all of these gardens in detail. But since we must count words, we are calling attention to one which offers valuable suggestions within the reach of many Pennsylvania gardens.

Truly unique is the silver-medal garden of Dr. Edwin Shoemaker, at Brookside Farm, Poali. Situated on the slope of a wooded hillside, with a free-flowing stream at its base, it provides an ideal background for the many wildings that have been assembled there. Originally, the soil was strongly alkaline with an outcropping of limestone. Since many of the woodland plants required an acid condition, aluminum sulphate, hardwood humus, sand, and peat were incorporated with the existing soil.

An amazing collection of plants, including Shortia, Galax, Partridge-berry, Foam-flower, Rattlesnake Plantain, Shooting-star, Spotted Pipsissewa, Dwarf Iris, Trillium, Hepatica, Lady-slipper, and Wild Ginger, have been established in the shady areas. Such shrubs as Carolina Rhododendron, Laurel, Azaleas, Leucothoë, and Dogwood have been utilized to good advantage. Ferns, mosses, and lichens indigenous to the area have been improved by the introduction of masses of weathered sandstone which retain the moisture during dry seasons.

It is evident that the maker of this garden, fascinated by the ecological relationship of plants (which is nothing more than the study of the environmental conditions under which plants grow), applied his common sense in developing his wild garden, with the result that the plants have adapted themselves to the conditions which were made desirable by human effort.

Indeed, native plants offer unlimited possibilities for use in our gardens.—WILLIAM J. SERRILL, *Chairman.*

Wild garden of Dr. and Mrs. Edwin Shoemaker, Brookside Farm, Paoli, Pa.
Awarded Silver Medal, 1936. (See page 14)

Narcissus naturalized along the edge of a woodland

Thelma, a variety of Narcissus poeticus

Naturalize Some Daffodils

By JOHN C. WISTER

NO FLOWER is better adapted for naturalizing in meadow or woodland than the Daffodil. The bulbs are cheap, and available in practically unlimited quantities. They can be planted in September or October and then forgotten, and if the varieties are well chosen, they should bloom year after year for an indefinite period.

True, the individual specimens will not be as perfect as those in the well-cared-for garden, nor will the increase of bulbs be as rapid as under nursery conditions, but the pleasing general effect should continue good for many years.

What are the best varieties for naturalizing? That is, of course, largely a matter of opinion. My own feeling is that the smaller-flowered types, such as Poeticus, Barri, and Incomparabilis are better than the large-flowered trumpets like Van Waveren's Giant or Olympia. I much prefer to see reasonable-sized masses of one variety rather than mixtures, or an entire meadow or woodland planted solidly. In other words, I prefer small drifts, five to ten feet across, or even fifty to one hundred feet across, or not much larger, and then an interval of grass or foliage plants or wild flowers alternating with similar drifts.

Among my favorite varieties for naturalizing are Sir Watkin and Mermaid for early; Torch, Albatross, Seagull, Conspicuus, Firebrand, Queen of the North, and White Lady for midseason; and Glory of Lisse, Thelma, and Recurvus for late. With the exception of Sir Watkin, Torch, and Conspicuus, these varieties are white. All of them are good growers, and they can be purchased by the hundreds or thousands at extremely low rates.

There is no need to buy the "top-size double-nosed" bulbs. Good round bulbs will be satisfactory. It is well, however, to prepare the soil as well as possible. When planting in grassland, for instance, it is much better to turn under the grass and cultivate it during the summer; then plant the bulbs in the friable earth, and sow grass seed after the bulbs are planted. In this way, the growth

of the new bulb does not have to compete with the roots of old sod.

As naturalized bulbs are not expected to be cultivated or lifted frequently, it is well to remember them often enough to give them a little food occasionally. On grassland this can be done by mulching the sod with barnyard manure in the late autumn, or by applying sheep manure in the early spring. In woodland a chemical fertilizer is probably preferable, and either bonemeal or acid phosphate may be used. Wood-ashes are always suitable.

Best results in naturalizing in woodland are obtained when the shade is fairly high, or when there are open glades into which the sunlight may filter. Neither Daffodils nor any other spring bulbs will do well in dense shade; they need partial sun.

The accompanying photograph, on page 16, shows how charming this type of planting may be. We hope that many more people take up this type of gardening, which is cheap to begin with, and practically without cost for upkeep.

Moisture for House-Plants

Air and moisture conditions in the average home are by no means ideal for house-plants. Accordingly, provision must be made for increasing the moisture content in the air. To help, containers filled with water should be placed near radiators. Frequent change of air by means of ventilation must not be overlooked. It has been found advisable to spray plants every two weeks during the winter months. Place the plants in a laundry or bath tub; apply the water with a fine spray, and allow the foliage to dry off before replacing your plants at the windows.

No definite rules can be given for watering. The container, the nature of the plant-growth, and the temperature and moisture in any given room, are the determining factors. The soil in the pots should be moist, but never soggy, nor should the pots ever be allowed to rest in water for any length of time. Some people prefer to water all their plants from below. In this case allow the plant to stand in water until there is evidence that sufficient water has been absorbed. Those who water plants from the top can easily tell when the soil in a pot is thoroughly moistened by the presence of water in the saucer.—DAVID RUST, *Consultant.*

The Foundation of Gardening

THE foundation of gardening is, of course, *gardening*, for knowledge comes best by experience. To be sure, the realm of experience is unlimited; but the span of life is brief. Fortunately, there is a short-cut for those who care to make it. Come often to the library of The Pennsylvania Horticultural Society where over 5,000 volumes on gardening are available on the shelves. Read of the experiences of others who have made gardening their life-work. Profit by the life studies of hundreds of garden-minded men and women. Enjoy the stories of travel of the world's distinguished botanical explorers. Learn about all the fascinating new and rare plants that have been recently brought into cultivation.

The library is a delightful room with comfortable chairs, good lighting, and tables at which to read. It is a wonderful place to spend a rainy day, "to read, mark, learn, and inwardly digest" the knowledge it contains.—MRS. J. NORMAN HENRY, *Chairman.*

Even the Japanese Like the Idea

THROUGH the courtesy of the executives of the Pennsylvania Railroad Company, the use of the main concourse of their magnificent Thirtieth Street Station in Philadelphia was granted to the Society for its Dahlia and Fall Flower Show. In addition, the officers and employes of the Company joined with the members and friends of our Society in making this one of the most beautiful and popular dahlia shows ever staged in Philadelphia. Exhibits were received from near-by states and from as far west as the Pacific Coast. Not only Philadelphians and residents of adjacent territory were enabled to enjoy this free exhibit of outstanding blooms, but the traveling public was also given an opportunity for the same enjoyment. Officials of the Japanese Government Railroads were so impressed with the possibilities for the encouragement of gardening among their employes that a special bulletin on this Show was disseminated throughout Japan. It is expected that this will be the forerunner of many similar flower shows sponsored by the personnel of our own railroads.—J. V. HARE, *Chairman.*

What the Professors Are Doing

THAT the professors at State College are genuinely interested in amateur horticulture is evidenced by the fact that detailed plans have been made for a large Display and Research Garden which will eventually contain most of the plants desirable for Pennsylvania gardens. Then, too, a special area will be devoted to a collection of trees and shrubs native to Pennsylvania, with the idea of suggesting possible plant combinations in an ecological relationship. As soon as funds are available for this undertaking, the plan will be put into operation. When completed, this garden will come to be the show-place of central Pennsylvania.

However, during the coming year experimental plots will be used for the testing of Petunias, Dahlias, Gladiolus, and the more important perennials. It is with the idea of determining trueness to type, as well as desirability, that these trials are being undertaken. Why not visit the trial-plots during the summer of 1937

At the present time one may find at State College some 800 species of woody plants, in addition to more than 1,400 species and varieties of hardy perennials, growing in various parts of the campus. Unquestionably, an even greater and more complete collection of plant material should be assembled at Penn State. Such a collection can be developed if the garden lovers of Pennsylvania lend their support to the extensive program that has been planned. What is most necessary is the expression of honest opinion regarding the proposed Display Garden to the men who govern our Commonwealth.—E. I. WILDE, *Extension Committee.*

To Each Member-Reader

If you like this first issue of the Pennsylvania Gardens Quarterly, do two things about it, or better three things. *First*, sign and mail the enclosed necessary subscription card (no postage needed); *second*, make suggestions for future numbers to the Editor, Box 687, Harrisburg, Pa.; *third*, get a friend to come into the Society with you as a member. Bring him (or her) to the Philadelphia Show, March 8–14, and by all means call at the office on the Sixth Floor of 1600 Arch Street for a little rest in the delightful library.

PENNSYLVANIA HORTICULTURAL SOCIETY

1600 Arch Street, Philadelphia

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The Members are urged to consult and to coöperate with the Committees

Vol. I, No. 2

JUNE, 1937

PENNSYLVANIA GARDENS

Going in with Swarthmore

(See page 12)

A Quarterly—Issued for

THE PENNSYLVANIA HORTICULTURAL SOCIETY

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The Pennsylvania Horticultural Society

1600 Arch Street, Philadelphia

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PENNSYLVANIA GARDENS—*A Quarterly*

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The September Number *will present the newer Chrysanthemums and late Perennials.* The December Number *will take the garden through the winter.*

THE MARY LAWRANCE ROSES OF 1799
Reproduced from "A Collection of Roses from Nature" published in London in 1799 by Mary Lawrance, and now very rare.

Hemerocallis lend a dominant color note to the summer garden

PENNSYLVANIA GARDENS

Edited and Published at Harrisburg, Pa.,
for The Pennsylvania Horticultural Society

In this second issue of PENNSYLVANIA GARDENS *we have endeavored to record information especially applicable to Pennsylvania. Mrs. Henry's article on day-lilies is the result of lively experience at Gladwyne. Gordonia is treated fully, in order to clear up legends which have misconstrued the facts for years. Miss Wertsner tells of eleventh-hour possibilities with perennials.*

Pennsylvania has many gardens, large and small, some of them really outstanding. We of The Pennsylvania Horticultural Society need to know and tell of them, for the Keystone State should be gardened back to the beauty it had when Charles II "granted" it to William Penn. We welcome information about good gardens.

The September issue will tell of chrysanthemums, late perennials, house plants, wistaria, tree peonies, and other treasures. But we want to hear from members who have or know of good garden material. What have you?

Hemerocallis in My Garden

By MARY GIBSON HENRY*

OF ALL the plants which bloom in our gardens none produces a more lavish summer floral display than the modern Hemerocallis, or Day-Lily. Few perennials are more adaptable to the many different growing conditions which must be faced.

Hemerocallis bear, with equanimity, the cold sub-zero winter temperatures of our northern states and the hot, dry summers of the South. In the spring of 1935 I saw them growing in Florida, and that autumn I saw them in Alaska. They seemed equally happy in both places. Whether they are growing in sun or shade, in dry or moist soil, in heavy, rich loam, or in flimsy sand with little care, they thrive and increase mightily from year to year.

Their copious sheaves of healthy, deep green foliage form a fine setting, and from their midst arise the splendid, fiery "lilies" with all the grandeur of well-nurtured beauties of the tropics. Highly

*With Mrs. Henry's consent this article is reprinted, with revisions, from "Little Gardens," a Seattle publication.

desirable for borders, formal or naturalistic plantings, Hemerocallis may be used also to decorate the elaborate garden of a palace or the modest flower-bed beside a cottage door.

Although the blooming season of Hemerocallis begins in May and ends in September, it is during the month of July, and often in August, that they are in their glory, filling our gardens with gaiety and beauty.

Most of us have known and loved the old-fashioned Day-Lilies of a bygone day. We who live in the East can easily recall great masses of reddish orange or yellow Day-Lilies with a quaint white-washed cottage for a background. These must have been planted many, many years ago. Hundreds of such enchanting scenes are to be found every season throughout the countryside of the eastern states.

Hemerocallis do not require dividing and replanting every few years as do iris, delphiniums, and many other plants. On the contrary, they develop large clumps, thus making great splashes of color that no other hardy plant growing in our latitude can approximate in splendor. Then, too, they seem to be almost immune to the attacks of insect enemies.

In recent years the hybridist has turned his attention to these flowers, with the result that there is now available for our gardens, a magnificent collection of new-fashioned, old-fashioned flowers, in form far superior to the old ones and in color richer and more varied. Dr. A. B. Stout, the foremost hybridizer of Day-Lilies, has written: "There are at the New York Botanical Gardens about 10,000 seedlings of recent breeding and some 500 seedlings that have been considered as the best among 50,000 seedlings grown during the past 20 years." I visited Dr. Stout's collection three years ago and was simply amazed at the beauty and diversity of bloom and the richness of color of these wonderful flowers.

There is a great treat in store for those who acquire these marvelous new Stout hybrids.

Those who enjoy flowers for the sake of sentiment surely will want the orange-colored *Hemerocallis fulva* and the old-time yellow *H. flava*. They are, and always will be, precious midsummer flowers. These two types were cultivated in the Orient perhaps 400 years ago, and it is interesting to think, when we are looking at

them, that they probably decorated the palace grounds of the Persian kings long ages ago.

Although some of the newer hybrids are more costly than most perennials, it is possible to make a collection of desirable varieties over a period of years at no great expense.

Among the improved varieties of Hemerocallis are the following:

ANNA BETSCHER (July, August), one of the best of the late bloomers, has fine, large, orange-yellow flowers.

APRICOT (May, June), an early, highly desirable apricot-yellow, is of good form.

AURANTIACA MAJOR (July) has deep orange flowers and is rather a dwarf grower.

BIJOU (July) was raised at the New York Botanical Garden by Dr. Stout, who says it is a "selection from many seedlings of a new race of small-flowered Day-Lilies." It is semi-dwarf and bears quantities of rich reddish flowers. An outstanding little Day-Lily of the new Multiflora type.

CINNABAR (July) has orange flowers that look as if they were sprinkled with powdered cinnamon.

CRESSIDA (July, August) has bright orange flowers with showy red markings.

CROWN OF GOLD (June) is a large orange-yellow sort.

FLAVINA (June), an extremely pretty little Hemerocallis, has pale yellow flowers, beautifully formed.

FULVA MACULATA (July, August), with its showy orange flowers having reddish splotches, has definite value.

FULVA ROSEA (July), a new type, has flowers of a most beautiful rose-pink.

GAY DAY (July, August) is a fine yellow and a late bloomer.

GOLDEN DREAM (July, August), a late variety, has orange-yellow flowers.

GOLDENI (July) is of attractive uniform orange color and of fine form.

GRACILIS (June), a pretty, dwarf-growing plant, has small yellow flowers.

HYPERION (July) is tall, with large yellow flowers, and one of the best.

KWANSO FL.-PL. (July), a choice, double-flowered old sort, is orange.

MARGARET PERRY (July to September) has medium-sized, orange-red flowers and a long blooming season.

MIDAS (June, July) carries 5-inch blooms colored a rich, glowing orange, and is a very valuable plant.

MIKADO (June) bears large, finely formed, bright orange flowers with big patches of dark mahogany-red. It is very brilliantly colored, and perhaps the most showy of all. Should be in every collection.

NADA (June, July), a dwarf grower, only a foot tall, bears comparatively large flowers of a striking shade of rich, dark red.

NOCORENSIS (July) has canary-yellow flowers with ruffled petals.

OPHIR (July, August), a vigorous plant, has splendid large yellow flowers.

RADIANT (July) is orange, and extra choice.

RAJAH (June, July), like a darker, later Mikado, has large flowers and is a very strong grower.

ROSE QUEEN (July to September) is pinkish with yellow, and has a long blooming season.

RUTILANS (June, July), a dwarf grower; it has yellow blooms.

SONNY (July, August) has large, beautifully formed flowers that are pale yellow and long lasting. One of the very best yellows.

SOUDAN (July) is splendid in every way, and has lemon-yellow, broad-petaled flowers.

SUNNY WEST (August) has fine pale yellow flowers and is valuable on account of its late-blooming habit.

TANGERINE (June), a handsome semi-dwarf plant, bears beautiful flowers of a fine orange.

THERON (July) has startling dark blackish red flowers that are magnificent beyond belief. One of Dr. Stout's wonderful new creations.

TODMORDEN (June), an attractive plant, has well-formed, medium-sized flowers of rich, golden yellow. This has always been the latest to bloom, with me.

VULCAN (July) is a new Hemerocallis of Dr. Stout's and one of the finest plant introductions of recent years. It bears large flowers which are colored a lovely full rich red of great depth. It is amazingly beautiful, and at present very rare. No collection will be complete without it.

Recent acquisitions are Chengtee, Wolof, and Patricia, all three raised by Dr. Stout. These have not yet bloomed in Gladwyne.

All of the foregoing are growing on my home-grounds. I could not willingly spare any of them, for all are desirable and all are different. They provide a splendid display of flowers for me from June until September.

As for their span of life, there seems to be no limit. On an old farm adjoining my home there is a great mass of *H. fulva* over 60 feet in diameter, and when in bloom it provides a sight not easily forgotten. The owner died last year at the age of ninety-four. Her husband's great-grandfather lies peacefully beneath the Hemerocallis, undisturbed, let us hope, forever.

Roses in Pennsylvania

By J. HORACE McFARLAND

THE extraordinarily rich native flora of Pennsylvania includes a half-dozen roses. Of these, *Rosa setigera*, the Prairie Rose, and its hybrids, which gave us Queen of the Prairies and the like, are most prominent.

But Pennsylvania, including in its population humans of the best strains in the world, deserves to be preëminent as a state of rose-gardens, both public and private. So far as climate and oppor-

tunity are concerned, no state in the North can be more favorably related to the Queen of Flowers.

Pennsylvania Gardens, both as the quarterly expression of the great Society which is its sponsor and as a fact, ought to have many good roses. Undoubtedly, the gardens of Pennsylvania are full of good roses, but we don't know about them. The comprehensive survey of the new roses of the last five years included in the "Proof of the Pudding," found in the 1937 American Rose Annual, in which 226 varieties are discussed by 96 contributors, contains but six reports from the Keystone State. New York, Ohio, Maryland, and Massachusetts seem to have many more roses, and this is not right.

So this is a request to those Pennsylvanians who have good roses in their own gardens to tell the Society of their treasures, old or new. The intimate connection with the American Rose Society possible because the editor of this publication is also the American Rose Society's editor, means help in cases of difficulty, and a much wider reach into the rose world at less expense if the facilities suggested are used. It is hoped, therefore, to hear much about many rose-gardens in many parts of Pennsylvania. We can have roses in our gardens. We do have them abundantly and beautifully and successfully in the commercial establishments which provide us with vast quantities of cut-flowers. But one rose from one's own garden, cut with the dew of a June morning on it, has a value wholly out of comparison with any values presented by the most beautiful productions of the forcing greenhouse.

Then there are other reasons for stirring up the rose-lovers in The Pennsylvania Horticultural Society. Undoubtedly, John Bartram had all the roses there were in his time. "Old roses" came to Pennsylvania gardens, and now there is a renewed interest in old roses, particularly manifested in two admirable books which may be consulted in our library. We are reaching into the larger library of our own gardens to know more about these old roses. The York and Lancaster rose, which celebrated the Wars of the Roses more than four hundred years ago, is with us yet. Some of the old Cabbage roses, sweeter than any modern productions, are in some gardens. Let us bring these treasures to light and get acquainted with each other through the shows that can be arranged. Let us

read about them in Mrs. Keays' "Old Roses," and in Bunyard's recently published English book, "Old Garden Roses."

Then there could be, in addition to very many more well-ordered private rose-gardens throughout the state, public rose-gardens. It is the belief of this editor that every human being in the state is entitled to at least one rose, either in his own garden or in a municipally maintained garden where he can as a citizen enjoy it. Under this prescription the City of Brotherly Love is by no means a city of brotherly roses, for Philadelphia has no municipal garden for roses, though there has been much casual discussion which long ago should have brought forth rose-gardens as creditable as those in Boston, in Bronx Park, New York, in Brooklyn, in St. Louis, in Fort Worth, in Rochester, and a hundred other American cities awake to the charm of the rose.

It will be said by those who read these words that one can't grow many roses in an apartment. That is true. It is also very true that the man or woman denied access to the soil which will take care of one rose (and it takes only a square yard to have one rose) can help tremendously by insisting on the municipal provision for the rose he or she is entitled to. He can "root" for a public rose-garden.

Pennsylvania is sadly lax about roses, as I have noted. Pittsburgh has no public rose-garden, but much smaller cities, Allentown and Bethlehem, have admirable rose-gardens, visited largely and participated in with great joy by the citizens of these and other cities. My own city of Harrisburg has no municipal rose-garden (though one is discussed), but I presume Breeze Hill, with its very large collection, drawing visitors from all the country, could be considered as serving the public in that way. At Hershey there will be coming into bloom about the time these words can be read, a very great garden established under suggestions originating at the meeting of the Federated Garden Clubs of the State last year.

The suggestion was eagerly availed of by Mr. Hershey, and his extremely capable horticultural man, Mr. H. L. Erdman, a member of the Pennsylvania Horticultural Society, has lovingly cared for some 8,000 roses which will open their first flowers this June. I cannot think of any way to make more people hungry for more roses than to recommend that they visit the Hershey rose-garden

some time during June and later. It can be reached easily over good roads, and is in full view, close to a dignified bit of natural woods and near a lovely pool, between the great Hershey Hotel and the village of Hershey. There is in this garden no memory of the contemptible strike a few weeks since, in which the "embattled farmers" of Pennsylvania certainly did a good job!

Pennsylvania needs roses along her highways, and every member of the Society can do good work if he will insist that highway plantings include the natural, native wild roses of the state. We can easily absorb a million roses in 1938, beginning in the fall of this year, to make the Keystone State a rose state.

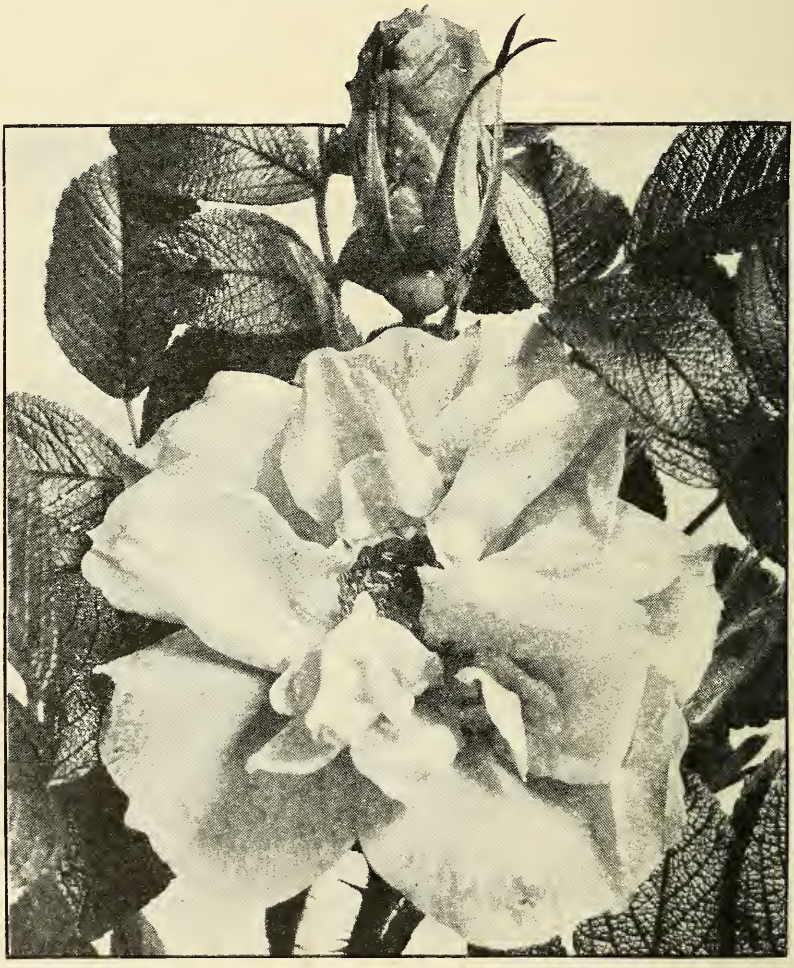
The supply of roses for Pennsylvania can be obtained readily within the state. Having a wide acquaintance with rose-growing the country over, I can assert, and do assert, that nowhere are better plants produced than those grown in Chester County, Pa. Two generations of rose-production have brought about in these establishments a knowledge of how to grow good plants, how to store them, and how to ship them. Pennsylvania rose friends, therefore, need not send to Texas or California for roses, although good plants can be obtained from many states. There is the opportunity for what one might call the "cash-and-carry" trade which ought to bring about the sort of wonderful rose success that can be seen at the Hershey garden mentioned above. Mr. Erdman was extremely particular to get good plants, to get them fresh without storage deterioration, and to plant them carefully. The result was almost ideal in perfection of growth obtained.

Rose-growing is not complicated, but easy. Those who search in our library may find plenty of the older books, the reading of which would tend to convince the aspiring rose planter of the necessity for difficult and expensive preparation and maintenance. These things may have been necessary for England, or France, or Germany. They are not necessary for fertile Pennsylvania. Any good kitchen garden in Pennsylvania has the conditions necessary to provide good roses.

It is not only to put the conventional Hybrid Tea roses in our garden, but to care for and carry along the old roses, that I write. It ought to be possible to see a hundred thousand rose plants, great splendid shrubs, displace that many hydrangeas and spireas that

have been overdone, for it is a fact that roses which will take place in the shrub border and do honor to it can be had easily. True, they do not bloom all the time; neither do the spireas or deutzias or lilacs. Roses do possess graceful form, good foliage, and there is always a promise of a lovely show the next year.

Many banks and hedges in Pennsylvania can be covered with roses. Thus, the Max Graf variety, ruggedly hardy, is a perfect bank protector, yet it never grows a yard high. Most of the hardy climbers will do good service as bushes with very little training. A rose-hedge is a thing of beauty. More roses in Pennsylvania!



Rosa rugosa produces a striking effect in the landscape

Wild Bird Haven—Joint Exhibit of The Pennsylvania Horticultural Society and the Garden Club Federation of Pennsylvania at the Philadelphia Flower Show, March 8–14, 1937

A Great Horticultural Opportunity

By JOHN C. WISTER

WHEN Dr. C. Stuart Gager, Director of the Brooklyn Botanic Garden, spoke at Swarthmore Founders' Day Exercises last October on the general subject of Horticulture and Education, he suggested that coöperation between The Pennsylvania Horticultural Society and the Arthur Hoyt Scott Horticultural Foundation of Swarthmore College would be most desirable for both institutions. He recognized that both the college and the Society were interested in education and that by working together they could further the appreciation of horticulture and encourage its practice.

Dr. Gager's suggestion bore fruit speedily, for Charles Jenkins, President of the Board of Governors of Swarthmore College, and Robert Pyle, a member of that Board, immediately began to discuss the methods by which such coöperation could be established. At their suggestion the President of the College and the President of the Society each appointed two members to a committee which was asked to work out practical details for an enterprise that might in the future grow to great importance. The Committee, consisting of Mr. Jenkins and Mr. Pyle representing Swarthmore College, and Mrs. Elliott and Mr. Pennock representing The Pennsylvania Horticultural Society, proposed the following resolutions, which were adopted by both institutions:

1. That a small joint committee of both organizations be appointed, this committee to be a policy making and supervising body to carry out the wishes of both organizations, this joint committee to be appointed by the respective presidents of the two organizations.

2. That the Society be provided with headquarters and place of meeting where a reference library may be established and which will act as a Center and Bureau of Information for visitors to the Arboretum.

3. That it is desirable for the Society to establish a committee or committees composed of horticulturally minded members and members of local Garden Clubs who will provide for the attendance of hosts and guides at certain times when floral displays are to be seen or at such other times as the public may desire to visit the Arboretum.

4. That it is conceivable a Garden Center might eventually be established where meetings and exhibitions might be held and for which suitable space would be provided by the College. This would increase coöperation and interest in the Society's headquarters at the College.

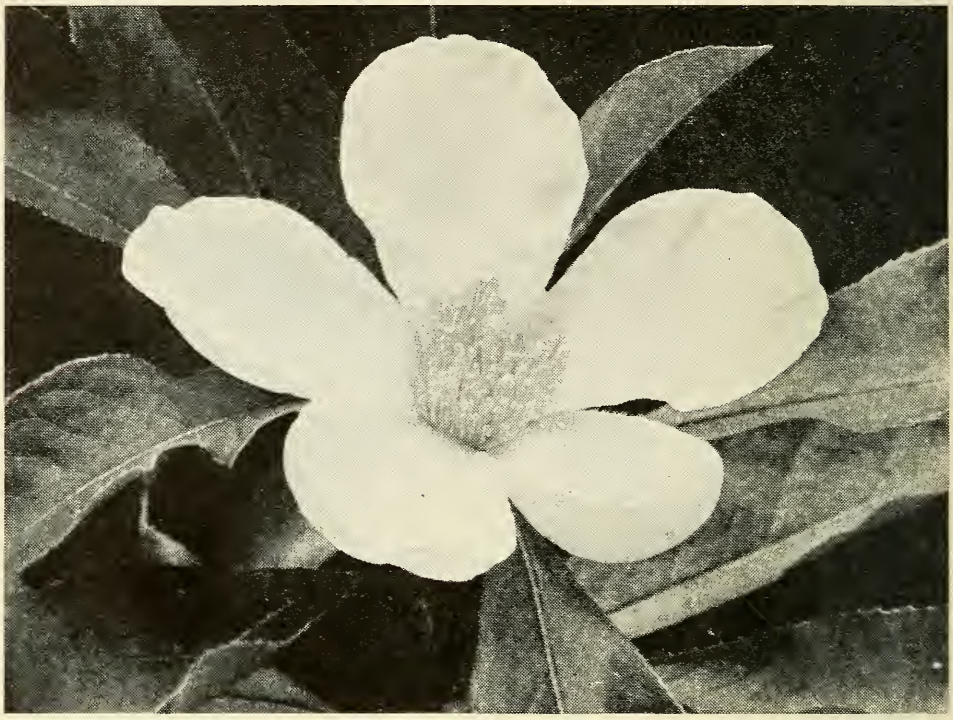
5. That the Society should be in charge of all public relationships in connection with the undertakings, employing their various outlets of publicity, such as their meetings, their publications, their bulletin board, and radio.

6. That it may eventually prove desirable to arrange practical and instructive classes for both adults and children with practical demonstrations at the Arboretum, these activities to be designated "Public Relationship," to which many other interests than those enumerated may be added.

7. That the College will continue the planting, maintenance and extension of the Arboretum, and also the care of the Society's office and exhibition rooms at the College; that the Society will be expected to pay all expenses incidental to meetings, demonstrations, public relationship and publicity, etc.

Two committees are to be appointed, the first to govern the policy of the coöperation, and the second to carry out this policy with concrete proposals. As a result, six afternoons, running from April 22 to May 27, were set aside for The Pennsylvania Horticultural Society, at which times members were welcome to visit the collection of flowering plants at Swarthmore, and ask questions about them. Representatives of the Society were in attendance for this purpose. While there is much of beauty to be seen at Swarthmore, emphasis will be placed on the practical horticultural instruction which may be received in answer to questions to the Society's representatives. They are to be ready to answer questions as to the names of the different plants and the country of their origin, the method of planting them and nurseries or florists from which they may be purchased, the approximate type of soil that they need and any special summer watering, winter protection, or protection from pests that may be required. By this service it is believed that Mr. Scott's dream of a place where people might bring their gardening problems will be realized. He often said that when he began gardening such information could not be had in Philadelphia or, at least, so far as the ordinary gardener was aware. He went to Rochester because he wished to study lilacs, and to Ithaca because he wished to learn about modern peonies. Both these places are well worthy of a visit for those who can go there, but to a greater number who cannot travel a long distance much horticultural information is now made available.

We hope that the members of the Society will find this Swarthmore service most valuable, and that it may be continued.



Gordonia alatamaha

The Story of Gordonia

By ELIZABETH C. WHITE

THIS exquisite, fall-flowering tree was brought in 1777 from the banks of the Altamaha River in Georgia to Bartram's garden at Philadelphia. John Bartram, recognizing its beauty and value, named it in honor of his lifelong friend, Benjamin Franklin. The change to the Gordonia name in accordance with botanical procedure is explained later.

The original grove of Franklin trees was again visited in 1790, but from that day to this no one has seen these trees growing in the wild, though many expeditions have searched the banks of the Altamaha for it. All known specimens of the Franklinia are believed to be descended from the little plant brought to Philadelphia a century and a half ago in an overloaded saddle-bag.

Franklin's tree is rarely beautiful in detail and marvelous in its landscape effect. Moreover, it blooms at a season when few shrubs or trees are in flower.*

The slender trunk and graceful branches are so muscular and sinewy in appearance that one almost expects motion, as under a greyhound's satin skin. Its smooth, dark gray bark has markings of lighter color wavering lengthwise.

Each twig develops at its tip a cluster of buds of graduated size, like overgrown greenish pearls, and the largest of these attain the size of marbles by early August. The guard petal then folds back, but the bud still retains its firm spherical form. From its shelter emerge four other petals, satiny, snowy white, elaborately frilled and pleated. The snowy chalice, 3 inches in diameter, holds a mass of orange-gold stamens and breathes a delicate, balmy fragrance.

Each flower lasts two to three days and then drops cleanly. There is a constant succession of bloom till hard frost. We frequently get the unusual effect of a tree clad in crimson autumn foliage and abundantly starred with white flowers. The Franklinia, as I like to call it, begins blooming when not more than 3 to 4 feet high. Young trees, under favorable conditions, increase in height a foot or more each season. Specimens 30 feet high are known. It develops naturally with several trunks, but may be trained to a single trunk by removing the sprouts which start from the base.

Full sun is preferable for this gem which has proved itself entirely hardy about New York and quite satisfactory in favorable locations about Boston. It is an especially desirable tree for the small, intimate garden, loved and lived in. As a lawn tree it is charming, and the grass may be allowed to grow closely about its trunk. Since it is indigenous to moist banks, it may be planted appropriately near pools, lakes or streams.

Bartram's Treasure, Gordonia alatamaha

Recording his travels in the year 1777, William Bartram wrote: "I had the opportunity of observing the new flowering shrub, resembling the Gordonia, in perfect bloom, as well as bearing ripe

*Lord Aberconway had sent to Bodnant a number of Gordonias this spring.

fruit. It is a flowering tree, of the first order for beauty and fragrance of blossoms; the tree grows fifteen or twenty feet high, branching alternately; the leaves are oblong, broadest towards their extremities, and terminate with an acute point, which is generally a little reflexed; they are lightly serrated, attenuate downwards, and sessile, or have very short petioles; they are placed in alternate order, and towards the extremities of the twigs are crowded together, but stand more sparsedly below; the flowers are very large, expand themselves perfectly, are of snow white colour, and ornamental with a crown or tassel of gold coloured refulgent staminae in their centre, the inferior petal or segment of the corolla is hollow, formed like a cap or helmet, and entirely includes the other four, until the moment of expansion; its exterior surface is covered with a short silky hair; the borders of the petals are crisped or plicated: these large white flowers stand single and sessile in the bosom of the leaves, and being near together towards the extremities of the twigs, and usually many expanded at the same time, make a gay appearance; the fruit is a large, round, dry, woody apple or pericarp, opening at each end oppositely by five alternate fissures, containing ten cells, each replete with dry woody cuneiform seed. This curious tree was first taken notice of about ten or twelve years ago, at this place, when I attended my father (John Bartram) on a botanical excursion; but, it being then late in the autumn, we could form no opinion to what class or tribe it belonged.

"We never saw it grow in any other place, nor have I ever since seen it growing wild, in all my travels, from Pennsylvania to Point Coupé, on the banks of the Mississippi, which must be allowed a very singular and unaccountable circumstance; at this place there are two or three acres of ground where it grows plentifully."*

Bartram added that on first observing the tree he was inclined to believe that it was a species of Gordonia, but after comparing it with *G. lasianthus*, the Loblolly Bay, he felt that it should be classified as a separate genus which, he wrote, "We have honored with the name of the illustrious Dr. Benjamin Franklin—*Franklinia Alatamaha.*"

According to Loudon this choice plant was introduced into England in 1774 by William Malcolm. In 1785 L'Heritier used the

*"The Travels of William Bartram," edited by Mark Van Doren, 1923. Pp. 369-370.

name of *Gordonia pubescens* in classifying it and quoted Marshall's name, also published in 1785, *Franklinia Altamaha*, as a synonym. The name Gordonia was given in honor of James Gordon, an English nurseryman who lived in the time of Phillip Miller.

Prof. Charles Sprague Sargent, writing in *Garden and Forest*, December 25, 1889, decided that *G. pubescens* must become *G. Altamaha*. However, the name now accepted by the authorities is *G. alatamaha*, although the river near which this plant was first discovered was known as the Altamaha. Why the Bartrams did not call it Altamaha we do not know. While we must relinquish the genus name Franklinia in favor of Gordonia, the species name remains as John and William Bartram named it—Alatamaha.

A Garden Market at Pittsburgh

By CATHERINE B. GASTON, Chairman

GARDEN or flower markets as a financial venture are by no means new. But the idea of an amateur garden market with a commercial background, financed by the good-will of thirty-two garden clubs, the Western Pennsylvania Nurserymen's Association, and a selected few commercial companies was unique.

In the spring of 1935, the Pittsburgh Garden Center opened its doors to the public for the same purpose for which most garden centers function. It was so enthusiastically received that it became necessary after a few months to cast about for adequate means of financing the rapidly increasing demands made on it.

It was feared that the sale of plant material in quantities sufficient to raise funds for the Center might embarrass the local nurserymen. Hence it was decided to enlist their assistance, and a "Shop for Your Garden Market" was planned.

A short street in Schenley Park, closed to automobile traffic, was chosen for the market-place. Collapsible booths, stained brown, with thatched roofs, were erected by the Center for the use of the garden clubs. Additional space was allowed to a selected list of commercial companies. A nominal charge was made for the commercial spaces, the sale of which partly underwrote the expense of construction. Everything was sold there, from a plant-stake to

a power mower, for not only were the city clubs working, but also eleven of the county units of the Woman's National Farm and Garden Association. The latter group built their own roadside stand with volunteer labor, and donated everything which was sold there. The Western Pennsylvania Nurserymen's Association duplicated the William C. Duckham garden which won the International Trophy in the 1936 New York show, this garden having been chosen because of its adaptability to the Pittsburgh climate.

Plans for the market, which was held May 26–29, 1937, were developed as a gift by Ezra C. Stiles, landscape architect. They embraced a much more elaborate scheme than last year's enterprise. There were amateur competitive classes of small gardens in addition to four large display gardens planted by nurserymen.

Garden lovers throughout Pennsylvania who visited the Pittsburgh Garden Market enjoyed a great community garden festival. Furthermore, there was opportunity to obtain new plants and new ideas.

Mary Lawrance, Painter of Roses

THE garland of roses illustrated in color in this issue of PENNSYLVANIA GARDENS is reproduced from the frontispiece of Mary Lawrance's great book "A Collection of Roses from Nature," which was published in London in 1799, presumably in a very limited edition. The plates had been issued separately over a period of several years before they were assembled in book form.

Mary Lawrance, whose artistic sensitivity made her work justly famous during her own lifetime, casually signed herself "Teacher of Botanical Drawing."

Comparatively little is known about her. From Mr. Courtney Page, Honorable Secretary of the National Rose Society of England, we learn she was "a successful exhibitor at the Royal Academy. Possessed of much personal charm, she was exceedingly popular in London where her lessons were in great request. All that was interesting in the Vine Nursery, Hammersmith, soon made its way to her house in Queen Anne Street . . . . It was thought to be an honor for the owner as well as for the flower when

Miss Lawrance painted its portrait. Her book on roses was published in 1799, and the demand was far in excess of the number of copies printed. At the time it created much sensation, as nothing like it had been published before, and roses were beginning to take a prominent place in gardens and were rapidly gaining in popularity. Miss Lawrance married Mr. Kearse in 1813, but she continued exhibiting and giving lessons until her death in 1830. The admiration excited by her flower pictures was partly due to the purity and delicacy of their coloring. She always attached great importance to the quality of her colors, which were all prepared at her own house and under her own supervision."

That this choice collection of prints is a collectors' item is evidenced by the fact that an English bookseller recently quoted a price of £125, about $625, for a copy. Only two copies are known to be in American libraries. Through the kindness of the Arnold Arboretum Dr. McFarland managed to have photographs and color notes made of all the plates. Now rose enthusiasts and lovers of fine prints may have the opportunity to enjoy these rarities.

It's Not Too Late to Plant Perennials

By ANNE B. WERTSNER

WHEN the June issue of PENNSYLVANIA GARDENS reaches your library table, it will not be too late to check your perennial border for fall-blooming plants. The great wealth of bloom in nearly every spring garden not infrequently causes us to overlook the possibilities for color in the late summer and autumn garden.

Since all wise nurserymen now dig plants with a generous ball of earth, and many grow perennials in pots, it is still possible to obtain perennials to provide a continuous display of bloom until frost.

Apply water generously when you put the new plants into your border. Also, it will help if you provide temporary shade, using a peach-basket or a flower-pot or some other handy cover. Protection from the sun during the heat of the day is most beneficial for newly planted perennials, especially in June.

Anemones, once they are established, will produce a striking

accent in your perennial border. Procure potted plants, and, if possible, grow them in partial shade. Whirlwind is a reliable white variety. September Charm, with its great masses of silvery pink blooms, is one of the finest fall cut-flowers. Another desirable pink is the semi-double Queen Charlotte. Hupehensis splendens, with its rosy glow, will add color to your rock-garden.

There are so many worth-while hardy Asters that it is difficult to select favorites. Among the new dwarf Asters which are most desirable for their neat growth habit (seldom more than 12 inches high) and their free-flowering character are Constance, a pure shell-pink; Lilac Time with its delicate lilac blooms; and the very popular Lady Henry Maddocks, soft pink in color. Niobe, seldom more than 6 inches in height, and Snowsprite, a taller variety, are worthwhile white sorts.

Although *Campanula pyramidalis* is often called a perennial, it is best treated as a biennial. Few plants can rival the beauty of the blue and white spikes of the Chimney Bellflower. It will do for the summer garden what Delphinium does in June.

Caryopteris mastacanthus is also commonly spoken of as a perennial, but its woody character places it with the shrubs. However, it seldom grows more than 3 feet high. Flowering in September and October, the whorls of lavender-blue flowers, arranged on long and graceful branches, are particularly pleasing. The pink and white forms are also worth growing along with *C. tangutica*, which produces flowers of a deeper shade of blue than *C. mastacanthus*. Few shrubs have cleaner foliage.

Perhaps the most spectacular contribution to the autumn garden in recent years is the Korean Chrysanthemums. Outstanding in hardiness and vigor of growth, in color and foliage they are truly indispensable. Aphrodite, a glorious combination of ivory and pink, is very free flowering. The brilliant orange of Apollo is striking, as is the richness of Fortuna, an oxblood-red with curled petals. Daphne, with its salmon-pink blooms, Hebe, a softer pink, Nysa, often producing 3-inch flowers of rosy lilac, and Mercury, deep red opening to copper-red, are all worthy of a place in the perennial border. The compact growth of Sappho, a pure yellow, and the white Niobe, should not be overlooked.

Eupatorium cœlestinum produces quantities of cut-flower ma-

terial of a soft ageratum-blue, and seems to require little attention. Group it with early-flowering Chrysanthemums.

Gaillardias are among the most vigorous blooming perennials one could hope for. Such names as Sun God, a bright golden yellow, The Dazzler, rich dark red with orange tips, and Torchlight, crimson with a gold edge, suggest the brilliant array of color of the once ordinary Blanket Flower.

The blooms of *Liatris scariosa alba* might almost be called tapers. Few accent plants are more distinctive than the creamy white clusters of florets that comprise the flower-spikes. If you have never grown this late summer-flowering perennial, you will be delighted with its unusual growth habit.

Physostegia virginiana, an old-time favorite, spreads far too rapidly for most borders. However, the dwarf variety, Vivid, may be used in the rock-garden or in the foreground of the hardy border. Its spikes of deep rose-pink flowers are most welcome in late August, and they last well into September.

To be sure, many of these perennials are by no means rare. Yet they are often overlooked, and, as a result, many perennial plantings lack interest with the passing of midsummer.

Fruits in Pennsylvania?

Consultation of the early premium lists and meetings of The Pennsylvania Horticultural Society discloses an amazing interest in fine fruits. We still have fruits, but we get them mostly, it seems, from outside of Pennsylvania. Such varieties as the wholesalers find it easiest to grow, ship, and store, they sell to us. (York and Adams counties do grow superb apples.)

Could not members of the Society again grow some of the many varieties of peaches, nectarines, grapes, pears, and even apples, that are now available for private gardens? Could we not build up an interest in fruit within the Society which would restore to exhibitions something of the flavor of a hundred years ago?

Why not?

Looking Ahead to the Dahlia Show, September 17, 18, 1937

By J. V. HARE

THE 1936 Dahlia Show of The Pennsylvania Horticultural Society, which was held in the Thirtieth Street Station of The Pennsylvania Railroad Company, at Philadelphia, with the cordial coöperation of the executives of the latter company, created such an enthusiastic interest in the public display of choicest blooms from many notable gardens that it has been decided to repeat this event in the station building on September 17 and 18, 1937. Reservations for space and numerous applications for entry blanks have been received, even before the catalogue of the Show has had time to reach the printer. This increased interest comes not only from the membership of The Pennsylvania Horticultural Society but in ever-growing volume from the 1,500 members of the newly organized Pennsylvania Railroad Garden Club, with its branches in the several states reached by that notable transportation company.

Those who grow fine blooms and are willing to share their joy with their fellows will find much gratification in the pleasure expressed by the thousands who hourly throng through the magnificent Thirtieth Street Station during the period that the Show is in progress.

In addition to that willing group of workers representing The Pennsylvania Horticultural Society, there will be a further group headed by William A. Whittaker, President of the Pennsylvania Railroad Garden Club, and Mrs. Frank J. Fell, Jr., Mrs. R. C. Morse, and Mrs. H. E. Wolcott, wives of executive officers who will represent The Pennsylvania Railroad Company, thus assuring the success of this outstanding exhibit.

It is earnestly hoped that all members of The Pennsylvania Horticultural Society will use every effort to exhibit at this Show and make it the most successful one that the Society has ever sponsored.

Where Can I Buy Them?

Every garden enthusiast keeps his favorite nursery and seed catalogues at his elbow. When he reads about new or unusual plants he will inevitably turn to those sources of supply to learn more about them before he purchases.

Since the early 1800's, when Bernard McMahon conducted his seed store in Philadelphia, Pennsylvania has been a progressive state horticulturally. Within its bounds some of America's greatest nurseries and seed stores had their beginning, some of which still do business. It will be wise, then, in searching for new plants, to peruse the catalogues of Pennsylvania seedsmen and nurserymen before looking elsewhere.

Occasionally one experiences difficulty in securing little-known or rare plants. While it is not possible to maintain an extensive information bureau, the editors will be happy to supply any information desired if a self-addressed stamped envelope is included with the inquiry. Everything mentioned in PENNSYLVANIA GARDENS is commercially obtainable.

Clematis for Summer Gardens

By DANIEL J. FOLEY

ARBORS and trellises covered with *Clematis paniculata* are a familiar sight in late summer, but few makers of gardens are aware of the exquisite beauty of many of the large-flowered varieties. There was a time in the late nineteenth century when these choice hybrids were garden treasures, but apparently they have been neglected until very recently.

They seem to grow best in partial shade. If grown in a sunny location, the lower stems and roots should be shaded by the foliage of other plants. Peat moss or spent hops will provide a satisfactory mulch to keep the Clematis roots cool and moist.

Rich garden loam, to which lime has been added, will satisfy the soil requirements. Well-decomposed cow-manure or bonemeal may be used for fertilizer. It is well to remember that the Clematis requires a well-drained location. A thorough watering at intervals

during the summer months will keep new plants in a flourishing condition and help them to become well established.

Since most nurserymen sell the Clematis hybrids in pots, one may obtain plants (as late as June 1) which will bloom this summer.

In planting, place the collar of the plant 2 to 3 inches below the surface of the soil. Cultivation is not recommended for Clematis. Moreover, I would emphasize the fact that it resents coddling.

All too often, gardeners have a tendency to use pruning shears more frequently than is advisable. Except for the removal of dead wood, little in the way of pruning is necessary until the plants are firmly established. The summer-flowering varieties should then be pruned to a height of 3 feet to encourage new growth.

Open winters do considerable damage to plants. To guard against the ill effects of alternate thawing and freezing, it is well to apply a mulch of leaves, straw, or peat in the late fall. As every experienced amateur knows, a little extra caution is advisable, especially with new plants. Clematis plants have withstood a temperature of 40 degrees below zero without any serious injury where a protective mulch had been used.

There are few gardens where Clematises cannot be planted to advantage. They make delicate tracery against garden walls when supported on wires. Trellises, pergolas, fences, and old stumps make desirable supports for these extraordinary plants.

Clematis Henry, shown on page 25, is very vigorous, reaching 8 feet, and producing large, creamy white flowers all summer.

There are now some 30 varieties in the trade. Among them are:

ASCOTIENSIS. Star-like flowers of azure-blue.
COMTESSE DE BOUCHAUD. Perhaps the nearest to clear pink.
CRIMSON KING. Rich crimson with brownish anthers.
DUCHESS OF ALBANY. Trumpet-like pink flowers. A hybrid of *C. texensis*, the Scarlet Clematis of Texas.
DUCHESS OF EDINBURGH. A double white sort excellent for pillar treatment.
ELSA SPATH. A gay, bright blue.
JACKMANI. Best known of the large-flowered violet-purple varieties.
KERMESINA. Wine-red of velvety texture.
LAWSONIANA. Blue, flushed with mauve.
LORD NEVILLE. Plum color. Luxuriant.
MME. BARON-VEILLARD. A vigorous hybrid with warm lilac-rose flowers.
MME. EDOUARD ANDRÉ. Red with a purplish cast.
PRINCE HENDRICK. Azure-blue.
RAMONA. An extraordinary lavender-blue.

Clematis Henryi, opposite

Lord Aberconway's Gardens at Bodnant

EDITOR'S NOTE.—Lord Aberconway, the President of the Royal Horticultural Society (much the largest horticultural organization in the world), who was the guest of The Pennsylvania Horticultural Society, March 9 last, is an honorary member of the Society. Feeling that our members would be interested to know something about his great collection of plants, we have selected the following parts of the descriptive "A Guide to the Gardens of Bodnant" which he gave to President Stout, together with the aërial view reproduced on page 36. Bodnant is near Colwyn Bay and Llandudno in Wales.

As we go to press, Lord Aberconway answers a request for his impression as to Pennsylvania gardens thus: "Dear Dr. McFarland: Unfortunately I was too early to see the gardens generally, and the two I saw were so exceptional as not to be typical of the general trend of gardens in Pennsylvania. My great regret was that I had not the opportunity of seeing your own garden, about which I have read and heard so much."

THE gardens are situated above the River Conway on ground sloping towards the south-west, looking across the valley towards the Snowdon range. In addition to the fine views of river and mountain thus obtained, they have the advantage of abundant running water and of backgrounds of large forest trees.

They consist of two portions; the upper one round the house comprises the Terrace Gardens, as well as informal lawns shaded by large trees, while the lower portion, formed in the valley of the River Hiraethlyn, a tributary of the Conway, contains the Pinetum and wild garden, and is known as the Dell.

Noteworthy in the gardens are the rose and flower borders near the house and on the terraces; the half-hardy flowering shrubs on the terrace walls; the conifers in the Dell; the hardy flowering shrubs and the Azaleas and Rhododendrons. A special feature is also made of Lilies, Primulas, Meconopsis, and Gentians.

Of Rhododendrons, the best of the hybrids may be seen, as well as numbers of the Himalayan and Chinese species. The Himalayan Rhododendrons were not planted at Bodnant prior to the year 1909, and do not therefore rival in size or beauty those that may be seen in Cornwall and elsewhere, where plants have thriven for more than a generation. On the other hand, the Chinese Rhododendrons at Bodnant include most of the species grown from the seed originally sent to England in 1900–1906 by Mr. E. H. Wilson,

who was the first to introduce Rhododendrons in quantity from China; and these plants are therefore as old as any in England.

The climate is a fairly mild one; in winter the occurrence of fifteen degrees of frost is regarded as normal, although in 1917 no less than twenty-seven degrees was experienced, and in 1929 there were four successive nights when the thermometer fell to twenty-two degrees below freezing-point. The rainfall averages nearly forty inches a year. The soil at Bodnant is a stiff boulder-clay, overlying a friable shaly rock; in places the former has been denuded, and there the soil is lighter.

Finally it may be stated that an endeavour has been made to grow a wide range of interesting and beautiful plants, but, at the same time, not to treat them merely as a botanical collection, but so to place them that, as far as possible, they may contribute to the general beauty of the garden.

At the upper end of the mill-pool is an extensive wild garden, planted with many kinds of conifers and with shrubs that thrive in the grass without special cultivation. Amongst the former are *Pinus Ayacahuite* and *P. Montezumae* from Mexico, *P. muricata* and *P. Coulteri* from California, *Abies concolor* and *Picea pungens glauca* from Colorado, *Tsuga canadensis* and *Pinus contorta* from Canada, *Tsuga sinensis*, *Larix Potanini* and *Cephalotaxus Fortunei* from China, *Picea jezoensis* and *Abies brachyphylla* from Japan, *Athrotaxis selaginoides* and *Dacrydium Franklinii* from Tasmania, *Pinus montana* and *P. Cembra* from the European Alps, *Cedrus Deodara* from the Himalayas, and *Abies numidica* and *Cedrus atlantica* from the Atlas Mountains. Among these trees are groups of shrubs, including Forsythias, Pernettya, Pyrus, Cherries, Berberis, Escallonias, Fuchsia, Clethra, Maples, Rose species, *Choisya ternata*, *Viburnum rhytidiphyllum*, which berries profusely, Abelia, *Cotoneaster frigida*, Cistus, Buddleias, Syringas, Lilacs, Stranvæsia, Eucryphia, Garrya, Camellias, Deutzias, Andromedas, and Skimmias. On an island formed by the division of the stream is a collection of Chinese Rhododendrons of the *Triflorum* series in purple and yellow shades.

The right-hand path at a fork, 50 yards further on, leads to a shrub border which is devoted to plants which flower in the early months of the year, such as *Viburnum fragrans* and *V. Carlesii*,

Forsythias, Tree Heaths, *Osmanthus Delavayi*, Magnolias, Witch Hazels, Exochordas, early Rhododendrons, and of smaller plants, the dwarf Heaths, Lenten Roses, Polyanthus and other Primroses. Further on other borders are reached, reserved for some of the rarer of the large-growing shrubs, principally from China. Among these may be noted *Hydrangea aspera* and *H. Sargentiana*, *Acer Davidii* with its slate-blue bark, *Cydonia Wilsonii* with its large fruits, *Rosa Moyesii*, *Cotoneaster frigida*, a small tree with a wealth of red berries, *Davidia involucrata*, *Catalpa vestita*, a group of Magnolia species, the white-flowered variety of the Judas tree, *Prunus subhirtella*, *Stranvæsia undulata*, *Viburnum tomentosum Mariesii*, *Berberis Gagnepainii* and *B. verruculosa*, *Buddleia Colvillei*, *B. Fallowiana*, and at the end a group of *Eucryphia pinnatifolia*. There also grows here a plum from China (*Prunus debiscens*) that flowers in February.

Violas for Your Garden and Mine

By DANIEL J. FOLEY

JOHNNY-JUMP-UPS have been jumping around in neglected fashion for nearly three hundred years in American gardens. They had been favorites in English gardens in Elizabethan times when they were known by such names as Heart's-Ease, Herb Trinity, Kiss-me-at-the-gate, and Ladies' Delights. Tussie-mussies (nosegays were so-called in Shakespeare's day) made of Heart's-Ease, rose-buds and scented herbs were very much a part of the romance of the time. Hence *Viola tricolor hortensis* was a popular symbol of thoughts of love and was cherished in every dooryard garden. It is consequently not surprising that this romantic symbol was brought to America, where it soon became so well established that it grew and bloomed luxuriantly throughout the year. There is hardly a January thaw that has not brought forth blooms of this little treasure in some Pennsylvania garden.

With the development of the bedding Violas and pansies, and the rise of interest in carpet bedding, Johnny-jump-ups were neglected and would have been entirely forgotten had they not persisted in a few old-time gardens. Now they have returned to

our perennial borders and rock-gardens, and there they are cherished by thoughtful gardeners.

But there is more to be said. Nearly a hundred years ago European gardeners began to select and develop strains of *V. tricolor hortensis.* (Some other species may have been used in hybridizing.) The result was a great variety of large-flowering pansies, classified as forms of *V. tricolor hortensis.* They are spoken of as strains of pansies rather than as named varieties because the results of hybridizing have produced innumerable combinations.

On the other hand, the Violas or Tufted Pansies, most of which are hybrids of *V. cornuta,* have come into favor, especially for rock-gardens and borders. As an underplanting for spring bulbs, they are also most effective. Some are species from the alpine regions of Europe and others are hybrids from the gardens of collectors and nurserymen.

A rich well-drained soil in an open location or a partially shaded area will be best for growing Violas. Some varieties come true from seed, while others are best propagated by division. Jersey Gem is most commonly grown from divisions of old plants, which may be set out in late August after new growth has started. Shade them, and keep them moist until they are established, and they will produce healthy plants for spring bloom.

All too often Violas become weak and straggly in late summer, chiefly because they have been allowed to become leggy. It is not enough to cut off dead flowers; the plants should be kept compact in form by pinching back long stems. When cutting Violas for flower arrangement take long stems and some foliage. This will encourage new growth and thus keep the plants in a flourishing condition. Liquid manure at intervals through the summer months, and generous watering during dry periods will aid.

Among the Cornuta varieties, Jersey Gem is unquestionably the outstanding garden Viola. It is a prolific bloomer, producing large blue-purple blossoms on stems often 6 inches long. Masses of dark green foliage add materially to its beauty. Of the same parentage is Jersey Belle. Slightly more compact in form, its flowers are somewhat smaller, and the color is described as clear mauve with a pale yellow eye. Jersey Jewel is richer and brighter in color than Jersey Gem—distinctly a true pansy-violet according to Ridgway's Color

Chart. I have found it most effective in small masses, especially when planted in front of *Alyssum rostratum*. Royal Gem is definitely purple, with a striking depth of tone. Warm weather does little harm to this new variety; it flowers freely throughout the summer. Portland Gem is a distinct slaty blue. A yellow hybrid found in a bed of Jersey Gem Violas in Seattle has been named Seattle Gem; primrose-yellow in color, it fades somewhat as the flowers mature, and was found to be rather unsatisfactory at Breeze Hill. White Jersey Gem, as its name suggests, is a desirable white form which will combine with almost any of the Cornutas.

So numerous in color and form are the Violas that it seems worth while to present a check-list of the more popular species and varieties now available from commercial sources.

ADMIRATION. (Cornuta.) Deep violet.

APRICOT. True apricot with orange center.

ARKWRIGHT RUBY. (Cornuta.) Rosy crimson with terra-cotta shadings. Delightfully fragrant.

AZUREA. (Papilionacea.) A smoky sky-blue variation of *V. papilionacea*.

AVALANCHE. (Cornuta.) An improved white.

BEAUTY OF LARONE. (Cornuta.) Royal blue, with large flowers and compact-growing habit.

BETTY. Blue flowers flaked with white. Does best in warm weather.

BIZARRE. (Cornuta.) Upper petals rich violet, lower petals clear apricot.

BLACK KNIGHT. (Cornuta.) Glossy black flowers.

BLUE BUTTERFLY. (Cornuta.) Mid-blue shading to white.

BLUE PERFECTION. (Cornuta.) Light blue with yellow eye. Very free flowering.

BOSNIACA. Clear rosy mauve. Enjoys moist root-run and a sunny position in the rock-garden.

BOWLES BLACK. (Cornuta.) Rich velvety black with yellow eye.

CALCARATA. Similar to Cornuta but with underground runners producing a carpet effect. Purple flowers. Grows readily from seed.

CHANTRYLAND. (Cornuta.) Pure apricot—an improved form of Apricot.

CORNUTA. Pale blue flowers in abundance.

CORNUTA ALBA. A white form.

CORNUTA ATROPURPUREA. Violet-blue flowers.

CRIMSON KING. (Bosniaca.) Approaching a true crimson. Flowers larger than the species.

FLORARIENSIS. An alpine gem developed by Correvon. Mottled blue and white flowers.

G. WERMIG. (Cornuta.) Rich dark blue flowers on long stems.

HASLEMERE. (Cornuta.) Lilac-pink flowers freely produced during summer.

JACKANAPES. Bright golden yellow flowers, upper petals bright mahogany-brown.

LITTLE GEM. (Cornuta.) A miniature Jersey Gem.

LORD NELSON. (Gracilis.) Rich deep purple flowers.

Johnny-jump-up. (See page 28.) One of the progenitors of the Pansy.

LUTEA. The species tends to vary in color from white to violet.
LUTEA SPLENDENS. Golden yellow.
MAGGIE MOTT. (Cornuta.) Soft mauve-blue. Should be better known.
MONARCH VELVET. (Cornuta.) Large purple blooms, 1½ to 2 inches in diameter, with yellow eyes. Very desirable.
MOSELY IDEAL. Yellow, edged with blue.
MOSELY PERFECTION. Large yellow blooms.
NORMANDIE. (Gracilis.) Burgundy red-purple.
PRIMROSE DAME. (Cornuta.) Pure sulphur-yellow.
PUCK. (Cornuta.) Upper petals purple-violet, lower petals yellow.
PURPLE ROBE. (Gracilis.) Deep violet.
ROSY GEM. Bright rose.
SNOWDROP. A valuable white of compact habit.
WEDGWOOD. (Cornuta.) Large; dark blue.
WHITE PERFECTION. (Cornuta.) A very desirable white form.
W. H. WOODGATE. (Cornuta.) Bluish mauve.
YELLOW GEM. (Cornuta.) Deep, pure yellow.
YORK GEM. (Cornuta.) Plant Patent No. 83. Violet tones. Shaped more like a pansy than a Viola.

What Do You Grow, and Why?

With more than 3,400 members in The Pennsylvania Horticultural Society, there are very many special interests concerned. Nearly every garden-lover has a flair for some particular species or group of plants. Were it possible, it would be highly desirable to print, from time to time, some of the experiences of garden enthusiasts in Pennsylvania. Tell us of your garden trials and triumphs.

Comments, suggestions, and helpful criticism will be most gratefully received. If you choose to write and tell us what you grow and why, we shall have some indication of the pulse of the great Spirit of Gardening that has always been so vital in Pennsylvania.

The Garden Club Federation of Pennsylvania Convenes

Skytop Lodge, at Skytop, Monroe County (by rail to Cresco, on the D. L. & W. R.R.; by motor over Routes 209, 611, and 90) has been chosen for the Annual meeting of our Federation of Garden Clubs, June 2 and 3, 1937.

In addition to the regular business sessions, a pilgrimage to the

outstanding gardens and nurseries in that vicinity has been arranged. That the scenic beauty of Pennsylvania is uppermost in the minds of the Committee is evidenced by the fact that the two-day meeting provides for several trips featuring natural scenery.

On Thursday, a round-table discussion on "Billboard Restriction," directed by Mrs. J. W. Lawrence and Mrs. C. G. Fox, and a talk on "Broadleaved Evergreens" by Jesse S. Flory, L. A., will provide interest. It is hoped that all the Garden Clubs in the state will be represented.

Garden Books for Summer Reading

There came to the Editor's desk recently a very helpful list of garden books, published by DuBois Public Library, DuBois, Pennsylvania. It does not cover any phase of gardening completely, for such is not its mission. However, it offers suggestions in the way of helpful books for the dirt gardener in addition to many volumes for the armchair gardener. It was, undoubtedly, compiled to stimulate an interest in horticultural literature. Copies may be had by writing to C. W. Hull, Librarian.

The Harrisburg Flower Show

The members of the Harrisburg Garden Club are making elaborate plans for their Annual Rose and Perennial Show to be held on June 10 and 11 at the Zembo Mosque. With the assistance of local nurserymen, florists, and neighboring garden clubs, they are anticipating a great exhibition, and they invite all our members. Harrisburg is so central that it may be reached in from three to four hours from all Pennsylvania. The wonderful new Hershey rose-garden is but fifteen miles away.

Roses, Irises, Peonies, and early perennials will be featured. Classes for flower arrangement are also included in the schedule. In addition, provisions have been made for children to enter arrangements. There is to be a special class for Girl Scouts.

Among the awards are the President's cup, offered as a sweepstakes prize; small silver cups for the best rose and the best iris in the show; as well as books and plants for the children's classes.

Summer Flower Shows

MAY

May 22. Philadelphia, Pa., suburbs. The following gardens will be open under the auspices of The Pennsylvania Horticultural Society: Mr. and Mrs. Charlton Yarnall, "Crum Creek Farm," White Horse Road, Devon; Mr. and Mrs. S. Laurence Bodine, "Green Bank Farm," Palmer Road, Newtown Square; Dr. and Mrs. John H. Gibbon, "Lynfield Farm," Providence Road, Media.

May 25 to 28. Wilmington, Del. Annual meeting and exhibition of the American Iris Society. There will also be tours of gardens in the vicinity of Wilmington and Philadelphia, Pa.

May 29 and 30. Rutledge, Pa. Spring exhibition of the Rutledge Horticultural Society at the Fire Hall Auditorium.

JUNE

Spring Flower Show, Drexel Club of Philadelphia, in Great Drexel Court, Drexel Institute of Technology, June 3, 4 to 10 P.M.

Spring Flower Show, Garden Club of Norristown, June 3, City Hall, 3 to 9.30 P.M.

Flower Show, Upper Chichester Garden Club, of Boothwyn, Delaware County, Fire House Auditorium, June 5.

Spring Flower Show, Garden Club of Springfield, Central School Auditorium, June 5.

Flower Show, Countryside Gardeners, home of Mrs. Franklin S. Edmonds, June 7.

Rose and Perennial Show, Germantown Horticultural Society, Library Hall, Vernon Park, June 7, 4 to 10 P.M.

Rose and Perennial Show, Harrisburg Garden Club, Zembo Mosque, Harrisburg, June 10 and 11. Thursday, 2 to 10 P.M.; Friday, 10 A.M. to 10 P.M.

Spring Flower Show, Delaware County Horticultural Society, Haverford Township High School, June 11 and 12.

Flower Show, Garden Club of Hazleton, Masonic Hall, June 24 and 25.

Laurel Blossom Festival, Pocono Mountains, June 15 to 25.

Pittsburgh Garden Market, Schenley Park, Pittsburgh, May 26 and 27.

Local Garden Day Visits in various parts of the state during June.

JULY

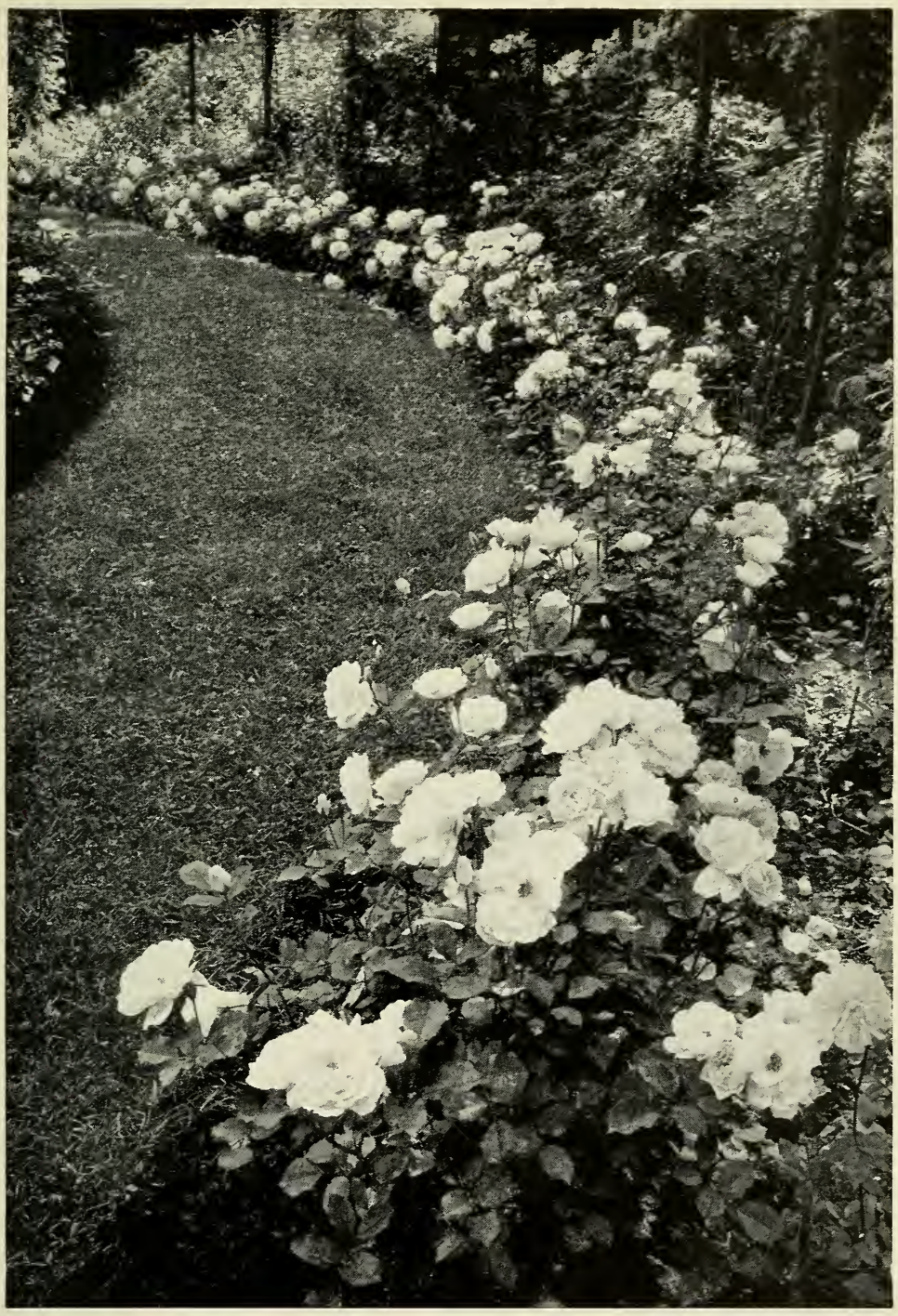
Gladiolus Show, Rutledge Horticultural Society, Fire House Auditorium, July 31.

AUGUST

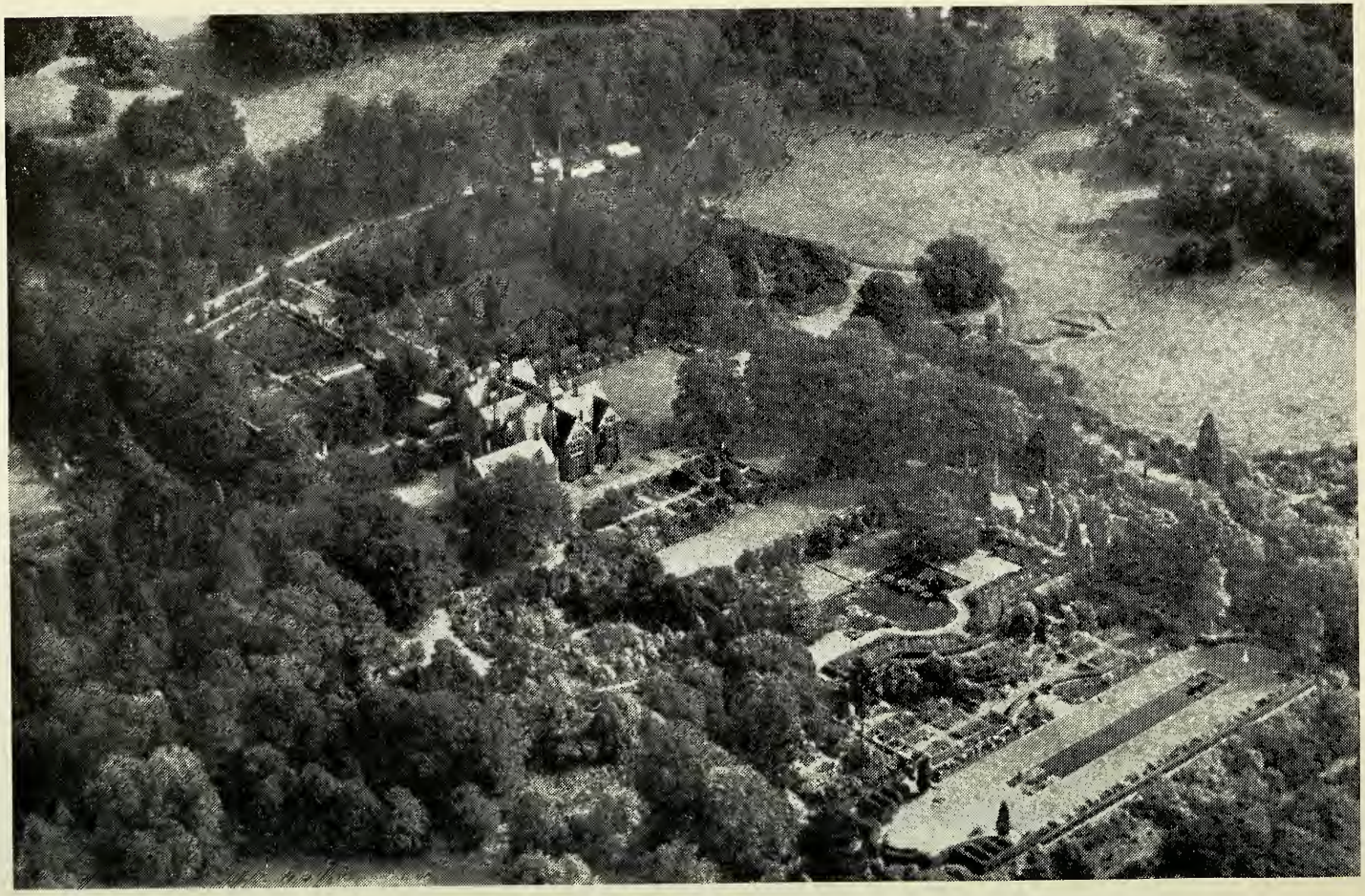
Gladiolus Show, Germantown Horticultural Society, Library Hall, Vernon Park, August 9, 7.45 to 10 P.M.

Men's Garden Clubs of America

The Hotel Brunswick, Lancaster, has been selected as the headquarters for the fifth annual meeting of the Men's Garden Clubs of America, July 16–17, 1937. Every man in the Commonwealth genuinely interested in gardening is invited to attend. Although it is a gathering of men, ladies are cordially invited. There will be visits to Breeze Hill, Conard-Pyle Co., and the Hershey Rose-Garden.



Snowbank—a fine new Polyantha Rose growing in Dr. McFarland's Garden, Breeze Hill, Harrisburg. (See page 6.)



Aërial View of Lord Aberconway's Gardens at Bodnant, in Wales (See page 26)

Vol. I, No. 3 SEPTEMBER, 1937

PENNSYLVANIA GARDENS

Miss Wertsner on House Plants
(See page 3)

A Quarterly—Issued for

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Executive Office:
1600 Arch Street, Philadelphia, Pa.

The Pennsylvania Horticultural Society

1600 Arch Street, Philadelphia

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The December Number *will take the garden through the winter.*

PENNSYLVANIA GARDENS

Edited and Published at Harrisburg, Pa.,
for The Pennsylvania Horticultural Society

In this third issue of PENNSYLVANIA GARDENS *let us look abroad.*

This is a Pennsylvania garden magazine. But Pennsylvania gardens and Pennsylvanians are surely cosmopolitan and not local to the state—very few of us claim kinship with the red men with whom William Penn bargained.

Our gardens must be world gardens as well as Pennsylvania gardens. Contrary to the twisted economics of the Marlattian quarantine and restriction era that began injuriously in 1919—now happily waning in 1937—it is the amateur's love for plants that builds horticulture. The nurserymen usually follow; they seldom lead. So to keep our gardens gaining in scope and beauty we must look abroad.

These reflections arise as the Editor reads the current number of that delightful English publication, "My Garden," which fits the coat pocket so comfortably and gets read in consequence. (It is no secret in the Extension Committee that we modeled Pennsylvania Gardens on this intimate and inspiring monthly.) Pictures and stories of plants unknown to most of us fill the pages of this lively periodical. Who ever heard of a Hieracium not to be feared but desired? Yet one reads of H. villosum so described. Geranium silvaticum pops up in blue beauty. Phlox adsurgens, Œnothera triloba that really blooms only "in the cool of the evening," a blue-flowered Cyananthus Delavayi that is "not everywhere," a lively and hopeful discussion of thrips—these are items we need to absorb. So let us follow our nativity within reason, and look abroad.

What 1600 Arch Street Has to Say

By FANNIE A. ROOT

ABOUT the time this issue of PENNSYLVANIA GARDENS reaches you, you will receive your schedule of the Dahlia and Fall Flower Show, and will notice that the exhibition will be held again this year in coöperation with the Pennsylvania Railroad Company, assisted by its flourishing new Garden Club, in the Thirtieth Street Station, Philadelphia, on September 17 and 18. Last year the

majority of the visitors seemed to be the traveling public, and while it was a great pleasure to have had them, we want our own "public," too—the people who use the Library, those who come to the lectures, and the members who enjoy the Garden Visits. We also want some new exhibitors as well as the old ones. If you have some particularly choice flowers or plants (this season they are apt to be finer than usual), or if you like to arrange flowers, make an entry and get the thrill of taking part in the Show. (See the detailed announcement on the back cover.)

A privilege of the Society that doesn't seem to be understood or appreciated as much as it deserves is the matter of membership in the Garden Club Federation of Pennsylvania. The Federation, as you probably know, is made up of member organizations, mostly garden clubs; but what many seem to overlook is that our Society is also a member, the largest single unit in the Federation, and each of our members is entitled to share all of the advantages which such affiliation confers. Among the pleasantest of these are the annual and semi-annual meetings and other special meetings. Although the Society is permitted to send only a limited number of delegates to these gatherings, other members are invited to attend in a non-voting capacity, and they may enjoy all of the activities at the same registration fee as the accredited delegates. The annual meeting at Skytop Lodge, in the Poconos, this past June was a delightful affair, combining instructive indoor sessions with interesting tours of gardens in the beautiful mountain country. The meetings of the Federation are announced in advance in *Horticulture*, and if you are interested in the programs, do write to the office and we shall be very happy to send you full particulars.

Another horticultural activity in which some of our members may be interested, although it has no connection with the Society, is a four-months' botany course for beginners, given each year on Monday evenings, eight to nine o'clock, at the Wagner Free Institute of Science, 17th Street and Montgomery Avenue, Philadelphia. This year's course starts on September 14 and continues to December 21.

Fuchsia

Selecting and Growing House Plants

By ANNE B. WERTSNER

WITH the many varied conditions under which house plants must of necessity be grown, a careful selection of the plants is a prime factor. The interest and joy they add to our homes throughout the winter will amply compensate for any reasonable effort or time previously expended on them, and we owe it to ourselves to make our choice a careful one.

Air-conditioning has brought a revival of interest in house plants, since it supplies the needed amount of moisture in the air. In the average home the atmosphere is much too dry, and humidifiers of various types are imperative.

Light and temperature are also vital factors. Then, too, the care of our house plants should be a year-round concern to us, not just an afterthought when the first frost comes. Winter bloom depends largely on the treatment plants have been given through-

out the season. In late August or early September pots should be lifted from the cinders into which they were plunged up to the rim for the summer. Remove all extraneous roots, apply water generously, and keep plants shaded for several days. A little pruning to improve form may be necessary in some cases, but care should be taken not to remove any flower-buds. The pot should then be scrubbed, the drainage-hole opened, the plant staked if needed, and a final dusting or spraying administered if insects are present.

A dust of fine sulphur and pyrethrum will keep plants free from most pests, but it may be necessary to use arsenate of lead for caterpillars, beetles, and other chewing insects.

Most house plants prefer a night temperature of 50°–65° Fahr. and a day temperature of 70° Fahr. While they tolerate lower and higher temperatures, great fluctuations retard the growth and reduce the vitality of plants, making them more susceptible to attacks by insect pests.

Soil-moisture is important. A deficiency produces stunted, woody growths and small leaves which often drop off. An oversupply often causes brown tips on the leaves, while plants such as cyclamen may rot off at the crown and die. Watering may be done from the top or bottom. There are good theories for each, but the important point is to see that the plant is thoroughly moistened although not allowed to stand in water. Water generously on bright days and syringe overhead with a fine atomizer on dull days. Fast-growing plants, like begonias and coleus, require more water than slow-growing plants like geraniums and lantanas.

House plants require some feeding throughout the winter. Fertilizers may be given directly to the plant, or mixed with soil and put on as a top dressing. Liquid manure may be used, but it should always be applied to the plant after watering. For ferns or foliage plants an occasional watering (every three weeks) with two teaspoons of nitrate of soda dissolved in three gallons of water will stimulate leaf-growth. All feeding should be omitted during December when the days are short.

The following method of feeding has been tried and proved satisfactory. To quote one who has successfully employed it: "Into a twelve-inch pot I put a mixture of soil, a very little well-rotted manure, leaf-mold, and peat, enriched still more with a

Begonia Feastii. (See page 7)

mixture of one heaping tablespoon of Urea (Floranid), two of superphosphate, and one-half of sulphate of potash, all thoroughly mixed with the soil. The pot is set over an open top half-gallon jar. Every morning I pour one-half gallon of water into the pot. This drains through the hole in the bottom of the pot into the jar, giving a clear, odorless, liquid manure containing not only the three principal plant-foods, but no doubt some food dissolved from the soil mixture itself. To this liquid I add one and one-half gallons of tepid water, making a total of about two gallons. In order not to exhaust the fertility of the mixture in the twelve-inch pot, I add, each day, a level teaspoon of the fertilizer mixture aforementioned."

Fertilizer may also be used in the soil-mixture at the time of potting or repotting. Bonemeal may be added for some plants (but never for azaleas) at the rate of five or six teaspoons per peck of soil. Sheep or poultry manure may be added at the rate of one teaspoon to a six-inch pot of soil.

Potting is generally done in the spring or late summer and at least once a year. Although there are varied opinions about the container to use, it has been proved that porous pots do supply certain quantities of potash, which glazed jardinières do not. As long as the container is not too large for the plant, and has some drainage material in the bottom, it will probably prove satisfactory. However, care must be taken not to plant too deep, to allow enough water-space at the top, and to treat the soil properly. A good potting mixture should contain three portions of loam, one each of well-decayed manure, sand, leaf-mold or peat moss.

When plants are potted or repotted, they should be pruned if necessary, then placed outside for the summer, during which time they will produce new growth.

Among the favorite house plants are begonias. There are many types, and it may be said that some variety is to be found blooming every month of the year. Some are suitable for sunny windows, and others grow luxuriantly in north windows. All thrive best in a light, porous soil, and prefer a moist atmosphere. They vary in size of plant and foliage from the very small-leaved *B. foliosa*, to the large, pointed foliage of *B. ricinifolia*. Others frequently grown are *B. metallica*, with bronzy leaves, *B. Haageana*, a desirable

Saintpaulia ionantha. (See page 8)

winter-flowering kind, and *B. incarnata*. *B. rubra* (*B. coccinea*) with its deep coral-red blooms that are unusually persistent, is to be recommended for home use, as are also *B. Sandersonii*, *B. nitida*, and *B. Feastii* (illustrated on page 5). All are free flowering and not too vigorous in growth. Rex Begonias are especially good for dark windows, and there is great diversity of coloring in the foliage.

Likewise, geraniums make window gardening a constant source of interest. The many scented kinds vary not only in odor, but in size, shape, and habit of the foliage and plant as well. This genus prefers a soil not too rich, and a firm potting. Good drainage, not

too much water, and an abundance of sunlight are essential. One of the freest bloomers of all double varieties is Mrs. Lawrence, a shrimp-pink. La Favorita is a good double white.

Fuchsias are as interesting as are geraniums, largely because of their richness of color and their variety of form. There are fuchsias for almost every conceivable location in the temperate zone, except in full sun or very windy exposures. A moist atmosphere and a soil rich in humus seem to supply their needs. They can be grown as climbers, as trailing plants, or as small or large pot-plants.

Cacti and succulents should not be overlooked, since many of them make very desirable house plants. Sunlight and good drainage are essential for their growth. They prefer firm soil, not too rich, and watering about once a week. Several species of Mammillaria, echinocactus, and a few of the opuntias are most desirable. Among the succulents are the echeverias, the crassulas, and the sempervivums. *Bryophyllum pinnatum* may be grown satisfactorily if given a warm, sunny location and plenty of water. The kalanchoes are rising in popularity, especially *K. coccinea globulifera* with its bright coral-red flowers.

The shrimp plant (*Beloperone guttata*) is successful in a sunny window and requires a firm soil. *Erlangea tomentosa*, with its soft mauve flower and gray foliage, resembles the fluffy heads of ageratum. A firm soil, plenty of water, and a light cool window will keep it flowering until late winter.

Plumbago capensis, with its pale blue heads of flowers, not unlike those of our native phlox, is very desirable, and the plants may be grown as shrubs or climbers. A firm soil and a cool porch or window are its essential requirements.

Dædalacanthus nervosus (*Eranthemum nervosum*) is a plant which needs full sunlight, but it will well repay you for its space when its gorgeous gentian-blue flowers appear. A moderate temperature, firm soil, and sunlight are its requirements.

The African violet (*Saintpaulia ionantha*) illustrated on page 7, and calathea will thrive in a dark window. They prefer a light soil enriched with humus, good drainage, a moist atmosphere, and a moderate temperature. Water must not be allowed to touch the foliage of the African violets as it will cause yellow spottings.

Ferns, vitis (grape ivy), dracænas, pandanus, peperomia and

Aglaonema modestum are all tolerant of shade or a position which does not afford direct sunlight.

English ivy, tradescantia, philodendron, *Cyperus alternifolius* (umbrella plant), and aglaonema may be grown in water as well as in soil. Although they prefer sun, they will grow where there is little direct sunlight.

Such annuals as calendulas, petunias, nicotiana, and marigolds may be kept blooming throughout the winter if given a warm sunny window and not allowed to produce seed. Even the perennial chrysanthemums are useful for indoor decoration and by selecting late-flowering varieties, such as Wilcox, New York, Christmas Gold, Buckingham, and White and Yellow Garza, it is possible to have bloom until after Christmas. An enclosed porch is the best place to keep them until they come into bloom. Then move them indoors. Plants grown for this purpose should be potted firmly in late August, allowed to settle, and kept in vigorous growth outside as long as possible. Then a deep pit protected with sash, or an enclosed porch where there is plenty of light, will develop the buds fully. Watering with liquid sheep- or cow-manure every two weeks until the buds show color will prove beneficial.

In the event that house plants prove too much of a task, try the easiest kind of home decoration—a glass bowl which may be planted with small, hardy, evergreen plants. It will remain green all year, and afford much pleasure with little effort.

Ambler's Quarter Century

By LOUISE BUSH-BROWN

AT a congress of women held at Bryn Mawr on April 16, 1910, Miss Jane B. Haines outlined her plans for the establishment of a school where women would receive instruction in gardening.

"Believing thoroughly in the principle of horticultural training for women and that the time for opening such an institution is now come, a number of people have associated themselves together under the title of The Pennsylvania School of Horticulture for Women, with the purpose of opening, in the near future, a school for this practical training of women in gardening, garden management and certain kindred subjects. The School is to be located

The Center of Activity at Ambler

near Ambler, eighteen miles from Philadelphia. The purpose, then, of the School of Horticulture for Women is to offer to educated and earnest-minded students who have a love for country life and an aptitude for country pursuits this training in the principles and practice of horticulture and allied subjects." Thus did Miss Haines present her plans to a group of interested women on that April day more than a quarter of a century ago; and the following spring her vision became a reality, when, in February, 1911, the school opened its doors with a principal, one instructor, and five students. A survey was made of the European colleges of gardening which, for many years, had been recognized in the educational world. As a result, the school at Ambler was established along similar lines.

In the two and a half decades which have passed since it was founded, students have come to the School of Horticulture from every section of this country and from several foreign nations as well, New Zealand, China, Japan, and Czechoslovakia having been represented. The majority of the students enter directly

from high schools or private preparatory schools, while some are college graduates or have had several years of college work.

The school offers two distinct courses: a two-year Diploma Course in Horticulture, and a two-year Preparatory Course for Professional Study in Landscape Architecture. The course in Horticulture offers theoretical and practical instruction in Floriculture, Fruit-growing, Landscape Design, Vegetable Gardening, Animal Husbandry, and Farm Management, as well as in the allied subjects such as Botany, Chemistry, and Entomology. In the Preparatory Course, such subjects as Landscape Design, Plant Materials, and Floriculture are emphasized.

When the school was first established, the original old stone farmhouse, which dates back to pre-revolutionary days, housed the small student body and served also as administration and classroom building. The intervening years have brought many changes. Today, a group of spacious and beautiful buildings provides accommodations for fifty students, and contains lecture-rooms, laboratories, and drafting-rooms, while the three greenhouses, the dairy barn, and the poultry plant offer to the student an opportunity for practice work. The extensive flower gardens are one of the greatest features of attraction. Wide central panels are planted with perennials and bulbs, while smaller and more intimate sections are devoted to irises and to annuals. Beyond the garden lies the woodland where many rare and lovely wild flowers have been naturalized, and a beautiful outdoor theatre, designed and planted by the students, forms a pleasant setting for plays and pageants.

Graduates of the school are, today, taking a prominent part in horticultural affairs. Several have become well known as writers and lecturers on garden subjects; others have taken salaried positions as superintendents of private estates, as teachers, as farm managers in industrial schools, or as horticultural therapists in hospitals. Many have been very successful as garden consultants, and others have found increased joy and interest in the management of their own gardens or country places. The first graduates of the school were pioneers in a new field, and it has been most inspiring to observe the widely varied opportunities which have developed for these women who have been trained in horticulture.

A Mass of "Native Gold"

ONE of the most delightful composites for the rock-garden is *Chrysopsis falcata*. Its small, yellow, daisy-like flowers in heads measuring a scant three-quarters of an inch in diameter, and borne on six-inch stems, have given a bright note to a spot that would have been colorless otherwise—late July to early August. Both disk and ray flowers are golden yellow, and the linear foliage is dull green. An observing plantsman collected it on Cape Cod in 1933. The species is indigenous on dry, sandy soil along the coast from the pine barrens of New Jersey to Nantucket. It would seem that the genus name, Chrysopsis, had been well chosen for it means "gold aspect," and surely this mass of "native gold" deserves a place in many rock-gardens. Here is a desirable American plant for American gardens, and it will flourish in any hot, dry, sandy area, among rocks or in the perennial border.

Lord Aberconway Talks

AT THE annual meeting of the Royal Horticultural Society in London, this past spring, Lord Aberconway, in announcing the patronage of the new King and Queen, said, "King George is, as we all know, a notable gardener, and I am sure that we should all wish that throughout his reign he may find, in his own personal and private garden at Royal Lodge, relaxation for the onerous duties and responsibilities which are his. Nothing gives greater rest and relaxation than indulgence in the pleasure of a garden of one's own making." Lord Aberconway also referred to the fact that the King's daughter, Princess Elizabeth, was following the family tradition of gardening, and added "It is a very fine tradition, if one may venture to say so, in so august a family."

It is significant that a program of wide-spread planting was undertaken by the Coronation Planting Committee in connection with the great ceremony. Parks and gardens were laid out and trees were planted in an attempt to create a permanent memorial in honor of the Coronation. It is not surprising that the English, who are noted for their love of gardens, should attempt to create such enduring tributes to their beloved monarch.

Tulipa Fosteriana. (See page 14)

The Species Tulips

By J. HORACE McFARLAND

AS THIS number of PENNSYLVANIA GARDENS is being read, all garden folk will be considering the bulb catalogues and planning the fall planting which will enrich the gardens of the 1938 spring. There is a virtual revolution in Tulip culture. The old lines separating classes are breaking down most desirably, so that we may come, before many years, to a very much easier situation not complicated by "forty-eleven" specific classes, because they have considerably merged into each other. This situation came very prominently into my garden mind in the blooming-time of 1936.

At that time more than 250 Tulip varieties were considered at Breeze Hill, having been obtained directly from some of the more acute Holland growers who wanted our judgment on them.

(Incidentally, it became apparent, when our methods of careful description were used, that the Hollanders did not look on color as we do, and their descriptions went haywire repeatedly.)

But this is not the story of the Darwin, Mendel, Triumph, Breeder, Parrot, Cottage, or "what have you" varieties. I merely want to direct the attention of Pennsylvania gardeners to the value and beauty of the so-called "botanical" or "species" Tulips. For the most part they are not grown in great fields as are the millions of Tulips we get from Holland under varying names. Instead, they are collected, I believe, in the wild where they have grown, as other species items do. I do not want to tell where these Tulips come from, but I do suggest to any reader that he take from the Society's library Sir Daniel Hall's superb book on the Tulip which tells the whole story in easy English. It is the Tulip authority.

One reason for introducing the species Tulip group is because they invariably bloom first, when any bloom is most welcome. It is really exciting to see the bold spears of *Tulipa Kaufmanniana* show in the garden, preferably in the rock-garden, which they seem to both favor and adorn. This Kaufmann Tulip, as it came to us some years ago, was quite small. It was characterized not only by the earliness mentioned, but by its peculiar coloring, which could be rose or pink or red, according to conditions, but was always interesting and different. (Illustrated on opposite page.)

The Hollanders have really improved this species, at least in size, so that the varieties Elliott Rose and Elliott Red are about twice the size of the species. They grow about 12 inches tall, and, like most of the species, persist very much longer than the petted garden varieties. In my experience they are quite permanent, and therefore will recur from time to time. Either open sun or light shade seems to be acceptable to them. The illustration here presented will give an idea of the very sharp difference this species Tulip has from the ordinarily accepted garden Tulip.

About three weeks later, *T. Fosteriana* gets in its work. It is red of the reddest character, and the newer varieties, also the result of some Holland effort, are literally immense in size. As usual, each shrewd Hollander sets up his own name variety on any variation. Thus Red Emperor and Mme. Lefeber seem identical. As my associate Mr. Hatton wrote of them, both "simply

Tulipa Kaufmanniana. (See page 14)

burned a hole in the background when viewed from a hundred feet away" by the sheer brilliant redness they possessed. But this redness is not offensive, because it has so little of the raw scarlet tinge. With flowers that are long in bud, and which spread out to 9½ inches in diameter, as they did at Breeze Hill, each flower is an event to be celebrated by calling in one's friends to see it.

One other variety in the same group, obviously coming from another grower, is the "Big Boss" Fosteriana. It is not as large, but its sharply pointed petals are somewhat distinct. Also, please note, it is red, red, red! (Species illustrated on page 13.)

T. Eichleri is another of these fiery spring garden events at Breeze Hill. It has a lily type of flower with an 18-inch stem, and is sufficiently different to be altogether worth while. Common sense indicates the placing of these bulbs that they may have the contrasting green background which best accentuates their color.

T. Greigii is a little bit more on the orange-scarlet type, with its 6-inch flowers held up about a half-yard. This Tulip will endure half shade, and seems to be benefited by it. It is different from all the others because of its broad, pale green leaves closely marked with irregular purplish brown spots that are a pleasant variation. Greigi is quite permanent, and to me seems to be a garden necessity.

Another commendable species is *T. Marjoletti* in yellow and rosy red, and thoroughly distinct as it shows itself in the rock-garden. *T. Clusiana*, also a rock-garden Tulip, has a combination of white and crimson which is a little like Kaufmanniana, but yet so distinct as to be quite desirable. Another variety, *T. acuminata*, has most fantastically cut petals looking as if somebody had operated on a good flower with a pair of scissors. It is always an object of admiration when it comes along.

T. Hageri has small coppery red flowers that are quite distinct, and *T. præstans* puts us back among the reds again with considerable brilliance.

Of course there is yellow in this group, coming through *T. sylvestris* and its varieties. This Tulip first came to me many years ago as Florentina odorata. It was lost, and then found itself again, so that now it pops up pleasingly, which shows its persistence and desirability. *T. chrysantha* also gave us pleasing small yellow blooms, sometimes flushed with copper, on daintily slender stems.

I should have written before this that all of the scarlet varieties have superb black centers, which justify my insistence that a Tulip is not appreciated until it is seen wide open. To me one of the silliest ideas the seedsmen have is their insistence on showing Tulips only closed or half closed, and never broadly open so that their full structure and color relations can be seen.

Let me commend the species Tulips as worth garden trial. One does not plant them in large quantities. However, they do give a feeling of daintiness and difference, notwithstanding the brilliant reds I have described. Especially is this true when they are properly placed in relation to available backgrounds, either in the rock-garden or in the border.

Tree Peonies

By H. G. SEYLER

FOURTEEN centuries ago Tree Peonies were the exclusive property of the Emperor of China. Noblemen and peasants alike who attempted to grow them outside the palace walls were promptly put to death. Today, in cosmopolitan America, they have a place in the humblest cottage gardens, on the most pretentious estates, and in our public parks.

Few shrubs are more spectacular than Tree Peonies. Their tremendous heads of fluffy petals are rich in color and striking in form. Ruffled petals, masses of golden stamens, and distinct markings in the centers of the flowers are outstanding characteristics of these distinctive and somewhat overlooked treasures.

To be sure, they are more costly than many common shrubs, but they are plants of enduring beauty that improve with age without requiring too much space.

Tree Peonies should be planted when dormant, either in the spring before the buds break, or in the fall, from late August until late October. If dug with a ball of earth they may be moved in full leaf. However, the foliage must be thinned and the branches cut back. In addition, such plants should be shaded for about 10 days and watered copiously until they are established.

I like to say that "a $5.00 plant is worth a $5.00 hole." That

is, make the original hole large and deep enough for a half-dozen Tree Peonies and then refill with good soil. Give the plant that wants to live for a hundred years some encouragement to do so. Mix sand with gummy soil; clay with sandy soil. Apply lime as a top-dressing annually if there is any evidence of acidity. Use a high-grade balanced commercial fertilizer and mix it thoroughly with the refill soil before planting. Apply several top dressings annually and avoid manure, peat, "woods soil," and unbalanced foods or fertilizers.

Tree Peonies prefer partial shade. The blooms last longer when sheltered from the scorching sunlight. Plant deep, as much as 4 to 6 inches deeper than nursery row-markers, since Tree Peonies like to set their roots deep. Winter mulching is not necessary or desirable if they are planted deep enough, except possibly for the first winter after a late fall transplanting. Then, mulch with soil, as one hills roses for winter.

Tree Peonies are very effective in the foreground of shrub plantings or as a background for the perennial border. As specimens they make pleasing masses to accentuate lawn areas or shrub plantings. Plant them in combination with late tulips, lilacs, iris, *Rosa Hugonis*, azaleas, spireas and other favorite May-flowering shrubs. While they often develop a spread of 10 to 12 feet over a period of 50 years, they are most satisfactory when planted about 4 feet apart. However, if they are to be associated with other rapid-growing shrubs, one should allow more room.

Selection of varieties depends largely on personal taste in the matter of favorite colors. Some gardeners may be attracted by the picturesque Oriental names which are attached to many of the varieties. The late Bertrand H. Farr used to say, "There are no undesirable Tree Peonies. It is only that some are slightly better than others."

How long will Tree Peonies live? No one seems to know, but plants in America are known to be more than 50 years old, growing as lustily and blooming as freely as in their youthful days.

A Quaint Old Herb Book Is Reprinted

By GERTRUDE W. MERRILL, Brooklyn Botanic Garden

"ACETARIA, a Discourse of Sallets," by John Evelyn, F. R. S., is a delightful volume on salad herbs, setting forth the "Plenty, Riches, and Variety of the Sallet-Garden." Published in 1699, the original is now rare and very expensive.

Feeling certain that its humor and quaint philosophy will have a wide appeal, the Woman's Auxiliary of the Brooklyn Botanic Garden is undertaking to reprint a limited edition of the "Acetaria." It should appeal to many book collectors because of its rarity, as well as to the garden-minded. Nor does one need to cultivate an herb garden to enjoy the recipes included in the volume, for many of the listed herbs grow wild in the fields and woodlands.

The material for "Acetaria" was gathered as early as 1679, with the idea of making it one chapter of an encyclopedic work on horticulture of which the Plan of a Royal Garden, included in this volume, was the outline. Unfortunately, the preparation of this ambitious work required more time than his other activities allowed, and in 1699 "Acetaria" was published as a separate volume. At that time Evelyn was in his eightieth year, and the book embodies much of the author's philosophy of life.

Born in 1620, John Evelyn was one of the foremost horticulturists of his time. By nature and inheritance he was essentially a man of property, and devoted much of his life to the study of gardening and plant-life and to the writing of many books on that inexhaustible subject. "Nor do I think," he writes, "Men will ever reach the End and far extended Limits of the Vegetable Kingdom, so incomprehensible is the Variety it every Day produces . . . . since almost all we see, and touch, and taste, and smell, and eat and drink, are clad with and defended . . . is furnished from that Great and Universal Plantation Epitomized in our Gardens."

A limited edition of the book is being printed by the Haddon Craftsmen. It will be a faithful reprint of the original, with all the charm of the seventeenth-century edition.

The book may be secured from the Woman's Auxiliary at the Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, N. Y. Price $5.00; pre-publication price $4.00, to above address.

Something About Daffodils

By MRS. WALTER KING SHARPE

WHEN a mere novice attempts to write on a specialized subject she must endeavor to interest the beginner, but, as the late Reginald Farrer said, not enrage the learned.

In recent years Daffodils have taken on a new importance. No one who observes trends in the horticultural world can fail to be impressed with the strides which have been made in the development of the flower itself and in the awakened public interest.

England, with its keen garden interest, its climate, and its comparative leisure, would seem to be the paradise for amateur growers. Moreover, it is from the amateur, who is not entirely dependent on the success of his labors, that the most outstanding results have come. In this country we have lagged far behind because of difficulties in the form of the quarantine, in costly experiments with soils and climates, and in the lack of stimulus provided by keen competition.

Since the standard classification of the Royal Horticultural Society subdivides the genus *Narcissus* into ten divisions, with some varieties overlapping, let us follow it. In order to exhibit satisfactorily one should be able to produce specimens in each class. When one has made a general collection one should specialize in those varieties which seem most desirable.

The first division comprises the great family of Trumpets. These are among the earliest to bloom and keep in excellent condition at a low temperature for ten days or more, a most desirable quality when intended for showing. There are three classes which are distinguished by trumpets equal in length to the perianth segments.

Yellow Trumpets have flowers of unusual size, length of stem, substance, and color. They appeal very strongly to the beginner and are truly magnificent subjects, making up in splendor what they lack in delicacy. Two fine varieties at a moderate price are Dawson City and Aërolite (shown on page 23). Kandahar is larger and more expensive.

White Trumpets are among the great beauties of the race, and efforts are being directed constantly toward a pure white trumpet.

Several open with a pale lemon trumpet fading to white, such as Mrs. Ernest H. Krelage and La Vestale, but Beersheba opens entirely white. They are all outstanding. It is in this group that the so-called "pink" hybrids, Mrs. R. O. Backhouse and Love Nest, are usually listed by the trade.

In the Bicolor class, Silvanite is good and moderately priced. Æolus and Moira O'Neill are somewhat higher in price.

In the next great division, the Incomparabilis, some of the finest achievements have been made. Here the cup or crown is not less than one-third the length of the perianth segments. It is in this section and the following one that the breeders are striving to intensify and stabilize the deep orange or red of the cup which too often fades in our hot sunshine. The famous variety, Fortune, still a very high-priced bulb, occurs in this group. John Evelyn, although not new, is a flower capable of great size which always compels admiration and does well on the show table. Gallipoli and Milford-Haven are both excellent in this division, while outstanding varieties still rather costly are Irene Bordoni, Torrid, Hades, and Scarlet Lancer.

The third division, the Barri, whose distinguishing characteristic is that the cup or crown is less than one-third the length of the perianth segments, is marked, like the preceding one, by brilliant color. Here are many of the best-known varieties, ranging from Bath's Flame and Diana Kasner to Shackleton and the famous St. Egwin, still quoted at a figure too high for many of us.

We find in the Leedsi division some of the most refined and appealing of all the Daffodils. The Leedsi are, in effect, a paler Incomparabilis, since here again the length of the cup or crown is one-third that of the perianth segments. The Giant Leedsi often verge on the White Trumpets, as in Crystal Queen and Her Grace. Tenedos and White Nile are superb things, while Blizzard and Grayling are worth waiting and saving for.

Having gone through the first four great divisions of the genus, which in the Incomparabilis, the Barri and the Leedsi are again subdivided according to size or color, we reach the lesser but perhaps more charming types: Triandrus, Cyclamineus, Jonquilla and Poetaz hybrids, the Poeticus tribe, and the Doubles.

In the Triandrus group, the species is very similar to that of

Narcissus, Aërolite. (See page 21)

Cyclamineus (at least in appearance). Some very winsome hybrids have appeared: Agnes Harvey, Pearly Queen, Thalia and Stoke.

Among the Cyclamineus and Jonquilla Narcissi are many dwarf forms with small flowers and rush-like foliage which are particularly adapted to the rock-garden. Jonquilla simplex, with its butter-colored flowers and fragrance, grows rampantly in some of

the southern states and will do well in Pennsylvania if given sunshine and sharp drainage. Golden Scepter, Tullius Hostilius, Lady Hillingdon, and White Wedgwood are all highly recommended. There are not many Cyclamineus hybrids; the earliest, February Gold, is pure gold even if it does not bloom in February. There are also Winter Gold and March Sunshine. The species itself is very interesting, with a narrow, drooping trumpet and reflexed perianth, very like the Triandrus.

Short-cupped and clustered flowerets, somewhat like a Polyantha primrose, distinguish the Poetaz. They belong to the late season. Desirable varieties are Laurens Koster and Medusa.

Flowers of the Poeticus section are known and loved wherever Daffodils are grown. Its hybrids bear such haunting names as Juliet, Horace, Edwina, and Rupert Brooke. Ornatus and Recurvus are the old forms, blooming a month apart, the latter being the Pheasant's-Eye.

The Doubles bring the present classification to a close. Of old gardens, Orange Phœnix and Golden Phœnix are far surpassed by Twink which is just like its name. Cheerfulness suggests a bunch of tiny gardenias, and Holland's Glory, a double yellow rose.

Daffodils cover a long season of bloom—Mr. Wister lists a season just short of two months—from the first February Gold through the Trumpets and late Poetaz to the old Pheasant's-Eye, and for those who are fortunate, *N. alba plena odorata.* It is, to many gardeners, a most tantalizing variety. Many seedsmen have discontinued supplying it because of dissatisfied customers. There is a garden, famous in southern Pennsylvania, where these coveted bulbs bloom literally by the thousand on a sloping, sandy hillside in full sun. The owner acquired them many years ago, from the dooryard of a farmhouse still farther up the mountain. I have known three people to cut industriously for more than an hour with no perceptible effect upon the mass of bloom.

The purpose in growing Daffodils will largely determine what to plant, where to plant, and how to plant. If one wishes Daffodils in drifts as part of the garden picture, he should plant the simpler, less expensive kinds, combining them with other spring flowers as part of the landscape design. If one is raising them for the show table, choose a sheltered, sunny location and prepare the

soil well with fertilization from below. Plant choice bulbs deep, about seven to eight inches from the top of the bulb, so that they will not spend their vigor in rapid reproduction, and give them clean cultivation and water in dry weather. One does not pay $4 for Warlock or $10 for Fortune to turn them over to chance in woodland or meadow. To these are given splendid isolation with their own kind and the gardener's prayerful attention.

Wisteria for Pennsylvania Gardens

By A. E. WOHLERT

WISTERIA suggests to us something of the romance, the glamor, and the atmosphere of the Orient, and yet it has a very definite place in American gardens. Although two species of this genus are indigenous to North America, they are not widely cultivated because the Oriental kinds are much more decorative.

Climbing plants are used not only to embellish homes and structure in the garden but also to conceal architectural mistakes and irregularities. Frequently, pergolas, gazebos, arbors, and even homes tend to dominate a garden setting rather than blend with it. For this purpose Wisteria is an especially valuable plant since it lends itself to the softening of harsh lines or helps to give unity to a home and its adjoining garden.

Buildings of stone and brick provide a very desirable setting for this Oriental vine. Undoubtedly, the builders of those substantial old residences in and about Philadelphia were aware that Wisteria would enhance the beauty of their homes. Some of the most remarkable plants there date back more than fifty years.

Formal gardens often require definite accent plants at entrances or changes of level. Perennial borders often need similar treatment. Wisterias trained as standards or tree forms are used to advantage in such places. However, they may need supports for several years after planting.

Introduced into England about 1816, *Wisteria chinensis* was made known to American gardens in 1818 by John Reeves, a tea-taster. It is commonly accepted that Thomas Nuttall named the genus in honor of Dr. Caspar Wistar, professor of anatomy at the

Wisteria softens the severity of stone

University of Pennsylvania. However, the early spelling Wisteria was believed to have been a mistake, and the name was spelled with an "a" in all literature for nearly a century following the publication of Nuttall's monograph. Research indicates that there were two branches of the family, one spelling the name with an "e" and the other with an "a." Our Secretary, John C. Wister, opines that old-timers did not know how to spell anyway. Furthermore, some of the descendants of this old Germantown family are of the opinion that the genus was named for Charles J. Wister, of Germantown, by the famous Abbé Joseph Correa de Serra. The Abbé, a spy of Bonaparte's, was born in Portugal, where he later became perpetual secretary of the Academy of Science at Lisbon. To escape religious persecution he traveled to France and later to England. In 1814 he became professor of botany in Philadelphia and was well known as a lecturer in scientific circles. Recently, the Botanical Congress at Vienna ruled that the original spelling should be used, even though mistakes had caused the change, which coincides with the account which some of the Wister family have given. Accordingly, we shall accept the spelling, "Wisteria."

Adaptable to varying conditions of rainfall, soil, and temperature, Wisteria is outstanding for the color, form, and fragrance of its flowers, in addition to the attractive foliage and the character of its growth. In aspect the Wisteria reminds one of the pleasing and unique forms so characteristic of Japanese flower arrangement.

Not only the extreme heat of recent summers, but the severe freezing of the past few winters has made garden enthusiasts conscious that resistance to adverse conditions is of vital importance when considering plants, especially climbers, for garden use. To be sure, extreme heat does burn the edges of the tender foliage of Wisteria, but it causes no permanent damage. A temperature of 25 degrees below zero has caused no injury to the dormant flower-buds, although the cambium layer did register evidence of the severe change. As with espalier fruit trees, Wisterias trained on pergolas and trellises are most satisfactory if pruned back to three leaders. Intertwining almost always causes decay on one or all of the involved branches. Space each leader 2 to 3 feet apart, according to the effect desired.

In preparing the soil, especially near buildings, it is advisable

to dig a trench 2½ feet wide and 2 feet deep and refill it with new loam, or add a mixture of old manure and leaf-mold or peat moss. Sand or sifted coal-ashes may be added if the soil is unusually heavy. Set new plants 4 to 6 inches deeper than the graft; larger plants, 8 to 12 inches. Spread the roots well and tamp the soil firmly. Then water generously. It has been observed that Wisteria does not have definite soil-preference as to acidity or alkalinity.

It should be remembered that newly planted Wisteria does not come into leaf promptly; nor should one expect the flowers to be of any consequence the first year. October, November, and December are good planting months, as are March, April, and May. Pot-grown plants may be moved throughout the growing season.

When plants have become established, growth may be increased by applying water generously during the dry season. Soil of high fertility produces the most vigorous growth, but Wisteria will grow in poor soil and flower better.

Generally speaking, if vines are not producing flowers it is because they have not reached maturity. However, artificial maturity may be created by severe root-pruning after mid-June. Dig around the plant, making a circle with a sharp spade, and cut all roots 12 to 14 inches away from the crown. If the vines have been established 10 years, more radical treatment is needed.

Feed the vine and it will grow luxuriantly—starve the vine, by poor soil and scant water supply, and you will get flowers.

Horticultural Advance in Pennsylvania

Every member of The Pennsylvania Horticultural Society receives this expression of the Society, sent out in an honest endeavor to advance gardens in the Keystone State. This endeavor will count as each member helps. How? Show the magazine to a garden friend, suggesting membership as a mutual service. Tell the Editors of outstanding gardens that may be visited, of rare plants, of good trees. Consider how community effort may count, as in a public garden, even of annuals if not of roses. Note how a planting suggestion may reach the highway authorities, toward better town approaches. In all this, help make your Society useful—that is its purpose.

Chrysanthemums

By R. MARION HATTON

IN THE modern Chrysanthemum we have one of the finest of all garden flowers whose brilliant colors and pungent fragrance stimulate our drooping spirits, and make it so much easier to wind up the garden year.

While frosts will destroy all open flowers, early light frosts do not injure the buds, so we can have Chrysanthemums for weeks after the more tender things have all been killed. A few plants will furnish color for the garden and armloads of long-lasting cut-flowers for the house.

Chrysanthemums are among the easiest of all our garden flowers to grow. They are little troubled by disease and but few insects bother them. Plants of even the newest varieties are not expensive, and they can be increased rapidly by green cuttings; or if one is not interested in named varieties, blooming plants can be raised from seed in one season, and seed of the finest strains is now obtainable from the originators.

The plants are so accommodating that they can be moved at any time, even when in full bloom, and are thus useful to fill vacancies in the border.

There are a number of Chrysanthemums to be found in old gardens throughout Pennsylvania that are unquestionably hardy, having existed for years with little or no protection, but most of the varieties popular today require some attention to enable them to get through an average Pennsylvania winter.

Like most plants which produce quantities of flowers, Chrysanthemums require rich soil and plenty of water at all times. If the plants are to remain over winter where they have bloomed, it is well when preparing the beds to raise them an inch or two so that water and ice will not cover the plants during cold weather. A large percentage of the winter loss of Chrysanthemum plants can be traced to water or ice smothering them during the winter months. Although Chrysanthemum roots do not go deeply, the beds should be well prepared, with a liberal quantity of manure incorporated with the soil.

Chrysanthemums can be planted any time after frost-danger has passed, up to early summer, and late plants are surprisingly successful but, of course, will not produce as much bloom as those set out early.

Many nurseries list potted plants and field-grown clumps. The potted plants are usually cheaper, and although they are small and have only one shoot when you get them, they will develop into perfect plants by bloom-time, and will give better satisfaction than the divisions of last year's plants.

Chrysanthemums should be dug up and divided at least every second year. Most good growers do this every spring, pulling the old crowns apart and using one or two of the newly rooted shoots for a new plant.

Chrysanthemums, being hungry plants, quickly exhaust the soil under them; the center of the plant dies out and the flowers become smaller and smaller, so it pays to divide often, replanting in new ground or remaking the old beds.

Among the few insects bothering Chrysanthemums are black aphis, which seem to be more easily discouraged than are their green relatives. Infrequent spraying with Black-Leaf 40 or one of the newer contact preparations will keep the plants clean. Grasshoppers are fond of Chrysanthemum petals, and are sometimes rather annoying at bloom-time but as any poison used would spoil the flowers, there isn't much that we can do about them, except encourage the birds. A bird-bath and a feeding-tray in the garden are about the best insect insurance we can have at any time.

Leaf nematodes are troublesome in some places, especially on some of the new Korean Hybrids. Thus far we hardly know what to do about them. Probably the most sensible thing is to throw out susceptible varieties, as there are plenty of desirable ones which are apparently immune.

Give the plants a feeding of a complete fertilizer, such as Vigoro, two or three times during the season, and plenty of water at all times; then there will be little need to worry about disease. Chrysanthemums are not immune to disease but if well fed and watered they usually keep in good condition.

The browning and drying up of the lower leaves of some varieties is sometimes caused by disease but is more often the result of

Chrysanthemum
Astrid

lack of water. Chrysanthemum canes are of a woody nature, and if the plants suffer from drought for any length of time the canes become so hard and woody that the sap is slowed up and the leaves dry out, so never let your Chrysanthemums suffer a check from lack of water.

When the plants are 6 inches high, pinch out the tips and continue to pinch them back during June and July. This will make bushy plants increasing the quantity of bloom and the plants will require less staking than if allowed to grow at will.

If the plants are in raised beds, or in a position where water cannot cover the crowns in winter, a light covering of oak leaves, straw, or hay (just enough to keep the sun off) will usually be all the winter protection required after cutting the old stems near the ground. But if one has a coldframe, it is well to lift a plant or two of each variety and transfer to the frame where they will be sure to carry over. Each clump will furnish a number of new plants for early setting out.

It is not in point here to discuss varieties, but I suggest a careful study of the catalogues of some of the Chrysanthemum specialists. Or, better than this, if you live in eastern Pennsylvania, visit the campus of Swarthmore College, where John Wister has growing one of the finest collections of Chrysanthemums in this country.

Let me urge you, however, to not overlook the Amelia family (sold by some dealers as Azaleamums), now obtainable in several colors; the Korean hybrids, both single and double; the Arcticum hybrid, Astrid (illustrated on page 31), originated by J. J. Styers, Concordville, Pa.; and Mr. Cumming's new Shasta Daisy and Pyrethrum hybrids. That great hybridizer is doing things to all the members of the Chrysanthemum family, and Chrysanthemum lovers will do well to keep an eye on his work. He has a lot of surprises in store for us.

OF FRITILLARIAS.—"The chief or only use thereof is, to be an ornament for the Gardens of the curious lovers of these delights, and to be worn of them abroad, which fo- the gallant beauty of many of them, deserveth their courteous entertainment, among many other the like pleasures."

—JOHN PARKINSON, 1629

Autumn Flower Shows

SEPTEMBER

Sept. 9. Mifflin County Garden Club, Y. M. C. A., Lewistown, Pa. 12 M. to 8 P.M.

Sept. 10 and 11. Trevose Horticultural Society, Community Building, Trevose, Pa.

Sept. 11. Garden Club of Springfield, Central School Auditorium, Springfield, Delaware County, Pa.

Sept. 11 and 12. Rutledge Horticultural Society, Fire House Auditorium, Rutledge, Pa.

Sept. 14. Fall Show of The Hatboro Neighbors Club.

Sept. 16. Garden Club of Berwyn.

Sept. 16. West Philadelphia Garden Club, 3944 Walnut Street, Philadelphia, Pa.

Sept. 17. King's Daughters, Carmel Presbyterian Church, Edge Hill, Pa.

Sept. 17. Ardmore Fall Flower Show, Women's Club Building. 2.30 to 9 P.M.

Sept. 17 and 18. The Pennsylvania Horticultural Society, 30th Street Station, Pennsylvania Railroad, Philadelphia, Pa.

Sept. 19 to 24. Florists' Telegraph Delivery Association, Annual Convention, School of Design and Style Show, Bellevue-Stratford Hotel, Philadelphia, Pa.

Sept. 21. Garden Club of Drexel Hill.

Sept. 23. Norristown Garden Club, City Hall, Norristown, Pa. 3 to 9.30 P.M.

OCTOBER

Oct. 1 and 2. Old York Road Garden Clubs, Strawbridge & Clothier Store in Jenkintown.

Oct. 1 to 3. Dahlia and Horticultural Society, Camden Vocational School, Browning Road, Merchantville, N. J.

Oct. 4. Germantown Horticultural Society, Library Hall, Vernon Park, Germantown, Pa. 3 to 10 P.M.

Oct. 23 and 24. Rutledge Horticultural Society Chrysanthemum Show, Fire House Auditorium, Rutledge, Pa.

NOVEMBER

Nov. 1. Germantown Horticultural Society Chrysanthemum Show, Library Hall, Vernon Park, Germantown, Pa.

Nov. 4, 5, 6, 7. Autumn Exhibition of The Horticultural Society of New York, American Museum of Natural History, New York City.

THE 1937 DAHLIA AND FALL FLOWER SHOW OF

The Pennsylvania Horticultural Society

In Coöperation with

THE PENNSYLVANIA RAILROAD CO.
THE PENNSYLVANIA RAILROAD GARDEN CLUB
THE GARDEN CLUB FEDERATION OF PENNSYLVANIA

Friday, September 17, 1937
3 to 9 P.M. (D.S.T.)

Saturday, September 18, 1937
9 A.M. to 9 P.M. (D.S.T.)

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PENNSYLVANIA GARDENS

Future of Pennsylvania Gardens?
(See page 1)

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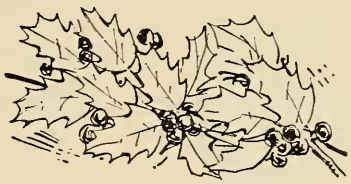


Is This the Last Number of Pennsylvania Gardens?

It is not without a sense of regret that I am obliged to announce that this will be the last number of PENNSYLVANIA GARDENS *unless the future holds some unforeseen means of financing. The little magazine was splendidly edited and provided most valuable garden articles* by eminent members of the Society.*

It was started as an experiment to assist in accomplishing a given end, which was to increase our membership throughout the State, and the Society had to make use of some of its reserve funds in order to make up the deficit caused by its publication.

The Society's thanks are herein expressed to Dr. J. Horace McFarland, who has edited the publication and who has worked without recompense in his effort to develop a worthy magazine devoted to Pennsylvania horticulture.

It may be that some of our members would care to make possible the continuance of the magazine, either by direct contribution or by a subscription at not more than $1 per year, independent of the scanty dues paid to the Society. From such the Extension Committee, of which Dr. McFarland is Chairman, would be glad to hear.

C. F. C. STOUT
President The Pennsylvania Horticultural Society

*Outstanding articles written with authority and originality were contributed by active members—John Wister on Lilacs, Hemerocallis by Mary G. Henry, Roses in Pennsylvania by J. Horace McFarland, Gordonia by Elizabeth C. White, House Plants by Anne B. Wertsner, Tree Peonies by H. G. Seyler, Daffodils by Mrs. Walter King Sharpe, Wisteria by A. E. Wohlert, Holly by F. R. Furness, and Barberries by John C. Swartley.

What 1600 Arch Street Has to Say

By FANNIE A. ROOT

THE Society's autumn season got off to a good start with the Dahlia Show in late September, followed by the Hardy Chrysanthemum Show at Swarthmore College in October—the first exhibition to be held in coöperation with the Arthur Hoyt Scott Horticultural Foundation. The Visiting Days at Swarthmore last spring and the Chrysanthemum Show this fall, are concrete expressions of a closer relationship which, we believe, will be very valuable to both organizations.

The offices and Library of the Society are beginning to buzz with the winter activities which reach their climax with the Philadelphia Flower Show in March. If fact, the increasing number of these activities makes the quarters of the Society more and more deserving of the distinction of being called the "Garden Center" of the Philadelphia area. During October, 75 visitors came to the offices for horticultural information, and 54 persons used the Library. Nine meetings were held in the rooms, bringing almost 200 additional visitors to our headquarters.

Lectures will be the principal December activity—with more lectures following in January and February. Mr. Hare's excellent lecture on "Gardens of Spain and Majorca" (see page 29) was the feature of the annual meeting on the evening of November 17, and on November 19 began the subscription course of six practical gardening talks by Miss Wertsner, the Society's Field Secretary.

This series is welcomed by many amateur gardeners who have often asked for such a course; and a timely lecture on Christmas decorations was given on December 13, having been included by special request of a group of members. The subscription courses are open to all—non-members as well as members.

Don't forget that Mr. Rust is available for garden consultation this winter. He holds office hours here at 1600 Arch Street, Philadelphia, every Monday from 9 to 12 A. M. and from 2 to 4 P. M., and can be seen other days by appointment. Miss Wertsner leads a round-table discussion on pertinent gardening subjects the first Monday of each month, from 2 to 4 P. M.

American Holly, Ilex opaca. (See page 4.)

Holly for Pennsylvania Gardens

By FAIRMAN R. FURNESS, in conversation with Daniel J. Foley

IT WAS Linnæus who adopted the name Ilex for this extraordinary genus. Prior to his time, and, in fact, going back two thousand years, Holly was known by the names Agrifolium and Aquifolium. From old records we learn that the Greeks used the former, which means "wild" or "of the fields." Later the Romans adopted the latter name, meaning "sharp leaf." The old genus name Aquifolium is now used to designate the species we know as English Holly.

How the name Holly originated is very much a matter of conjecture. It probably came from holy, because of the long-time association this tree has with Christmas. Even before the Christian era, Holly had a place in the festival of Saturnalia. In England and in many parts of Europe the Holly has become a part of the national tradition, with many superstitious implications.

Observations of the species and varieties grown in my garden at Media are given here, in the hope that more Pennsylvanians will enjoy more kinds of Holly in their gardens.

Ilex cornuta, the Horned or Chinese Holly, is related to the English Holly. It is distinguished by at least three spines at the tip and one or two along the sides. Introduced into English gardens from China in 1846 by Robert Fortune, this plant is yet little

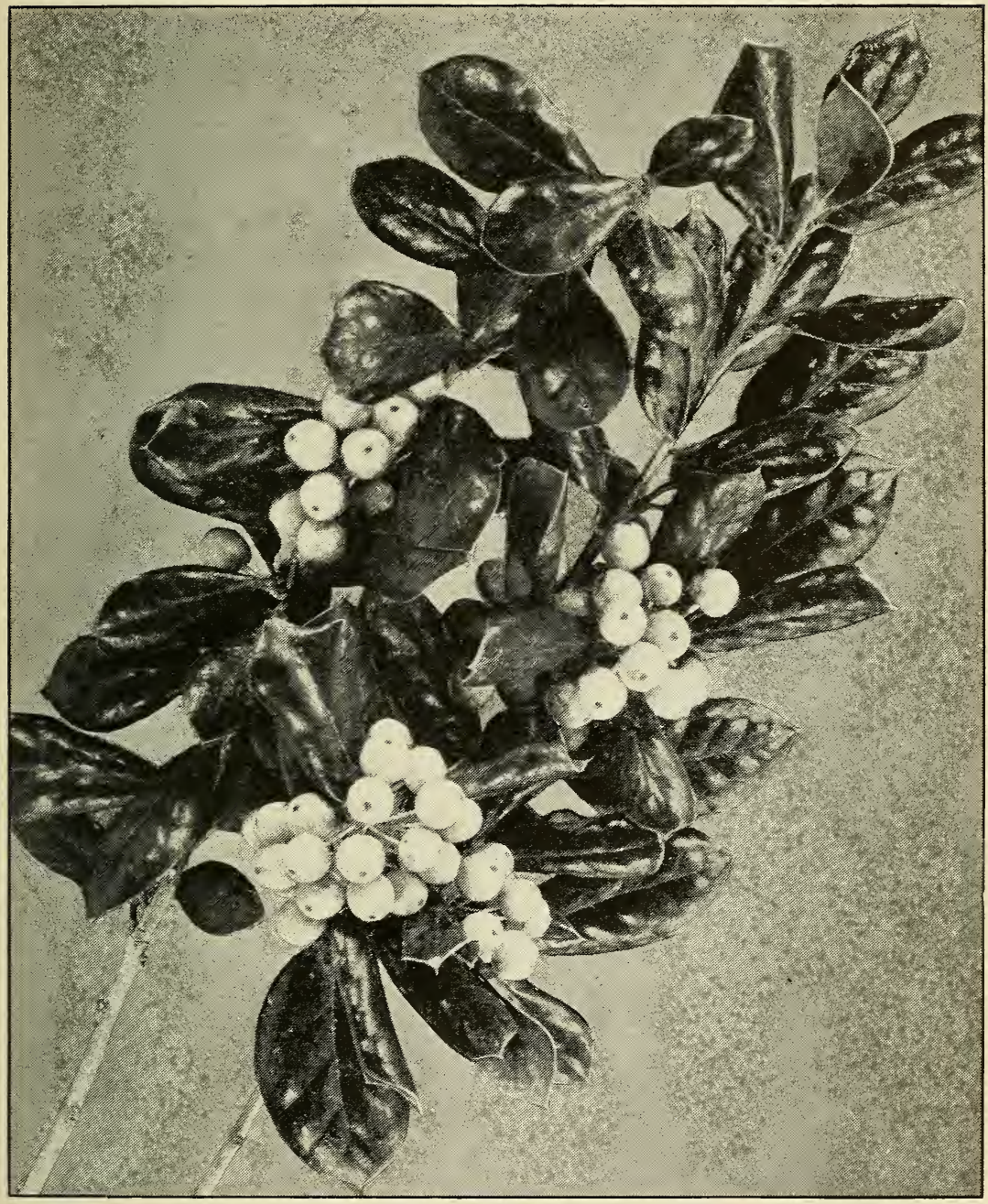
known in American gardens. It has proved fairly hardy at Media except for the severe winter of 1933-34, when it winter-killed badly. However, it has reëstablished itself, and makes a striking evergreen mass with its glossy foliage and almost equally glossy berries. (Mature plants produce large red fruits.) A variety known as *I. cornuta Burfordi* has rounded glossy leaves accentuated by a single spine at the tip. In fact, the leaves always look as though the gardener had just varnished them. (See illustration, opposite.)

Unfortunately, English Holly, *I. aquifolium*, is not reliably hardy over severe winters in Philadelphia, yet it can be grown in sheltered corners where there is some moisture. It seems that dry summer weather damages it badly, as well as severe changes of temperature in winter. The large, glossy leaves are particularly striking. More than 150 varieties are cultivated in England.

A well-established specimen of American Holly, *I. opaca* (see page 3) is a joy in any garden, and, what is more, its evergreen character makes it decorative the year round. Since Holly is diœcious, it is necessary to grow both male and female plants, but it is not necessary to have them in close proximity to have satisfactory fruits. Botanists tell us that the trees may be separated a mile or more as long as they are in the path of wind which will transmit the pollen.

Undoubtedly, the hardiest of all the exotic Hollies in the Philadelphia region is *I. pedunculosa*, a plant with spineless rounded leaves. It is a rapid grower and makes a slender mass of rich foliage which suggests its use as an accent plant.

While not possessing showy red fruits like so many of its relatives, the Japanese Holly, *I. crenata*, discovered by a Russian botanist less than a century ago, has unusual landscape value. In Japan it is widely grown since it lends itself readily to dwarfing and is often sheared into fantastic shapes. Like many plants of comparatively recent introduction, it has not yet attained its rightful place in American gardens. The small, box-like leaves and its pleasing growth-habit make it a desirable substitute for the sometimes uncertain box. Both as a hedge-plant and as an accent plant it leaves little to be desired. Mature plants attain a height of 8 feet or more, and bear many small black berries. The form *I. crenata bullata* (*convexa*), introduced by Wilson, is more compact and



Ilex cornuta Burfordi as photographed through a red filter to secure full detail in the brilliant red berries. (See opposite page.)

has glossy foliage, and *I. crenata microphylla* has very small leaves.

Better known in the South, where it grows in abundance, is the Dahoon Holly, *I. cassine*, with heavy clusters of dull red fruit.

The Inkberry, *I. glabra*, deserves more attention because of its smooth evergreen foliage, its complete hardiness, and its blue-black fruits. Perhaps if it were not a native plant of wide distribution along the Atlantic seaboard, it would be more widely grown.

Another native Holly, *I. verticillata*, the deciduous Winterberry, is valued for the brilliant fruits which contribute a major part of the red color to Christmas decorations. However, too few garden enthusiasts think of it as a desirable garden shrub; yet, it carries its fruits well through the winter months. Planted against an evergreen background or along the sides of a stream or even in low, moist areas, it makes a brilliant mass of winter color. Both male and female plants must be grown for successful fruiting.

Many gardeners consider *I. lævigata*, with its orange-red fruits, superior to *I. verticillata*. The former grows in wetter situations and is native in many parts of the eastern United States.

A deciduous Holly, little known in Pennsylvania, is *I. decidua*, which develops into a small tree when mature. An unusual specimen, seen at the Morris Arboretum this fall, was heavily laden with red fruits not unlike those of *I. verticillata*. It appears to be native from Virginia to Florida. Since it has persisted in Chestnut Hill, developing into a well-shaped small tree of very pleasing character, it merits more attention from discriminating gardeners in the less frosty parts of Pennsylvania.

To grow Holly successfully, one needs acid soil. The plants are best moved in early spring, although many gardeners have been successful with fall transplanting. Plants moved in the fall should be well mulched with peat moss and oak leaves. When moving Holly, one should take care to provide for a generous ball of earth with each plant. Some growers prune the foliage back severely. As with all broad-leaved evergreens, water must be applied freely until the plants are well established. The more tender exotic kinds need a sheltered location in our climate—that is, protection from wind especially. It will bear repeating to state the necessity of planting staminate and pistillate trees if one would have berries.

Why not begin a collection of Hollies?

The Three Eastern Horticultural Societies Speak

From SECRETARY JOHN C. WISTER

THE Pennsylvania Horticultural Society was organized in 1827 "to encourage and improve the art of gardening." For more than a century it has held exhibitions at which new, rare, and superior plants and flowers have been shown. It has established a library of horticultural and botanical books, has conducted courses of lectures, both elementary and technical, and has arranged for visits to estates and nurseries where plants could be enjoyed.

Through these and other activities the people of southeastern Pennsylvania and near-by New Jersey and Delaware have had unique opportunities to learn about growing and arranging trees, shrubs and flowers. Today the suburbs of Philadelphia are justly famous for their beauty, and to this development the Pennsylvania Horticultural Society has contributed greatly.

The officers of The Pennsylvania Horticultural Society are proud of its long and honorable history. They are anxious to extend its beneficent influence throughout all of Pennsylvania, and to engage interested garden people and other groups in progress toward the goal of a more beautiful America. To this end they have coöperated on many occasions with the great Horticultural Societies of Massachusetts and of New York, with the National Association of Gardeners, with the Garden Club of America, with the Federated Garden Clubs of Pennsylvania and near-by states, as well as with many other organizations, national, state, and local.

The offices and the library of the Society have become a central meeting-place for horticultural organizations. They constitute a veritable garden center where information and advice about plants and their relations may be secured freely.

The Society exists to serve. Its present officers wish to make it constantly more useful to Pennsylvania gardeners near and far. All persons interested are urged to join the Society, thus enabling the officers to extend the activities and accomplish the ideals that actuate the organization. They are always glad to turn toward anything that may prove more helpful to all who love gardening.

PRESIDENT RICHARDSON WRIGHT Speaks for The Horticultural Society of New York

Part of my wistful thinking for the advancement of horticulture on this particular reach of the Atlantic seaboard is that the officers of the three great horticultural societies—Pennsylvania, New York, and Massachusetts—might spend a week-end together. First of all, we ought to know each other better; secondly, we ought to know each other's problems; and, for a third—the most valuable result of such a meeting—we might be able to exchange ideas that would help solve these problems and project future advancement along lines where it is most sorely needed.

While it is highly desirable, as the Psalmist says, to strengthen our stakes, it is equally desirable to lengthen our cords. The routine of educational work carried on in our central offices at Philadelphia, New York, and Boston continues as part of the day's work. In each instance this includes lectures, horticultural advice, the use of a library, pilgrimages to gardens, monthly or periodic shows, and an annual exhibition. These are the stakes of our tents and they constantly need strengthening.

What of the cords? How can we reach out from these three great centers to extend the perimeter of our influence? For such an extension we need budgets that are elastic and we need men and women of vision who can plot the work. We need, in both management and membership, a strong resolve to make these eastern states all one great garden to which our cities can resort for the advantages gardens always provide.

At no time in my wistful thinking have I dreamed that by working together these three great societies would lose their identities. I am opposed to the notion that because England has a Royal Horticultural Society, the United States or even the Atlantic seaboard horticultural progress can be forced under one leading head. Such strength as we have today lies in the strength of our individual organizations. It is far better to keep them distinct and, thus being apart, to maintain a lively and good-natured spirit of competition. A neck-and-neck race is highly exciting. Besides, all the horses are going in the same direction toward the same goal.

Perhaps the first lap of this race will be the week-end conference!

SECRETARY E. I. FARRINGTON represents the Massachusetts Horticultural Society

It is not surprising that three great eastern horticultural societies should be working together in perfect harmony. They have the same aims and purposes. They use the same methods and have organizations which are similar in character. Their officers are men and women with similar interests—men and women who are glad to exchange opinions and to profit by each other's successes and mistakes. They are represented at the dinners and exhibitions of the other societies, always with a message of good will and coöperation.

The statement has been made oftentimes that the presidents or the secretaries of the three societies should meet at intervals to talk over their varying problems. This would be a worth-while custom to establish, but even as matters now stand, the officers of each society are fairly well acquainted with the work of the others.

The secretary of the Massachusetts society is in an exceptionally advantageous position for maintaining contacts in the other states, as many letters come to *Horticulture* from readers in Pennsylvania and New York. *Horticulture* in itself forms a bond by which the three organizations are linked together more closely than would be possible through any other medium.

Letters which come to Boston from other parts of the country show that horticultural societies like those in Philadelphia, New York, and Boston are not known in most other sections. For the most part, horticultural societies are made up of men and women devoted to the cultivation of fruits. As a rule, they have an official connection with the state board of agriculture. Because of these facts, visitors to the East are surprised to find that the three societies now being discussed are independent, having no state affiliations or state aid, and that they are devoted particularly to ornamental horticulture. In some instances, however, visitors have been so impressed with what they have seen they have gone back to states farther west with an enthusiasm for horticultural societies of the type found here. This explains, in part at least, the development of similar horticultural societies in Michigan and Illinois.

Perhaps the fact is not realized by most of our members, but it is true, nevertheless, that through the work which they are doing they are making their influence felt throughout the country.

Starting a Garden Library

By MARIA B. SAMUEL

THE wealth of material available to anyone about to start a garden library is amazing, and consequently it makes the selection of the most practical magazines and books a difficult one. As librarian of the Pennsylvania Horticultural Society, I have endeavored to compile a list of the periodicals and books which seem to be most helpful to the average gardener consulting our library. The list is offered as a guide and is not to be considered the best or only choice that can be made.

Periodicals should play a prominent part in the garden library. It is through these monthly and quarterly organs that the latest knowledge on unusual plants and new horticultural methods is first presented to the garden-minded public. To keep abreast with the latest developments, one must be a regular reader of garden magazines. Among those most helpful to amateurs are:

	Annual Subscription
The American Home, 251 Fourth Avenue, New York, N. Y.	$1.00
Better Homes & Gardens, Des Moines, Iowa	1.00
Flower Grower, 99–129 North Broadway, New York, N. Y.	2.00
Garden Club Exchange, Des Moines, Iowa. (This is a supplement to Better Homes & Gardens and contains valuable information about Garden Club programs.)	.25
Garden Digest, Great Oak Lane, Pleasantville, N. Y.	1.00
Gardeners' Chronicle of America, 1270 Sixth Ave., New York, N. Y.	2.00
Horticulture, 300 Massachusetts Ave., Boston, Mass.	1.00
House & Garden, Greenwich, Conn.	3.00
The National Horticultural Magazine (quarterly), 32d Street & Elm Ave., Baltimore, Md.	3.00

Among the important books for the limited garden library, I would suggest:

Hortus, by L. H. Bailey	5.00
Standard Cyclopedia of Horticulture, by L. H. Bailey	15.00
Standardized Plant Names, by the American Joint Committee on Horticultural Nomenclature	6.00
Garden Guide, by a number of well-known authorities	2.00
The Book of Annuals, by Alfred C. Hottes	1.50
The Book of Perennials, by Alfred C. Hottes	2.00
The Book of Trees, by Alfred C. Hottes	3.50
The Book of Shrubs, by Alfred C. Hottes	3.00
Adventures with Hardy Bulbs, by Louise Beebe Wilder	5.00
Rock Gardens & Alpine Plants, by Henri Correvon	3.00
American Rock Gardens, by Stephen L. Hamblin	1.25

Roses of the World in Color, by J. Horace McFarland	$3.75
How to Grow Roses by J. H. McFarland and Robert Pyle	1.00
House Plants: Modern Care and Culture, by Majorie Morrell Sulzer	1.50
The Window Garden, by Bessie R. Buxton	1.50
New Flower Arrangements, by Mrs. Walter R. Hine	2.75
Four Seasons in Your Garden, by John C. Wister	2.50
The Story of Gardening, by Richardson Wright	3.75
Wild Flowers, by H. D. House	3.95
Field Book of American Wild Flowers, by F. Schuyler Mathews	3.50

In this limited list I have not attempted to include any volumes dealing with the special fields of horticulture, such as botany, fruit and vegetable culture, entomology, landscape gardening, biography, etc. Also it does not cover elaborate or expensive volumes which are very useful but not always possible for the restricted garden library. A. T. De La Mare Co. and The Macmillan Co., both of New York City, specialize in the publication of garden books and should be able to supply any of those mentioned.

The Library of the Pennsylvania Horticultural Society, with its 4,300 volumes, includes all of the above listed books and magazines and many others which garden lovers would find interesting and instructive. This library is available for consultation to all, and members of the Society have the additional privilege of taking books out of the library, including bound volumes of the magazines. It is our hope that many more of our members and their friends will visit and use our Library.

The 1938 All-America Selections

By W. RAY HASTINGS*

THE trend of flower novelties, in a much more natural way than styles in dress, follows popular modes. Plant-breeders are ever alert to the demands of the garden public. One year there is a fad for blue gardens; another, gold and yellow is the color motif. Then, too, there is the more conservative attitude on the part of gardeners who are continually looking for improved strains of our popular annuals. Zinnias, for ease of growth and colorful display, have been the annuals called on most. Petunias, also produced in varied tones, shapes, and sizes, have given life to our gardens and homes.

*W. Ray Hastings, of Atlanta, Ga., is chairman of the Committee on All-America Selections.

Recently Marigolds have come to the front and even dropped their familiar odor to shyly add a soft perfume.

Seed-growers and breeders, amateur, governmental, and professional, send their new varieties to the All-America Council for trials in a dozen different sections of America. Of course, this occurs before they are ever offered to the public, in order to determine just how good they are and whether they might be recommended for general garden use over a wide planting territory. Sixteen judges, in whom the seed industry of the United States and Canada has the greatest confidence, watch over these trials from planting through maturity. Comparisons are made with similar varieties already in commerce. Each judge must consider a trial entry better than anything else of its kind or color and adapted for outdoor garden use in his section before voting for it at all. Tabulated merit points voted by all the judges determine the winners. The remainder of the plants on trial are forgotten or turned back to their sponsors for further breeding.

This is the only undertaking of its kind whereby gardeners may learn of the world's greatest novelties the first season offered. Also, it is the only way seedsmen can know what new introductions they can honestly recommend. The 1938 Selections follow:

Salmon Supreme Petunia, the first Award of Merit for 1938, brings a distinctly new color to this popular family. It is versatile, too, for its plant grows erect, a foot high and wide, like Rosy Morn, and it may be used for edging, low borders, pots, and boxes. The 1½-inch flowers of light salmon with a white throat are in keeping with the size of the plant, and it is covered with blooms until fall.

An Award of Merit goes also to a new Antirrhinum called Celestial. While this Snapdragon is not rust-resistant, it is of the large-flowered Majestic type, with salmon-rose flowers on very broad, closely set spikes about 10 inches long. The plants, not over 2 feet tall, are compact in habit and do not require staking. Celestial is a first-rate cut-flower of most desirable color.

Giant Pansies are more in demand than ever, and solid beds or bands of a striking color are decidedly effective. Coronation Gold is the Award of Merit variety, with round canary-yellow flowers flushed golden orange on the lower petals. A few blooms may show light rays from the center. All have slightly ruffled edges.

Calliopsis, Golden Crown

Calliopsis, or Annual Coreopsis, is so easily grown that some of us might have passed it by. The large-flowered Drummondi type, though, is neither as tall nor as spindly as are many of the annual varieties. It is a fine development of gold or rich orange-yellow, larger even than the type, and a third of the daisy-like flowers have double rows of petals. With its pleasing fragrance and 12-inch, wiry stems, it is highly recommended for cutting. Golden Crown Calliopsis deserves its Award of Merit.

Another Calendula, Orange Fantasy, has been given an Award of

Merit for its distinct, rather dwarf, heavily foliaged plants, seldom more than 2 feet tall. Crested orange flowers, with a center cushion of seal-brown, distinguish this 1938 novelty.

Several years ago, in Japan, the impossible was accomplished. A secret, never revealed, produced an all-double strain of Petunias. Some of the flowers were not fully double and some were small, but there were no single flowers. Most of them were giants in size, with fringed petals. Then a dwarf plant strain was developed which required no staking, and with a high percentage of fully double, giant, fringed flowers averaging 4 inches across. One of these hybrids, Orchid Beauty, is orchid or light lilac, heavily veined with violet. Like a Japanese iris, while opening it seems to develop petals as it expands and most of the blooms are fully double when mature. The sturdy plants are a foot tall and thus a double Petunia has been given an Award of Merit.

Gaiety is the other dwarf, giant, fringed, all-double flower, winner of a Special Mention. Frilled petals of rich rose, or light rose-red with white markings, make this Petunia a desirable addition to the small number of outstanding double forms.

The Petunia Topaz Rose hails from California. It has 2-inch, plain-petaled flowers on 16-inch, upright plants, and is a good strong grower. The topaz-rose or light cerise-red blooms run true to color, and, what is more, it has a rich Petunia fragrance. A continuous bloomer, holding its unusual color well in hot sun, it is bound to win with you, too. It received Special Mention.

OTHERS RECOMMENDED

Golden West Marigold is an enlarged and improved Guinea Gold, or carnation-flowered golden orange variety with 3-inch flowers. It is not as large as Sunset Giants of last year's introduction, but more uniform in color and type.

Blue Gem is a new, very dwarf, compact Petunia useful for edging, pots, and boxes. Growing only 8 inches tall, it is a delightful companion for Rose Gem and Pink Gem, the All-America winners of several years ago.

Zinnia Navajo, brings us a new type of bi-colored Zinnias, less than 3 inches across, on 15-inch plants. Most of the blooms are double, and the petals are strikingly striped in contrasting colors.

Asters are among our most popular garden flowers. The development of wilt-resistance is one of the greatest contributions to twentieth-century horticulture, since it provides these beauties with the health and vigorous growth they formerly displayed in our gardens. Enchantress, a rich rose-pink in the Improved Crego class of lacy-petaled Asters, and Illusion, a silvery pink in the rather similar but Giant Comet class, are recommended new colors in these wilt-resistant favorites.

Lastly, attention has been called to American Beauty Mixed Marigolds. These are, doubtless, the finest Marigold hybrids or crosses among the choicest varieties and modern types. Carnation-flowered, chrysanthemum-flowered, and crested types, in many shades of light yellow to deepest tangerine-orange, go to make up these lovely hybrids. They are early and continuous bloomers.

Plant some of these novelties this spring and be sure to enter them in the flower shows. Seeds should be obtainable from your favorite seedsmen, described and pictured in their catalogues for 1938.

The Christmas Rose

By DANIEL J. FOLEY

ALTHOUGH blooming in the open near Christmas, almost regardless of the weather, this welcome, and surprising perennial is not a rose at all but a species of the genus Helleborus—*Helleborus niger*. It has long been a cherished flower in the Christmas tradition but is not widely grown. The flowers do somewhat resemble those of a single rose, which partly accounts for the common name.

A fanciful legend, much cherished abroad, recounts the origin of this plant. It seems that a girl named Madelon followed her brother, a shepherd, to the manger at Bethlehem on that first Christmas eve. She observed that he and his companions had brought doves, fruit, and honey as gifts to the Holy Child. Disheartened because she had nothing to offer, she turned back toward her home. Tradition has it that the angel Gabriel appeared and asked the reason for her sadness. Madelon confessed that she was too poor to take an offering to the new King, whereupon the kindly Gabriel caused the blossoms of what we know as the

The Christmas Rose, Helleborus niger

Christmas Rose to spring instantly from the ground before her. The little girl quickly gathered a cluster of them, then, hastily returning to the manger, presented them to the Holy One.

This legend has no basis of fact, but has been a tradition for centuries. It serves as another thread in the great cultural tapestry of civilization which has sprung from the heart rather than the mind, and which memorializes the birth of the Christ Child.

The Christmas Rose was known to Theophrastus and Dioscorides, who called it Melampodion—from Melampus, the goatherd who "purged and cured the mad or melancholic daughters of Prætus with the roots thereof." Parkinson tells us that in the seventeenth century it was grown "only in the gardens of those that are curious," and such is the case with this plant in American gardens of our own time.

Observations at Breeze Hill convince the writer that this plant grows with little care. It thrives under ordinary conditions but seems to grow best in moist soil. A partially shaded location that is protected from wind provides ideal growing and flowering conditions, and a background of evergreens makes an effective setting.

Bittersweet, Celastrus scandens

Decorations for the Christmas Holidays

By ANNE B. WERTSNER

WE HAIL with joy the increasing efforts of our conservation-minded countrymen to preserve the native plant materials which were in danger of extinction because of an over-zealous use as Christmas decorations. Their efforts have served to make all Garden Club members at least, increasingly conscious of the fact that certain greens, such as Balsam Fir, White Pine, Spruce, Hemlock, Red-Cedar, Arbor-Vitæ, Juniper, Yew, Box, Ivy, Barberry and Privet may be used freely; while others, such as Holly, Laurel, and Ground-Pine must be protected from individuals carried away by Yuletide exuberance. Each state has its peculiar problem. Here in Pennsylvania we do not have Holly as they do in the South, nor Balsam as they do in New England, but we must protect our Ground-Pine and Laurel.

Along these lines, the Garden Club of America has done a commendable piece of work with its Conservation Committees, and Nurserymen have recognized the fact that the tags of approval which were supplied up until this year by that Club were necessary for the sale of their greens.

It is a human trait to look immediately for a substitute as soon as we are deprived of something we have long used, and very often we are able to replace our original with an equally good, if not better, item. The tabooing of Holly wreaths brought increased interest in the use of other greens. As a result, we have gradually progressed to the use of practically all kinds of plant materials for holiday decorations. Now, I think, we are beginning to accept, as a familiar sight, wreaths of mixed greens with, possibly, some fruits, nuts, berries, or seed-pods that ten years ago would have seemed bizarre. From California it is possible to buy most attractive wreaths made entirely of fruits and nuts. An ingenious person could easily make a wreath of Walnuts, Chestnuts, Brazil Nuts, Litchi Nuts, Acorns, Pine-cones, Sycamore balls, Castor-beans, and seed-pods of varying colors for contrast.

The mixed-greens wreath, decorated with berries of deciduous Holly, Bayberry, Acorns, Cranberries, cones, etc., is most attractive and has excellent lasting qualities. Such a wreath, if used indoors, should not contain Hemlock, which soon dries and drops its needles; but Pine, Cedar, Yew, and Arbor-Vitæ last almost indefinitely and are generally acceptable for this purpose. Many of the sweet herbs may be used in wreaths. Some of the gray-foliaged plants provide a contrast to the dark greens which are most widely used. Rosemary, Santolina, gray Artemisias, and Lavender not only add interest, but also lend a subtle fragrance.

Fashioning wreaths is extremely interesting and not at all difficult. One needs only a frame, which can easily be made of privet canes or willow branches, tied together to the desired size, and strong, fast-colored, green florists' thread which is used to tie the greens in place. As wire cannot be pulled as tightly as strong thread and does not shrink with the greens as they shrivel, string is the more satisfactory for the novice. Small bunches of greens should be firmly tied on, one at a time, and the string should be carried around as one continuous piece. The length of the pieces of greens and the position in which they are held will determine the size of the wreath. Wire frames filled with Sphagnum moss are sometimes used for elaborate wreaths. The decorations should be put on last and wired firmly, using No. 18 or No. 19 wire, cut into 12 or 18-inch lengths. Attach cones, sprays of berries and fruits singly.

Garlands, ropes, and festoons for doorways, stairways, and mantles are equally fascinating to make and allow a delightful range for individual experiment. The greens are cut into small clusters and fastened to a cord or some pliable material which lends itself to easy and graceful draping. Make these ropes the desired length before beginning, and thus avoid the necessity of cutting, which tends to loosen all the greens.

An attractive decoration for a window or for suspension from a doorway is the evergreen ball. This is made by inserting evergreens, berries, and other desirable materials in a ball of sphagnum moss, etc. Or, to simplify your efforts, branches of evergreens placed in empty window-boxes, can be arranged most effectively for the holiday season. Sprays of Bittersweet, Winterberry, Pine-Cones, Sumac, and Pyracantha (if you are fortunate enough to have it) will lend a dominant color-note to the evergreens.

For the table and mantle there is an endless scope of possibilities. A base made from a piece of linoleum, or a pie-tin packed with moist sphagnum moss and tied in place, can easily be covered with evergreens. Insert these to give the desired shape. If candles are wanted, they can be placed in the moss at the time it is being packed. Fruits and cones may be used, or lovely effects may be created by lightly silvering the candles, Privet berries, cones, or Pines with a little silver paint. (White Pine is particularly nice for this.)

A colorful and charming effect may be obtained by employing branches or twings of Hawthorn or other thorny deciduous trees arranged in a moss base or in a base of plaster of paris, which gives the effect of snow. If variety is sought, silvering, a sprinkling of confetti over the natural twigs, or gumdrops impaled on the end of each twig or thorn, supply it. Artificial snow may be prinkled over the still wet plaster of paris to give a glistening appearance to the arrangement.

Small branches of evergreens inserted in a plaster of paris base simulate miniature trees and may be decorated with tiny balls, Cranberries, or cones. If these are placed on a mirror they afford an attractive centerpiece for the table.

There are innumerable possibilities for the person with a little originality. Everywhere the more venturesome are discovering new uses for a one-time common material.

Ruffled Giant Petunias

A Pennsylvania Petunia Test

By E. I. WILDE, State College, Pa.

PETUNIAS, Petunias, and more Petunias! There are several hundred varieties now in the catalogues, and hundreds more have been on trial in the test-fields of California, besides those which will result from careful breeding. The over-emphasis which is being placed on this group is best illustrated by the fact that of the nine All-America Selections of annuals this year, five were Petunias. One wonders if the seedsmen, as they are frequently accused, do not have a chronic case of "Petuniaitis." This accusation is not made to discourage the breeding of better and superior varieties of Petunias, but it would seem that seedsmen tend to clutter their catalogues with varieties of questionable superiority. It is also a hint that possibly more time should be spent on the development of other garden annuals.

When catalogues contain hundreds of varieties of one genus, with

names duplicated and triplicated, under different classifications, it is certainly proper that a test should be conducted to clarify such a muddle. With this in mind, such a test was conducted at the Pennsylvania State College, this past summer, to study the variation existing in the Petunia group. The collection included most of the varieties in commerce; there were 426 samples and about 20,000 plants. All were grown in well-manured and fertilized Hagerstown loam in full sunlight, and under irrigation.

The test showed very definitely that the colors were neither as intense nor as clear during the hot summer months as in late September or October when the climatic conditions more nearly approached those of the seed-growing districts of California. Petunias seem to develop best in a cool, even temperature, where there is plenty of soil-moisture, and even under cloudy or foggy conditions. Unfortunately, the descriptions of many of the Petunia varieties were written in the fields under a set of climatic conditions which can be duplicated in less than one per cent of the area of the United States. One may therefore expect them to vary considerably in color, in form, in size, and in height, when grown under more adverse conditions. The descriptions would be more accurate if they were secured from plants growing under average conditions.

In general, the test indicated (1) that the miniature varieties were of no value in the garden, but made excellent pot-plants; (2) that the variety Martha Washington (see page 22) was better than any of the improvements; (3) that the Giants, as a group, were of little value for bedding and failed to grow vigorously until late summer or early fall, but that the individual flowers were exquisite; (4) that the ability to produce seed decreased as the size of flower, the tendency toward ruffled and fringed petals, and the doubleness increased; (5) that too little difference existed in color between many varieties to justify the number of sorts now in commerce; (6) that confusion exists in the classification as to habit of growth; and (7) that many of the varieties listed as "improved" failed to show a uniform superiority.

I am here presenting a condensed statement of our observations on named varieties:

Among the royal purple group there was a slight variation toward the red. Perhaps the clearest color was expressed by the variety Royal Purple. This,

Petunia, Martha Washington (see page 21)

however, failed to clothe itself with sufficient foliage to cover the ground. Blue Bird, Alderman, and Violacea, for bedding, ranked in the order given; the variety Blue Bird grew taller and more uniform for color and habit of growth. Balcony Queen was the most uniform as to color, a royal purple, and the blotched flowers were striking and outstanding, but, unfortunately, although large, only 20 per cent of them were blotched and with no consistent pattern. Elk's Pride Improved was a large-flowered variety with a "glory" type of flower and a uniform tone, the best in this color group. Inflata Sapphire was a most desirable small-flowered variety attaining a height of 22 inches and producing an abundance of flowers 1¼ inches across.

Among those listed as blue, none surpassed Chicago Blue for all-round performance. Blue Perfection and Blue Bee were close seconds, a bit darker.

Silver Blue was the outstanding light blue. The plant attained a height of 17 inches with flowers about 2 inches in diameter. The objection to this variety is that the flower fades to a washed-out color.

Howard's Star Improved dominated in this group. Fifty per cent of the plants produced starred flowers, and the plants were vigorous, with a large percentage of the flowers a rich velvety red color. The dwarf strain failed to show dwarfness. Red Star, a dwarf variety, possessed the color of Rose of Heaven, and was most acceptable. Cockatoo proved to be a great disappointment, as the size and color of the flowers were not consistent.

The varieties Baby Violet and Senator are recommended to those who enjoy tints of true purple (Ridgway's Color Chart).

Most pleasing among the velvety crimsons was Flaming Velvet, which could not be distinguished from Black Prince as to growth or color. Crimson and Crimson Bedder were conspicuous in the crimson class, each being extremely uniform in color and habit of growth. Plain-edged Kriemhild was similar to Balcony Queen in all characteristics except color, which was rich crimson. Burgundy was outstanding because of its unique garnet-red flowers.

Salmon Rose (Diener's No. 27) and Salmon Beauty were two remarkable fringed salmon types hard to distinguish one from the other.

Dainty Lady stood alone as a fringed light yellow type. Pale Sulfur-Yellow, an unfringed form, was about as effective.

Noticeable among the bedding pinks was Celestial Improved (German strain). The plants were all dwarf, compact, and well covered with intensely colored flowers. Rose of Heaven and Celestial Rose were nearly the same shade, differing only in throat-color.

Luminosa, Fringed Rose, and Tyrian Rose were the distinct taller pink varieties. The colors, however, did not vary widely from Celestial Rose.

Columbia and The Art, from all appearances, were the same. The plants attained a height of 30 inches, producing an abundance of large flowers (2½ to 3¼ inches across), beautifully but unevenly blotched, striped, and edged. The color ranged from Tyrian rose to pinkish rhodamine-purple, variously marked with white.

Pride of Portland produced 60 per cent fringed flowers, and deserves first mention among the taller, large-flowered, fringed types. Gaiety was the best of the dwarf group. Countess of Ellesmere was consistent in habit of growth but possessed a color which was much more purple and therefore less desirable.

Two outstanding brilliant pink, large-flowered types were Pink Glory and Pink Triumph. The color was about the same, but the amber-yellow or bluish throat of Pink Triumph was more attractive.

The best bedding white varieties were Snow Queen and Snow Drift. White Cloud and Snowstorm Improved, both large-flowered types, were about of equal value. White Beauty, a fringed variety, merits its name.

Most of the all-double mixtures were good, but *Petunia maximum*, Double Fringed, was best. This variety produced 40 per cent doubles, and 60 per cent semi-doubles, and attained a height of 26 inches.

White Queen produced the purest (least-colored) flowers, and was given preference over Snowball (Madonna). Both were excellent.

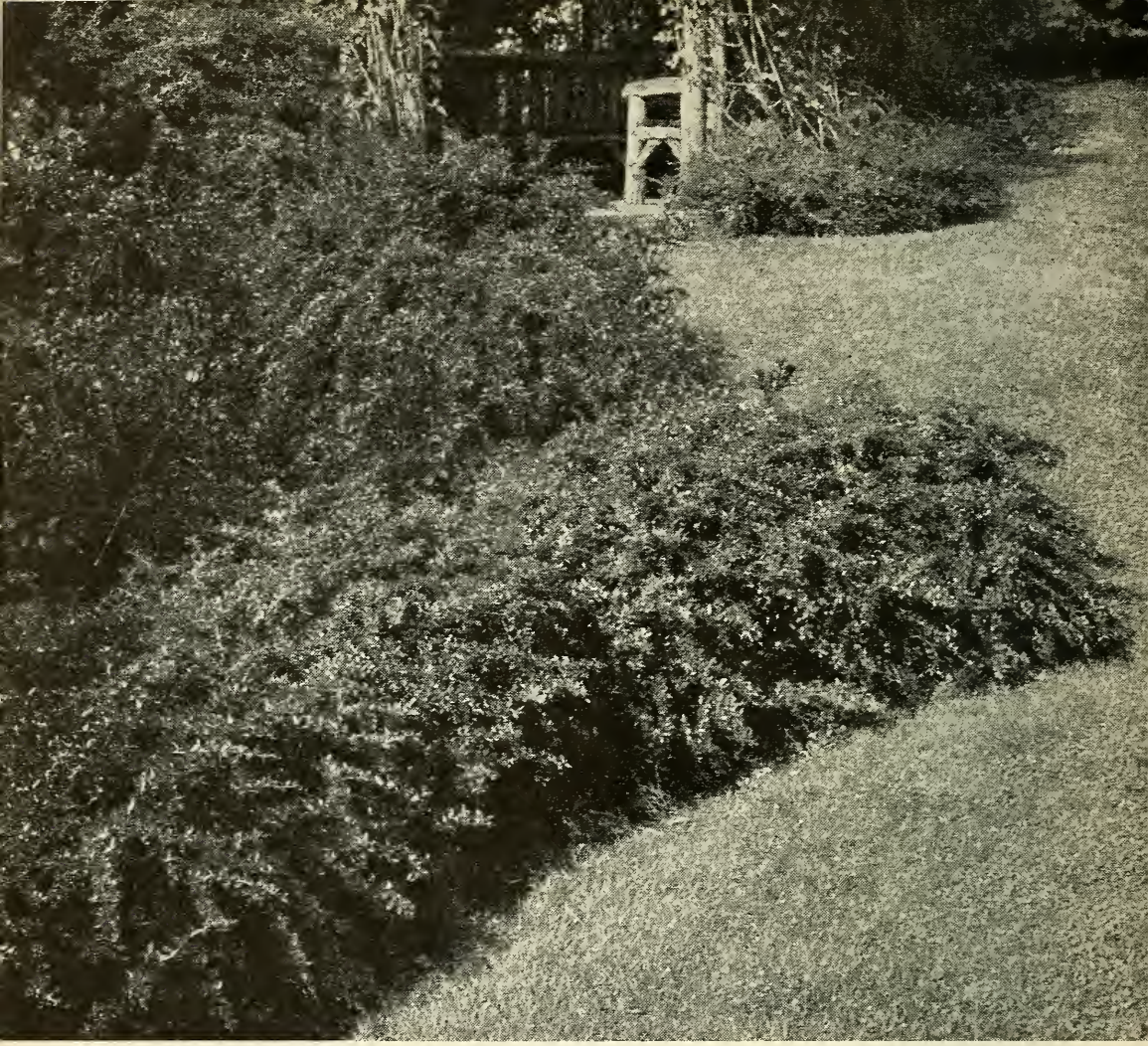
World Beauty and Pink Perfection were identical. The flowers were true to color and 98 per cent double, 14 per cent being semi-double.

Purple Robe and Amaranth Red were identical, not so uniform for color as World Beauty, but 100 per cent double.

Double Rosy Morn gave definite promise as a pot-plant. However, it ran only 46 per cent double, being really only semi-double. It was dwarf in habit of growth—attaining a height of 18 inches.

The Giant forms were not satisfactory until late in September, just before frost. All of the varieties make excellent specimens. Rheingold is a very worth while white-flowering variety with a bright yellow center, but it is not a good bedding kind. The finest veined type was Princess of Wuerttemberg. The size of the flowers and the color were very uniform. Among the dark red kinds, King Alphonso was best. Copper Red Light was a coppery rose, and very uniform.

The test will be carried on for another year and possibly the results will vary from those of this year, as they should.



A thriving hedge of Berberis verruculosa at Breeze Hill

Barberries at the Morris Arboretum*

By JOHN C. SWARTLEY

AT LAST the Barberry is coming into its own! Until rather recently only two species have been commonly known and planted—the European, *Berberis vulgaris*, and the Japanese, *B. Thunbergii*. The former has been in ill repute for centuries because of its association with the black stem-rust of wheat. Although legislative measures were taken against it, even before the Revo-

*In case the reader desires to see some of the following species in the garden, he will find those marked (1) represented at the Morris Arboretum, Chestnut Hill, Pa., by mature plants, and those marked (2) by small plants.

lution, none were really effective until about the time of the World War. Since then the disease has been noticeably checked in some parts of the country. In this connection, it will be worth while to read the latest report on rust-resistant species—Arnold Arboretum Bulletin of Popular Information, of September 10, 1937. This is the culmination of work on the part of Dr. L. M. Ames, of the U. S. Department of Agriculture, and presents, among other things, excellent descriptions of immune species and varieties.

In this pamphlet notice is taken of *B. Thunbergii*, the other common Barberry above mentioned. This, with its varieties and a number of other species, is rust-resistant.

A. DECIDUOUS SPECIES, RUST-RESISTANT.

(1) *B. Thunbergii.* One of our finest shrubs, disseminated in this country by the Arnold Arboretum, and too well known to need further words.

B. Thunbergii purpurea (*atropurpurea* in the trade). A well-known variety with leaves colored purplish to red. Excellent if used with discretion.

(2) *B. Thunbergii minor.* A form with smaller leaves and habit. Neat little shrub for front-row planting.

(2) *B. Thunbergii Maximowiczii.* A type with distinctive foliage.

B. Thunbergii erecta (*pluriflora erecta* in the trade). Of upright habit, as the name suggests, and therefore is valuable for formal hedges.

B. mentorensis. A hybrid resulting from a cross between *B. Thunbergii* and *B. Julianæ.* This plant is almost evergreen and perfectly hardy. It is distinguished by stiff spines, many flowers, and good autumn color, making it altogether an admirable plant for specimens or hedges.

(2) *B. koreana.* An upright habit, interesting, bold foliage, which takes on splendid colors in autumn, and large, persistent red berries, raise this plant above the level of common shrubs.

The next three species are also rust-resistant but, so far as we know, are not in the trade. However, they should take a place of prominence there, for they are worthy garden inhabitants.

(1) *B. Gilgiana.* A fairly tall plant with spreading branches, interesting flowers and fruits, and good autumn color.

(1) *B. circumserrata.* This is an adornment to the landscape at any time of the year, but particularly so in the fall, with its brilliant autumn color emphasized by its compact, rounded form up to 6 feet.

(2) *B. Beaniana.* A plant slow to produce fruit, but worth waiting for.

B. EVERGREEN SPECIES, RUST-RESISTANT.

(1) *B. Julianæ.* Undoubtedly the hardiest, with fine foliage and upright, dense habit.

(2) *B. verruculosa.* Handsome, hardy, low shrub which thrives in half-shade. (Illustrated on page 24.)

(2) *B. Gagnepainii.* Distinctive with its erect, then arching branches.

(2) *B. triacanthophora.* Fairly hardy and one of the most graceful of the evergreen Barberries.

C. MAHONIAS, RUST-RESISTANT.

(1) *M. aquifolium.* Hardy and very handsome, with its glossy leaves and rich tints in winter. Can be used as a ground-cover beneath trees, as can also the next species.

(2) *M. repens.* A dwarf Mahonia with good but dull foliage.

M. nervosa. Also low-growing, but has much larger, lustrous leaves.

As far as evergreen Barberries are concerned, we Pennsylvanians can almost confine ourselves to the above types, unless we are collectors, or wish to go to the trouble of providing winter protection. If winter protection can be provided, a number of other very beautiful species may be grown.

As regards deciduous species, we can find many more types to fill in empty spaces in the garden, for most of us are not subject to rust-resistant limitation. So, if we have the urge to collect a number of other beautiful Barberries, we can consider the following lists. An earnest effort has been made throughout this article to select only those species which are of decided value.

D. DECIDUOUS SPECIES, NOT RUST-RESISTANT.

These are obtainable in the trade,* although some are scarce.

(1) *B. aggregata Prattii.* A very small-leaved, dense shrub, with handsome fruit and leaves persisting late in the fall.

(1) *B. amurensis japonica* (also called *B. Regeliana*). Similar to *B. vulgaris*, but larger in form, foliage and fruit.

(2) *B. dictyophylla.* Distinct, with small leaves and white sucker shoots in the true form. Handsome autumn color and fruit.

(1) *B. ottawensis.* A hybrid between *B. Thunbergii* and *B. vulgaris.* Has a graceful form and fine fruit. Probably most of the *B. Thunbergii pluriflora* in the trade is this hybrid.

(1) *B. Poiretii* (confused by the trade with *B. chinensis*). A graceful shrub with interesting bright green, narrow leaves and showy, bright yellow flowers.

(1) *B. Sieboldii.* Holds firm, bright red fruits until spring, a quality possessed by only a very few Barberries. Also has a brilliant color in the fall.

(1) *B. Wilsonæ Stapfiana* (*B. Stapfiana* or *B. subcauliata* in the trade). A beautiful shrub similar to *B. aggregata Prattii*, but is not so hardy. The berries are a glorious light red and the leaves take on brilliant autumn tints.

(1) *B. Vernæ.* This species was collected by E. H. Wilson and was one of his favorites. This is his description: "A green fountain 6 feet high, with long, slender, bright red branches, many slender, short racemes of deep yellow flowers, and translucent salmon-colored fruits." (Illustrated on page 27.)

*No Barberry not in the immune or rust-resistant class can be shipped from or into a protected state, Pennsylvania being one of them.

The abundant salmon-pink fruits of Berberis Vernæ. (See page 26.)

(1) *B. vulgaris* and *B. vulgaris atropurpurea.* These extremely common plants are still rated among the best deciduous Barberries.

D. Barberries not Obtainable in the Trade

Should the reader be interested in further members of the genus Berberis, there are still some left that should be cultivated, although it is almost impossible to obtain them. These are:

B. Bretschneideri
(2) *B. chinensis*
(2) *B. Chitria*
(1) *B. diaphana*
(1) *B. Dielsiana*
B. heteropoda
(2) *B. Jamesiana*
B. oblonga
(2) *B. canadensis*
(2) *B. polyantha*
B. rubrostilla
(2) *B. Tischleri*

Descriptions may be found in any good plant manual.

The Morris Arboretum

By DR. RODNEY H. TRUE, Director

EDITOR'S NOTE.—The resources, the real richness of the Pennsylvania Horticultural Society's relations and connections are evidenced in this all-too-brief statement by Dr. True, a member of the Council of the Society. Then, too, the Swarthmore Arboretum, almost a creation of the Pennsylvania Horticultural Society and managed by its secretary, is another evidence of the unique opportunities and privileges available to our members.

THE Morris Arboretum was the home of John T. Morris and of his sister, Lydia T. Morris. Upon the death of Miss Morris, in 1932, it became, by her will, the Arboretum. It consists of about 160 acres, located where the rolling slopes of Chestnut Hill merge into the Whitemarsh Valley. The windings of Wissahickon Creek form its western boundary for a great part of the way.

The plantings made by Mr. Morris and his sister are found on the hilltop near their former home and on the sloping sides of the valley toward the south. Here about 50 acres are occupied by trees and shrubs, in large part from eastern Asia, making this one of the finest collections of plants from that area to be found in America.

The remaining acres are being planted with trees and shrubs. It is hoped in time to have here groups that shall represent the different families of woody plants that are able to survive the weather conditions of the region. Large groups of barberries, deutzias, mock-oranges, and poplars are already in place. The nurseries have many more young plants that eventually will assume their places in the plan of planting.

The Arboretum is being developed along lines indicated in the will of the donor. This extensive out-of-door museum, with its growing collection of trees and shrubs, is open to the public on Wednesday, Thursday, Saturday, and Sunday afternoons from 1 to 5 o'clock, and the entrance is on Meadowbrook Lane.

The Arboretum has a rapidly growing herbarium of woody plants, which greatly aids in the naming of many plants sent to the Arboretum. The offices, library, laboratories, and audience-room are located in the Mansion. A course of five lectures is given on the second Saturday of each month, beginning December 11. The Arboretum Bulletin, published quarterly, announces further details.

Mr. Hare Sees Gardens in Spain and Majorca

EDITOR'S NOTE.—Not many of the 3,500 members of the Pennsylvania Horticultural Society get to the Annual Meeting, wherefore there is here printed Mr. Hare's address as presented November 17. It was most pleasingly illustrated by colored pictures thrown on the screen. We visit tortured Spain with Mr. Hare, seeing only some of its gardens and none of its bloody warfare.

STARTING our Spanish journey from Irun, across the French border, in the northwest corner of Spain, we clambered over the crest of the Pyrenees Mountains and traveled down their southern slope to the tableland surrounding Madrid. Of the four famous royal gardens in Spain—the Generalife, at Granada; the Alcazar, at Seville; the San Ildefonso, at La Granja, near Segovia; and that at Aranjuez—two are near Madrid.

With Madrid as the pivotal point, the garden tour began with a visit to the royal palace at La Granja, where the gardens of San Ildefonso are located. These are, perhaps, the least known outside of Spain of the four mentioned. Philip V, in an endeavor to emulate Versailles, caused thousands of tons of rock to be blasted from the mountainside at La Granja, and moved an equal amount of soil from the valleys below to create a garden some 360 acres in extent. The mountain peaks tower some 3,000 feet above the garden, and from the melting snows a grand cascade, called the Cenador, brings the sparkling water to a series of twenty-six fountains placed about the grounds. These fountains are considered the finest in all Europe, and one, designated as the Bath of Diana, cost the royal exchequer the vast sum of 3,000,000 pesetas ($600,000). The gardens are formal in design and are effective through the selective use of evergreens, shrubs, trees, and fountains. However, at the boundaries of the garden the yellow broom, hyacinths, marsh marigolds, and other wild flowers give a florescent touch to an otherwise somber landscape.

The real playground of the royal family appears to have been in the lovely garden at Aranjuez, on the banks of the Tagus, a short distance from Madrid. This garden, built on a level plain, is truly a place of beauty. With its several large gardens subdivided into a series of smaller ones, delightful avenues take one from the royal

palace to the Garden of the Island, the Garden of the Queen, the Garden of the Prince, and numerous others equally entrancing. Flowers, shrubs, fountains, magnificent trees are here assembled in a great panorama of beauty. In addition to the great palace, there is a smaller one more beautiful in appearance and setting called the Laborer's Cottage, containing works of art of immense value.

The true Spanish garden is not seen in northern Spain, where the French method of gardening prevails, but rather it is found in Andalusia and the other southern provinces which were under the spell of the Moors for so many centuries. In southern Spain the gardens are of Asiatic origin and hark back to Persia. To the Moor a garden was not merely a walled-off space of land but was a man-made design in which nature played a minor part. A fine example of the Moorish effort is found in the magnificent Alcazar Garden at Seville. This garden, containing some 16 acres within the palace walls, has numerous delightful walks overarched with clipped cypress trees and bordered with walls glazed with polychrome tile. Myrtle and boxwood hedges divide the larger garden into a series of smaller ones. Each is individual. Fine old trees, many of them semi-tropical, provide the shade that is so essential in this extremely hot section of Spain. This shade, together with the numerous fountains that play at every crosswalk, and the running water led through channels to every part of the garden for irrigating purposes, provide elements of coolness and beauty. Roses, which bloom in Seville every month of the year, potted plants in full bloom, benches and fountains glazed with delicately tinted tile, add to the impressive grandeur of the garden.

Perhaps the real Moorish gardens have been best preserved in the Alhambra and Generalife at Granada. The general appearance of these gardens has been little disturbed in the 450 years since Boabdil, the last Moorish king, departed with his host of followers from the Alhambra and turned over the control of the province of Granada to Ferdinand and Isabella. The Generalife, the "Lofty Garden" of Moorish sultans, is on a hill high above the Alhambra. The charm of the place captivates all who visit there. It was built some time prior to 1300 and is exceedingly well preserved. Looking upward from the Alhambra, its white walls and dark cypress groves set half way down the shoulder of Cerro de Sol in a frame of bright

red earth and dotted with olive trees, form a picture which can never be forgotten. In the background, only 10 miles away, are the snow-covered Sierra Nevada mountains, yet orange and lemon trees flourish in the terrace gardens of the Generalife. At intervals, there are series of patio gardens walled from each other and hidden behind giant cypress trees. A canal some 4 feet in width, bordered with flowers and shrubs, brings coolness and beauty to the place. In the Patio of the Cypress the canal is in the shape of the letter U and forms a water-parterre embracing diminutive islands. The planting in this patio is very simple, following the usual eastern custom of using one or at most two plants in each little square or small enclosure.

In the vicinity of Barcelona there are numerous private gardens, the outstanding one being El Laborinto. Here, within sight of the eastern extremity of the Pyrenees, is a small valley at the base of the hills. A large section of the garden has been laid out as a labyrinth by clipping the cypress trees to a height slightly above that of the average person. From the higher ground it presents a magnificent appearance, but woe betide the unwary who attempt to traverse its labyrinthine paths without a guide. Wonderful fountains, fine old trees, great pools of water and elaborate Spanish garden houses complete the picture.

Some 130 miles across the Mediterranean from Barcelona lies the glorious island of Majorca, truly a paradise in that great inland sea. On that beautiful island, some 54 miles in length, with Palma the capital city, is a place of enchantment for one who wishes to forget the cares of the world. There are numerous gardens here, too, all wondrous and beautiful. The tiny Bishop's Garden in the rear of the huge cathedral at Palma, the magnificent private gardens at Raixa, and the pergola gardens at Alfabia, all have their appeal. Time is forgotten in this island land and here one may build and rebuild without hindrance those glorious dream castles that one has always visioned in contemplation. Here come artists for inspiration, and here among the gorgeous green hills of the island, the sandy beaches of its wondrous shores and the heavenly blue waters of the Mediterranean, one finds peace, happiness, and contentment for the soul.

What About the Delaware Canal?

By W. WILSON HEINITSH

IN THE autumn of 1931, I saw one of the last canal-boats on the Delaware Canal, floating along so contentedly behind a pair of mules that it seemed, for the moment, as if I had been transported back into the nineteenth century. Beside it, for a brief second, scurried a modern motor car, hurrying nowhere, perhaps. Where such a contrast in methods of transportation is still visible, the charm of antiquity becomes more striking. This old canal, running parallel to a modern highway, is one of the few beautiful landmarks unchanged by modern engineering. How can we preserve it?

One-sixth of America's entire population lives within a two-hours' journey of the Delaware River Valley. The motoring public knows full well the beauty of this section. Here the desire for speed seems to give way to a studied enjoyment of the surroundings. In these days of split-second rushing, this area nourishes a spiritual need for natural beauty, unconscious as we are of that need.

The Delaware Canal, which borders the river's western edge, is the most picturesque heritage of the Valley. Built more than a century ago, it has long since been graciously accepted by Nature. The overhanging trees and bridges along the canal have a settled look, and the old stone houses have become an inseparable part of the picture. Abandoned as a commercial waterway in 1931, it now offers a 25-mile stretch of unique recreational area within easy access of thousands who can enjoy it.

On the grassy banks of the towpath, horseback riders and hikers replace the plodding mules. The paddler in his canoe seems as carefree as the old man I saw dreaming at the tiller of the last barge. Occasionally nature lovers hire one of the old barges and loll on the deck, as the restful scenery rolls before their eyes. Nothing can improve the quaintness and natural beauty of this canal.

Years ago the canal was built by the State of Pennsylvania, and until 1931 it was leased and maintained by the Lehigh Coal and Navigation Company. Since then it has become an unwanted orphan and is now the subject of litigation. Whatever the outcome of this litigation may be, public opinion must demand that it be maintained in all its natural beauty.

Winter Lecture Courses

REMAINING LECTURES OF COURSE NO. 1

PRACTICAL GARDENING TALKS AND DEMONSTRATIONS
Sixth Floor, 1600 Arch Street
ANNE B. WERTSNER, *Field Secretary*

10.30 A.M.

DECEMBER 17 FRIDAY: Spring Plants, Rock Plants and Bulbs.
JANUARY 7 FRIDAY: Annuals and Perennials.

Subscription price for course $6; individual lectures, open to all, $1.25

COURSE NO. 2

Comparison of the Flora of Eastern United States with the Floras of Other Parts of the World
Sixth Floor, 1600 Arch Street
DR. JOHN M. FOGG, *University of Pennsylvania*

10.30 A.M.

FEBRUARY 1 TUESDAY: The North American Scene.
FEBRUARY 8 TUESDAY: The North American Scene, continued.
FEBRUARY 15 TUESDAY: North America and Asia.
FEBRUARY 25 FRIDAY: North America and the Southern Hemisphere.

Subscription price for course $3; individual lectures, open to all, $1.25

WINTER LECTURES

Auditorium, 1600 Arch Street—TUESDAYS—3 P.M.
Members may bring guests

JANUARY 11, 1938

"PERSIAN GARDENS AND THE MUGHAL GARDENS OF INDIA" (Illustrated)
FRANK S. COAN, *General Secretary of the English-speaking Union*

JANUARY 25, 1938

"17TH AND 18TH CENTURY PRINTS OF ENGLISH GARDENS" (Illustrated)
GORDON DUNTHORNE, *Washington, D. C.*

FEBRUARY 8, 1938

"THE PLANT LIFE OF CARIBBEAN SHORES" (Illustrated)
DR. WILLIAM SEIFRIZ, *University of Pennsylvania*

EXHIBITORS' COURSE

FEBRUARY 16–17, 1938

A course for flower-show exhibitors will be presented at 1600 Arch Street, Philadelphia, on Wednesday and Thursday, February 16 and 17, under the joint auspices of the Society and the Garden Federation of Pennsylvania. A detailed announcement will be sent to all members later in the winter.