

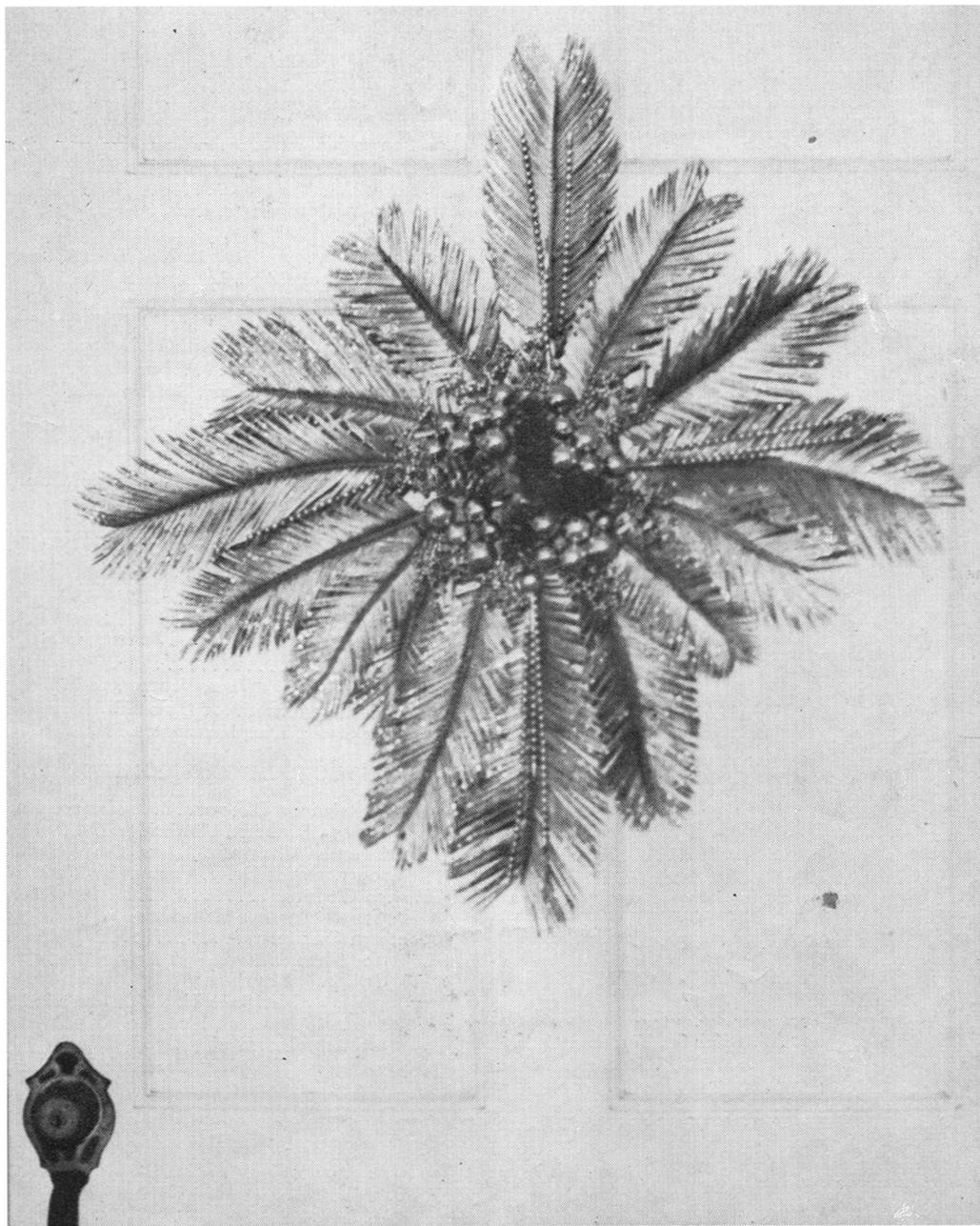
The Begonian

DEVOTED TO THE SHELTERED GARDENS

DECEMBER, 1958

PRICE 25 CENTS

VOLUME XXV, NUMBER 12



Editor.....Adelaide Brest, 3207 W. 186th St., Torrance Calif.
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General Offices, Dues, Address Changes or Magazines:

Bill Walton, Membership Secretary, 1415 Acacia, Torrance, Calif.

Annual Subscription, \$2.50. Branch members pay dues to branch.

Entered as second-class matter at the Post Office of Torrance, California, under the act of March 3, 1879.

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The purpose of this Society shall be: to promote interest in begonias and other shade-loving plants; to encourage the introduction and development of new types of these plants; to standardize the nomenclature of begonias; to gather and publish information in regard to kinds, propagation and culture of begonias and companion plants; to issue a bulletin which will be mailed to all members of the Society; and to bring into friendly contact all who love and grow begonias.

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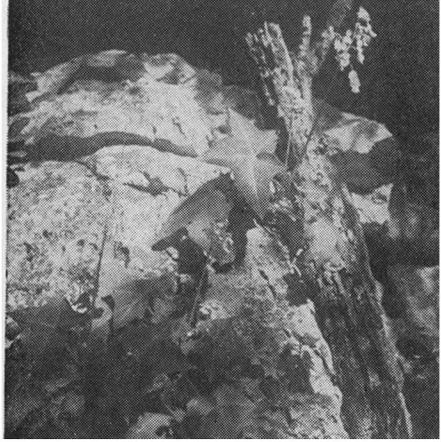
A Trip to *B. Kenworthyi* Habitat

By T. MACDOUGALL

IT WAS mid afternoon, Dec. 13, 1954. We had just arrived at the palm-thatched shelter in the Milpa area of my Soque Indian friends. The "we" included two boys, Isabel and Rodrigo, and a burra—the latter, of course, a donkey, a female of the species. We had walked about 20 miles, south from the town of Ocozocoautla, Chiapas, Mexico. The balance of the day was spent around camp, resting, and preparing a meal. I also gave them a bunk for the night. The boys are more or less immune to bedtime requirements; they like a fire to sleep by, but ask for little else. The family does not live at the "ranch." During much of the dry season there is a shortage of water for household use, and this precludes the essential farm animals. There was water still in a nearby "sa-no" (Soque for "water-rock"), a natural rock hollow which conserved water of the rainy season.

Just beyond our encampment stretched a ridge clothed with virgin forest. This was our goal for the morrow. As a free lance "explorer" I hoped to discover novelties and rarities in the flora and fauna there. Also, and this was of prime interest, I expected to observe and photograph *Begonia kenworthyi* in bloom there, in its native habitat.

In the morning we divided forces. Rodrigo remained to husk and "desgranar" a cargo of corn. Isabel and I proceeded up toward the wilderness area. A misty rain reminded me that we were at the edge of rain, or cloud, forest. There were occasional trees of giant Spanish cedar (*Cedrela mexicana*) and of the still larger Mexican elm, or "baqueta" as it is known here (*Chaetoptela mexicana*). In the shade of these, and of many other tree species, we passed thickets of a slender little palm (*Chamaedorea tenella*). Higher up, growing singly, was a larger species (*C. graminifolia*) with graceful, feathery leaves. And all around, growing in great abundance, and in full beauty of bloom,



Begonia kenworthyi, flowering in the type locality, El Chango, Ocozocoautla, Chiapas, Mexico. Altitude is approximately three thousand feet.

was *Begonia kenworthyi*. The plants were in varying degrees of light, from half sun to nearly full shade. All however, grew in humus accumulated in the pockets and crevices, and on ledges of the limestone rocks and cliffs. No plants were observed on the trees—often a saxicole will grow as an epiphyte, and vice-versa. Noteworthy too was the near absence of other begonia associates. Only two dwarf plants of another rhizomatous species were seen, but these were able to spare us the few pieces needed for propagation. I believe the species has yet to be determined by Mr. Ziesenhenné.

My photographic equipment and ability were quite inadequate. The camera adjustment for a subject in part shade part sun was a problem, and an unfamiliar film did not help matters. Anyway, only a good color rendition could have done justice to the begonia in its many picturesque settings. That evening at the shelter camp we talked of Soque names and customs. The boys do not converse in

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An Experiment With Gibberellin

By W. WILLETTS, F.R.H.S.

FOR ME the 1956 begonia season was one of the saddest on record. My stock grew fine until the end of June when, to my consternation and for no apparent reason, most of the varieties developed a peculiar form of blindness. This being my first experience with blindness and being very interested in pests, diseases, and arrested development of all plant life, I decided to send them to a higher authority for verification.

The findings were published in the 1957 Winter Edition of the *Begonia Bulletin*. For those members of this Society and foreign begonia enthusiasts who have not seen the report, it is as follows: "No trace found of attack by pests, the roots and compost appear satisfactory, and no trace of disease on foliage or roots." The following reasons were given: (a) a check through dryness; (b) draughts in the greenhouse; (c) too rich feeding; (d) over forcing; (e) too much nitrogen, causing soft growth so that any check of weather or root action may cause blindness.

So my begonia season of 1956 was written off, and so was the best of my stock, but 1957 was a normal season with me, and all I had to cope with was a little mite on a few varieties. I think I spent more hours looking at the growing points of my stock that season than I did on the cultural routine.

I started the 1958 season with some good tubers, and most of these made excellent plants and were duly potted into the finals by the end of May, the notable exceptions being one tuber each of *B. "Dream," "Harmony," "Everest," "Prince Hal"* and *"Jasmine."* These tubers were still in the starting pots, each having made a fair amount of root action but only tiny "pips." These "pips" had been in this condition for quite a time and, in my estimation, never seemed likely to

produce any further growth. (All begonia growers will know the type I mean.)

On June 2 I noticed that my plant of *B. "T. B. Toop"* was not looking so good around the growing point (I still couldn't get over the phobia of blindness), and later I found that it had gone blind. Luckily I found no other plants suffering from this distressing complaint. "*T. B. Toop*" and the tubers were still persevered with—the former still showing no signs of breaking and the latter still practically dormant—until June 28, when I received a supply of the new growth-promoting acid known as Gibberellin. I decided to try this out on the *Toop* and the malingering tubers. The first spray was used the same day, the strength of the solution being that as advised by the suppliers, namely, 5ppm (parts per million) in 8 ozs. of water. The second application was given on July 12, and the third and final on July 20. Midway between the second and third application of the acid I noticed signs of agitation in the near-dormant pips. A few days following the third application the leaves began to unfold and since then the plants have made excellent progress under normal cultivation.

I know that these plants will be late with the blooms, but I'm wondering now if I should ever have got this far without the aid of Gibberellin. With the *Toop* it was a different story. Despite my efforts there still was no response. So, during the last week in July I informed our secretary of my experiments with Gibberellin, the good news concerning the tubers and the indifference of the blind *Toop*. Today (Aug. 6) my whole outlook on this problem is somewhat brighter, for on picking up the plant for a final look before discarding it I found to my surprise that new leaves are

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Fascinating House Plants

By MARION DE COURSEY

BEGONIAS probably owe their fascination for so many house plant growers to their beauty and to their endless variety. This variety in this comparatively new and large genus is so marked that begonias have been nicknamed the "mimic plants"; the rose begonia, the peach leaved begonia, the elm leaved, the plum leaved, the aconitifolium and many others are well known plants. Although discovered by Charles Plumier in 1690 and established in Europe as a new genus in 1700, it was not for a good many years after that that begonias came to popular notice; not until the erection of stove houses and greenhouses made it possible for growers in Europe and the United States to winter these inhabitants of semi-tropical conditions and until the discovery of the Wardian case made it practicable to transport living plant material for long distances. The discovery of the Rex begonia in 1857 in Assam gave a great impetus to the distribution of begonias as every collector wanted one of these beautiful, silver-banded novelties and then, as now, it was only necessary to grow one species to want to try another and another. A very few begonias do not survive out of their native habitat, or are too big for even a large greenhouse, or are just too ugly to want; but by and large the genus offers so much of interest in leaf, flower and detail that there is no chance of not finding something to admire or to investigate whenever you look over your collection.

ornamental plants in the West Indies and

When Plumier discovered these fine explorer. Since the earliest times men have experimented with plants new to them for food and medicine and after the introduction into Spain of quinine, a specific for malaria, by the Jesuits in 1630 interest in European countries was stimulated in the possibility of finding in the largely unexplored Americas another plant of such value; so most officials were accompanied to their posts in the new world by

scientists who sent back any interesting plant material to their countries to be evaluated. Begonias never became useful as food nor as medicine but were introduced to Europeans by such scientists, sea captains and finally by plant explorers sent out by commercial nurseries and by such gardeners and collectors as Sir Hans Sloane and Sir Joseph Banks. Sir Joseph Banks' interest and readiness to finance expeditions attracted volunteers who sent him material from all parts of the world. We should think of him with gratitude for his efforts in popularizing several begonias discovered by his collectors.

Begonias found growing in the wild are species and it is estimated that there are more than a thousand species; a cross between two species gives a hybrid and since begonias cross easily there are now more hybrids than can be counted; the earlier hybrids were the work of commercial growers in Europe or the United States but lately many of the new hybrids come from amateur enthusiasts. So many of the crosses are beautiful that the hybridizers keep too many which too closely resemble each other or earlier known begonias. Once named and distributed it is getting very hard to recognize which hybrid is responding to your growing conditions. The American Begonia Society recognizes this problem and is urging its members to name and distribute only such plants as are a distinct improvement or have marked variations from already known plants. Besides species and hybrids we have cultivars which I understand to be crosses between a species and a hybrid or between two hybrids; for most amateur growers cultivars may be treated as hybrids.

Since begonias are such mimics of other plants it might be helpful to have a few guideposts to help us recognize the genus when we meet it in a greenhouse. Two plants that may be most commonly mistaken for begonias are the "strawberry begonia," *Saxifrage sarmentosa*, and the

"watermelon begonia," correctly a *Peperomea*. A botanist would identify a genus by its habits of reproduction but since begonias are not always in bloom and this method requires a good deal of knowledge we can get along very well with some very simple tests. First the flowers, if the plant is in bloom, occur in cymes (flat clusters), each cyme containing both male and female flowers which, however, bloom at different times, the males first and the females later. The males generally have four petals, two larger and two smaller with stamens held erect and prominent; the females have small flowers which open as the male drops its petals but often seem larger as their inferior ovary is large and often beautiful; the ovary is generally three winged and varies in color from pale green to deep pink. Each cyme springs from the axil of a leaf. The leaves are always alternate which is easy to see; less easy to see on a short noded plant is that the leaves are two-ranked; young leaves emerge from a stipule, an enclosing sheath which varies in color and texture; some stipules are very long lasting, some are hirsute, others are paper thin, many are delicately colored and add greatly to the appearance of the plant. As a rule all the main veins of a leaf meet at the sinus. The leaves are never symmetrical and on the most casual examination it is obvious that the two sides of the leaves are unequal. No one of these characteristics will identify a plant but if a number of them are present the plant is probably a begonia.

Species of begonias have been found around the world, both north and south of the equator and in both hemispheres, always in soil rich in humus, with sharp drainage and in high enough altitudes so that they experience a sharp drop in temperature as night falls. To have them thrive with us we should attempt to reproduce these conditions as nearly as possible; the soil mixture is not too hard to have; the sharp drainage can be arranged; we can lower the temperature at night; the only problem that begonias present in the house is that of providing enough moisture in the air around them. This is such a familiar problem, well

coped with by so many, that I shall not go into detail about it; you all know about pebbles in water, damp peat moss, and double potting. It is interesting to know that from China we get two valuable begonias: *B. evansiana*, which is the only begonia hardy out of doors as far north as Philadelphia, and *B. cathayana*, with its lovely velvety texture and fine coloring. *B. evansiana* is the only begonia I have listed from Japan. From the island of Socotra comes *B. socotrana*, a parent of the hybrid Christmas begonia; on the very dry island off the coast of India which is its home, *B. socotrana*, to conserve every drop of water, has cupped leaves; in our climate the cupped leaves tend to rot so have been bred out of the plant, but every now and then you will find on a Christmas begonia a cupped leaf. Madagascar, Sumatra, Java, the Philippines and India all have native species that we grow; Africa has contributed some of our favorites. Skipping across the Pacific we find begonias native to most of the countries in the northern part of South America, Brazil having most—at least 28—and Mexico being the next richest with 17. I don't doubt that these figures are outmoded now as begonias are being introduced from time to time. The West Indies, Puerto Rico and Jamaica each produce a few for us.

The luckiest amateur growers have a greenhouse, some an enclosed porch, but a great many of us grow quite respectable plants and have a great deal of pleasure growing on window sills. Many people have told me that they would grow begonias with joy if they had enough south windows; one of the virtues of the genus is that begonias do not all prefer, nor are they even all willing to put up with, a south window. The rexes, the older forms of which are hard to grow in the house, will do much better in the good light of a north window out of the sun; most begonias with deep red or deep green leaves have a much deeper color and a finer sheen to their leaves if they are grown in a north window; they would appreciate the use of a sunnier spot when they develop buds and while they flower. If I could have only one ex-

posure for begonias I would choose an east window, for it seems to me that begonias prefer the morning sun. Save the south window for any semperflorens that you grow, the manicatas, and any begonias which, like *B. scharffi*, *B. "Di-anna"*, *B. "Di-erna"* and any hybrid of *B. dichroa*, tend to bloom repeatedly through the year. In the west window I put all those that I can't accomodate in the east window. Nearly all begonia amateur growers water their plants too freely. Not only do their roots need water and moisture but they crave air; water the plant until all the soil in the pot is wet, pour off any excess water in the saucer and let the plant get quite dry, then repeat. No routine can be laid down as to how often to water, for small pots dry out faster than larger ones do; in a warm house the plants will use more water; in a short stretch of warm days they will dry out more quickly. It is interesting in the Branch of the American Begonia Society to which I belong to see how different are the procedures of our members and how even are the results. I like to water and to feed my plants but my results are not better than my friend, Mrs. Drew's, who doesn't feed in winter and waters sparingly. Four years ago we each started with a cutting of *B. boweri*: I had a fine looking plant the first year, the next year mine rested and she had a lovely specimen; my plant revived the following year and her's rested. We can't account for it. Is it any help to have a stone house? Our house is stone; Mrs. Drew's is cinder block and stucco. I can see a difference in plants grown in a greenhouse from the ones we work over, but of our eleven members who grow on window sills, each has a few outstanding successes each year no matter what her house is built of. I do think that my choicest plants do especially well in my bathroom. Cuttings that I start before Christmas, little plants that I cherish, flourish in the moist air of the bathroom and even without a range with a steaming kettle on it. I think that my kitchen is the next best room for a begonia to find itself in.

Though I enjoy the lovely foliage of the plants I very much prefer giving

house room to those species and hybrids which are going to bloom during the months when I cannot garden out of doors. Over a number of years Mrs. Drew has compiled a list of winter blooming begonias from reports of Begonia Club Circle No. 4 (at that time the members of that corresponding Circle had members from the New England state to Ohio), from the A.B.S Branches William Penn and Philobegonia, and from the personal records of Mrs. Drew. Because I think that many growers share my desire for bloom indoors I am adding this list below, with Mrs. Drew's permission, and with a few additions of my own. Because many begonias bloom for more than one month and some repeat I am listing them in the order of their bloom starting with October as we must bring our plants into the house around Philadelphia about the middle of September to lessen the shock of moving. In September the windows can be left open a great deal, the furnace has not been turned on as yet so the plants get acclimated before the difference between out of doors and house conditions become too accentuated.

OCTOBER

<i>B. "Prunifolia"</i>	<i>B. "Gretchen"</i>
<i>B. "Jinnie Mae"</i>	<i>B. hugelli</i>
<i>B. "Di-erna"</i>	<i>B. "Illustrata"</i>
<i>B. "Di-anna"</i>	<i>B. incarnata</i>
<i>B. rubra</i>	<i>B. "Manda's Woolly Bear"</i>
<i>B. "Annabelle"</i>	<i>B. "Marjorie Gibbs"</i>
<i>B. "Interlaken"</i>	<i>B. "Melior"</i>
<i>B. "Thrush"</i>	<i>B. nitida</i> var. <i>odorata</i>
<i>B. "Nelly Gaddis"</i>	<i>B. "Rosea Gigantea"</i>
<i>B. "Croftoni"</i>	<i>B. "Rubra Odorata"</i>
<i>B. "Digswelliana"</i>	<i>B. subvillosa</i>
<i>B. "Drosti"</i>	<i>B. "Winter Jewel"</i>
<i>B. "Green Berry" rex</i>	

AFTER CHRISTMAS

<i>B. "Angel Wing"</i>	<i>B. boweri</i>
syn. " <i>Coccinea</i> "	<i>B. "Erythrophylla</i>
<i>B. "Bessie Buxton"</i>	var. <i>Helix"</i>
<i>B. "Cheimantha"</i>	<i>B. incana</i>
<i>B. "Dorothy Grant"</i>	<i>B. maculata</i>
<i>B. "Erythrophylla"</i>	<i>B. manicata</i>
<i>B. "Floribunda"</i>	<i>B. nitida</i>
	Rosea" <i>B. sunderbruchii</i>
<i>B. kellermanni</i>	<i>B. "Crestabruchi"</i>
<i>B. "Limminghei"</i>	<i>B. "Joe Hayden"</i>

B. "Manicata	B. "Luwalter"
Aureo-Maculata"	B. "Marjorie Daw"
B. "Orrell"	B. Mexican species
B. "Marian"	B. "Mrs. Fred
B. "Paul Bruant"	Scripps"
B. <i>phyllomaniaca</i>	B. "Oadi"
B. "President	B. "Picta Rosea"
Carnot"	B. <i>roezli</i>
B. <i>rex</i>	B. "Rossi"
B. "Tea Rose"	B. "Tamo"
B. "Templini"	B. <i>alnifolia</i>
B. <i>dregei</i>	B. "Weltoniensis"

MARCH

B. "Bunchi"	B. "Immense"
B. "Elsie Frey"	B. <i>venosa</i>
B. "Guinea's Wing"	B. "Viau-Scharff"

A few begonias have the attractive quality of wishing to rest in the heat of the summer when I am more interested in my outdoor garden and giving repeated bloom during the winter months. B. "Preussen" is in a class by itself, for it does not even stop in the summer; there are many accounts of plants of "Preussen" blooming two or three years without stopping. The first and best plant that I had of "Preussen" was never without a flower for three years. As I look back on it I wonder if that wasn't before the mildew came East from California, where it was epidemic and weakened many plants which are subject to it. Mildew does not seem as troublesome now as it was two years ago; let's hope it will wear itself out and cease troubling some of our most charming begonias. Spraying with Mildex or Iscothan once a week will often prevent mildew on plants subject to it; start in August before the damp days of autumn. "Pruessen," "Sachsen," "Rubaiyat," "Di-erna," "Di-ana," *scharffi*, *schmidiana*, "Viaudi," "Thrush" and "Lucerna" may bloom at any time of the year. B. "Preussen" and "Sachsen" were grown from German seed; "Rubaiyat," "Di-erna" and "Di-anna" are *B. dichroa* derivatives, generous with their rose colored flowers; *scharffi* is one of the oldest and most satisfactory of the hirsutes; *schmidiana* is said to bloom even more continuously than the semperflorens; "Viaudi" is a strong growing hirsute with most delicate white flowers, and

"Lucerna" is probably the best known of the angel wings. Since more people are raising plants in less space nowadays the hybridizers have worked to produce smaller and tougher plants with great success. B. "Thrush" is a charming small plant which blooms very freely; many of the redleaved, silverspotted plants are delicate, but "Thrush" look delicate and demands no extra care. B. *mazae* and B. *boweri*, which are both fairly recent introductions, are not only attractive in themselves but have many desirable hybrids.

It is nice to be able to say in closing that begonias, like children, want to live and while a few may refuse to adjust themselves to living in a house the great majority thrive in spite of our handicaps and give us great joy.

(Reprinted from *New York Botanical Gardens Journal*.)

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About the Cover

Alberta King, a piano teacher for many years, began gardening as a hobby nine years ago, and since has been active in garden clubs in Los Angeles. She is a member of the Hollywood Begonia Society, also Los Angeles Garden Club and others. When she began gardening she hardly knew a petunia from a pansy.

The Kings bought a new home on a half-acre of ground which was undeveloped. They landscaped the yard themselves and now have a garden that attracts visitors from all over the city. Each summer garden clubs ask permission to visit and see the yard. Forty varieties of begonias as well as many ferns adorn their greenhouse and lathhouse.

The Christmas spray on the cover is an example of the loving care Mrs. King bestows on everything she touches.

The photo was by Russell H. Carroll, 2306 Carnegie Lane, Redondo Beach.

—B—

APOLOGIA

Both the editor and her husband have been ill for several months. Correspondents whose letters have not been answered during this period are requested to understand and to be patient.

Knowing Ferns Better

By DR. W. C. DRUMMOND

TO RECEIVE the most enjoyment from your ferns, to understand the best method of growing them, we should know their correct names. There are many advantages of knowing the correct scientific names, it means we can read and study and learn more about them, it enables us to correspond with distant fern growers with intelligence and confidence. The following is not a summary of fern nomenclature, it is a brief outline and method for the determination of individual fern names, it is written with the hope that it will help others to become more interested and to know their ferns better.

In the identification of ferns it is advisable to have on hand several well illustrated books with good detailed written descriptions of ferns at hand, to help us verify their names, or we also might consult and compare our fern with specimens in a herbarium. It is important that one make careful notes of the various parts of the fern, and to directly compare these parts with other correctly named ferns or those illustrated and described in the books. There are thousands of specimens of ferns, yet if we know for example, the fern's nativity, and to be coming from a particular place, as the Eastern United States, we will only need to consult a book describing the ferns of that locality to learn its name. Often much help may be obtained from your nurseryman or a fern hobbyist. Names acquired through this last source should be well checked with good up-to-date fern books. Once the correct name is learned, place this name on your growing fern. Next press a mature frond and mount, so as to show the sori, also press a sterile frond and mount both in a book. Further record on the same paper the scientific name with synonyms along with the common name. Follow this with an outline of the distinguishing characters. In this way you will soon learn to enjoy this

work and become an expert in fern nomenclature. Knowing our fern's name and its requirements, we can add much beauty to our garden by planting properly.

The following are some of the fern parts to be studied and considered in the naming and study of ferns.

A. THE PLANT

Measure the height and width of the mature fern. Is it spreading or erect? Is it deciduous or evergreen? Where is the fern native? Is the fern epiphytic or terrestrial? Is it tropical or of the temperate zone?

B. THE FRONDS

Are the fronds tufted, or are they wide spreading and distant? Measure the length and width of the fronds. Are they pinnate (once divided or cut) entire, pinnatifid or bi-tripinnatifid or more compound? Are they coriaceous? Record the color of the fronds front and back. Are they oblong, narrow, deltoid (triangular), acuminate (long pointed), or obtuse (abruptly cut off)? Are they scaly or hairy? If scaly give the color and the shape of the scales. Are the fern's fronds dimorphic (having two kinds of forms) with fertile and sterile different? Record the shape of the frond's blade.

C. THE RHIZOME

Is it erect, suberect, creeping, branching or wide creeping? Is it hairy or scaly? What color and shape are the scales on it, if any?

D. THE STIPES

How long are they? Are they glabrous (shiny) or rough? Are they hairy or scaly or both? Are they channeled (grooved)? What color are they? Are they adherent or are they articulated (freely breaking away) from the rhizome? Are they tufted (growing from a central point)?

E. THE PINNAE

Are the pinnae acuminate (long pointed), obtuse, acute (short pointed) or falcate (sickle shaped)? Are they entire, serrate (saw toothed), dentate (toothed), spinulose (with small spines), or crenate (scalloped)? Are they bipinnate below only? Note size of lower pinnae. Are the pinnae adherent (tightly fastened), sessile (closely attached), short stocked or decurrent? Are they articulated? Are the lowest pinnules or lobes longer near the rachis? Does the lower basal pinnae again become more divided and larger as in some of the *Dryopteris* genus?

F. THE VENATION

Is the venation pinnate, branching and free, costaeform (parallel), anastomosing (reticulated or reuniting) or do they have free included veins in the areoles? Are the veins clavate (thickened toward apex)? Notice general shape of the areoles. Are the areoles singular (costa form) along the costa (midvein)? Do they have a regular shape? Are they plain and quite visible? Give color if pronounced.

G. THE SORI

Are the sori (fruit dots on back of blade) in rows, how many? Are they round, oblong or continuous? Describe the location as to, close to costa midvein, marginal, intermarginal or covering the whole of the back. Record location as dorsal, media, lateral, terminal or capital (at point of junction). Is the sori naked or indusiate (with covering)? What color are the sori? Is the sorus imbedded in the pinnae?

H. THE INDUSIUM

Is the indusium round or oblong, pelate (attached beneath, not by margins)? reniform (kidney shaped) or continuous?

Is it double (composed of two parts? Is it composed of true or false parts of the pinnae margin? Are the indusium margins serrate? Is it fugacious (soon perishing) or coriaceous (leathery)? What color is the indusium? Is the indusium large or small?

I. SCALES

Notice their location, their color, their shape. Are they long and hair-like, do they have a broad base, are the margins entire or are they serrate or ciliate, or deciduous?

—B—

In Memoriam

It is with deep sorrow that the Margaret C. Gruenbaum Branch faces its meetings without the presence of its beloved member with ten years of service, Katherine Kilderry. "Kay" passed away Oct. 24 after an illness of just a few years. She will be greatly missed by all the begonia growers of this group, and by her Round Robin friends.

†

The Pasadena Branch is sorry to report the death of Mrs. John Cheney, one of our first members. Mame and her husband were present when "Pop" Dyckman presented the Pasadena charter. She was well known for her beautiful ferns, as well as begonias, and will be greatly missed in horticultural circles.

—B—

Gardens, like friends, must be cultivated.

May all the joys of Christmas Cheer
usher in Your Happiest Year

WHITTIER BRANCH

*Sincere Holiday Greetings
to all our garden friends.*

I n g l e w o o d B r a n c h

Aqua Pura

By TREVEL BRADY

TO THAT, upon which all life depends, Ladies and Gentlemen, I give you—Water. Indeed, from the smallest bacteria to the tallest Redwood of California, from the smallest amoeba to the largest elephants of Africa all life depends upon water.

Within the plant kingdom, we find that water accounts for varying amounts of a plant's weight. In some cases, the percentage of water may be as low as ten percent, while in others, the percentage will run well over ninety percent.

Plants get their nutrients from the soil through the soil moisture, and use water to move the nutrients through the tissues to the leaves. Water is used to combine these nutrients in the Photosynthesis process to form plant foods. The plant foods are then transported from the leaves to the stems and roots through the use of water. Plants depend on water to maintain turgidity in the leaves and to cool through the process known as transpiration.

Where does the plant get all water it needs? The answer of course is from the soil. Soil moisture comes from two sources, rain and artificial irrigation. There are three types of water found in the soil. Hygroscopic water is that water found in air dry soil. The amount of Hygroscopic water will vary with the humidity but under no circumstance is this water available to plants due to the terrific tension with which it is held to soil particles. Gravitational water is that water which runs through the soil when water is applied. It is of little or no benefit to the plant because of its short duration. The last and most important type of soil moisture is capillary water. Capillary water is held in the soil after gravitational water leaves. This is the water available to the plant.

Not all of the water the plant takes in through its root system is used by the plant. Plants lose approximately ninety-

eight percent of the water they take in through the processes of transpiration or evaporation and guttation. Guttation is the formation of droplets of water by the roots and the reduced evaporation from the leaves during periods of high humidity. The amount of water lost from a given plant will depend upon such factors as temperature, air movement and humidity. . . .

During periods of hot, dry weather plants will require very careful attention to prevent injury from drying. Rapid loss of water can be reduced by shading, protection from wind, and increasing humidity. Plants grown in relatively small clay pots will be very particular about the soil moisture. Moisture losses will occur from the leaves, through the pot and from the soil surface. For these reasons, it will be necessary to add water to the soil rather frequently.

The watering of potted plants may be accomplished in one of three ways. First is surface watering. Care should be exercised not to wash or pack the soil. With this method, there will be some tendency to leach nutrients from the soil. This should not be considered as too much of a disadvantage because it will also tend to keep harmful soluble salts concentrations to a minimum.

The second method is to plunge the pot to its rim in water for a few minutes so that the soil becomes saturated and then allow the excess water to drain out. This method definitely carries away many of the nutrients, hence more frequent feeding will be necessary. Let us stress

(Continued on Page 284)

Season's Greetings From
SAN FRANCISCO BRANCH
of American Begonia Society

Begonias Out-of-Doors

UNDER the able chairmanship of Miss Fanny McIlvain the William Penn Branch staged an educational exhibit of begonias at the Swarthmore Flower Show Oct. 24-26. In this area begonias do best in the summer under high shade and sunk in peat moss to the rims of their pots, so since one of our members had a dead apple tree to contribute we decided to show how to best keep begonias between the 15th of May and the 15th of September.

Around greater Philadelphia there are enough cold nights in early May and late September to set back begonias; this is particularly true in September when you want your house plants to come in looking their best for the winter and any leaf dropping is especially annoying. Our plan was simple but thanks to the apple tree turning out to be statuesque and the begonias having a good variety of size and shape the overall picture was very satisfactory.

A small sitting space near the trunk of the tree was covered with pine needles and this area outlined with rhizomatous begonias, the smaller plants starting at the aisle and the large toward the rear. We were careful to place the lighter green plants all the way back as their leaves catch the light and add depth to the design.

In the back right hand corner was a nice group of *B. "Mrs. Wallow"* and *B. "Chiala Rosea,"* which were tall and so individual in their habit of growth that both the handsome green top of the leaves and some of the lovely red back of the leaves faced the audience. Below them two *B. "Richmondensis"* and some *B. "Tea Rose"* bloomed with small red leaved plants in front of them.

To fill an empty spot back of the apple tree some of the eye-catching gray-leaved plants, *B. "Grey Lady,"* *kellermanni* and *venosa* were really sacrificed, but they

could be seen there even if not appreciated. The always useful and handsome *B. "Lucerna"* formed the background on the left and was a good foil to a large group of *hirsutes*. The *hirsutes* (such an ugly word for such handsome and lovely plants) were arranged with those in bloom in the foreground with the taller and darker plants lending solidity to the mass.

We felt that not enough gardeners knew that *B. evansiana* is hardy as far north as this so we collected a dozen or more plants of this species and placed these in front of the hairies; we were successful in keeping some good plants alive three weeks beyond their allotted time, but did not succeed in keeping the blooms.

Our specimen plant, the handsomest plant in the exhibit, was raised by the Valley Greenhouses; a perfect specimen of "Veitch's Carmine" was in full bloom and lent some much needed color. Nothing competed with this beautiful begonia; it was backed by larger plants of *B. evansiana*, had *B. "Joe Hayden's"* dark foliage below it.

Except for this one plant there was little bloom; an occasional cluster on *B. scharffi*, a little color on *B. "Lucerna,"* two or three small *semperflorens* showing color, a number of blooms on *B. "Richmondensis,"* which developed at the last minute. All of our plants had been indoors for about six weeks, long enough for them to have lost some of their leaves and not long enough for them to have gotten a second wind. Three baskets hung from limbs of the tree: a fine specimen of *B. macrocarpa*, a big *B. "Marjorie Daw"* and a very nice little *B. boweri*.

We were well repaid for any effort and work when we received a blue ribbon, awarded by the Philadelphia Branch of Professional Gardeners, who judged the horticultural exhibits of the show.

Buxton Check List of Begonias

1 9 5 8

This list supplements the check list of begonias issued by the American Begonia Society in 1957. It includes names of all begonias registered to date with the Society, also names found in trade and horticultural literature which, in many cases, have been verified by correspondence with the originator or distributor of the plant named. Due to limitations of space all names submitted could not be included, priority being given to those with descriptions. Beginning January 1, 1959, names to be listed, according to the new code of the Horticultural Council, should be accompanied by material adequate to distinguish the plant from its close relatives. A complete description is not necessary.

Errors in this list, and names to be considered for the next list, should be brought to the attention of the Nomenclature Director. All names collected but not used this year will be added to the Nomenclature file.

EMMA CARLETON and ALVA GRAHAM, *compilers.*

- x Abilene (Muriel Day x) rhiz by Schwerdtfeger, Cal., Beg '53, p 73.
- acutangularis* tall fib "A giant zebrina," Robinson. In Hortus II.
- x Aida (mazae x No. 1041) semi-tub by Elsie Frey, Cal., in Schwerdtfeger '54 list.
- x Alice M. Clark rex by Walter Knecht, Cal.
- alleni* found in Panama, reported in Beg '52, p 105.
- x Alma (Superba-Kenzii seedling) by Mrs. Ross Swisher, Pa. '35. Buxton: Begonias.
- x Alma Walton (*imperialis* x *chimborazo*) by Schwerdtfeger, Beg '53, p 74.
- x Alta Maiden (*scharffiana* x *Indian Maid*) by Gillingwaters, Cal. ABS Reg No. 107.
- x Andy Lee red camellia tub Antonelli, Cal., cat. 1958.
- x Arabelle (*Margaritacea* x *Lulu Bower*) cane by Constance Bower, Cal. '52.
- ABS Reg No. 142, in Beg '58, p 204.
- aridicaulis*, Zies, found by Th. MacDougall, Mexico, 1948. Beg 5/'52 (picture)
- x Aunt Mary (*dichroa* x *undulata*) fib by Rosecroft Gardens, Cal.
- x Autumn Prince rex Schwerdtfeger, Cal. 1957 list.
- x Baarde's Glory small majenta hiemalis reported by Bedson, Eng., '54.
- x Baby Brown (*pinetorum* x *mazae*) min rhiz by Ziesenhenné, Cal. 1947.
- x Beaumont (*ludwigii* x *Silver Star*) fib by Susie Zug, Cal. 1955.
- x Bel-Air (mazae x *hydrocotylifolia*) rhiz by Schwerdtfeger, on 1954 list.
- x Bella *gracilis* semp from L. Daehnfeldt, Denmark. FCC in JRHS 3/'56.
- x Bert Slatter (*incarnata* x *kenworthyi*) fib by Ziesenhenné. ABS Reg No. 154.
- x Black Beauty tall rex from Susie Zug, Cal. in Beg '57, p 15.
- x Black Lace (Edith M. x) creeping rhiz by Susie Zug, Cal. 1955.
- black star African sp., small rhiz sent to ABS seed fund, 1954.
- x Bobolink (Richard 1st x *limminghei*) cane by Elsie Frey, Cal. 1949.
- x Brentwood (*philodendroides* x *mazae*) by E. O. Sherer, Cal. 1951.
- x Buckskin Baby small star rhiz by Sylvia Leatherman, Cal. 1954.
- x Can-Can rex in Logee's 1956 cat., also in Horticulture, 9/58.
- x Carolyn Ann star rhiz of Suzie Zug, Cal., in Beg '56, p 181.
- x Cathy Lou small rhiz by Marie Turner, Cal., in Beg '57, p 174.
- x Cernacroa (*Lucerna* x *dichroa*) cane by Clara Cooper, Texas, Beg 12/52.
- x Clayton Kelly semi-tub by Ziesenhenné. In Schwerdtfeger 1954 list.

- x Col. Gale (*manicata cristata* x *kenworthyi*) rhiz by Schwerdtfeger, 1952.
- x Concha Alta (Adrian Schmidt x spiral rex) by Mary Gillingwaters, Cal. '53.
In Beg '54, p 5 and '57, p 221.
- x Concord (Queen of Hanover x Midnight) curly rex by Elsie Frey, Cal. '56.
- x Connie Bower (*dichroa* x *Alzasco*) cane by Constance Bower, Cal. 1940.
ABS Reg No. 141, in Beg '58, p 204.
- x Corallicta (*Corallina* x *albo-picta*) fib at Kew Gar., Eng. AM in JRHS 7/55.
- x Cranberry large rex by Elsie Frey, Cal., 1945
- x Cuban species (called "hollyleaf begonia") fib wh fl in Beg 4/'58.
- x Dazzler dwarf *gracilis* semp from N.V. Shuis en Groot, Holland. AM in JRHS 3/'56.
- x Decimperia (*decora* x *Imperialis smaragdina*) from Dr. Georges Morel, France.
ABS Reg No. 153, In Beg '58, p 27 (picture)
- x Dickie (*dichroa* x *White Shasta*) cane fragrant pink fl by Frey, Cal. '44.
dietrichiana, Irmscher (formerly Otto Dietrich) Beg '57, p 232.
- x Dr. Clyde (*philodendroides* x *mazae*) rhiz by E. O. Sherer, Cal., 1951.
- x Easter Parade (Edith M. x *mazae*) creeping rhiz by Susie Zug, Cal.
- x Ebony Lady semp dark lvs rose fl by Marie Turner, Cal. In Beg '56, p 127.
- x Edith M. (*boweri* x *Reichenheimi*) rhiz by Don Horton, Cal., '52. ABS Reg No. 26.
- x Edna Korts spiral rex by Perry Miller, Cal., '52. In Beg '53, p 180.
- x Edna Morse dwarf fib by William Givens, Cal., in Beg '56, p 152 (picture)
- x Elizabeth D. Fisher ruffled rex by Fisher, Cal. '50, in Beg '53, p 206.
- x Elizabeth Lockhart, *Superba* strain (erroneously called Daisy I.) by
Marie Turner, Cal., in Beg '57, p 7.
- x Elizabeth Woolman db orange tub from H. Woolman, Eng. AM in JRHS '51, p 331.
- x Ella Keyes (*Feasti* x *Mrs. Townsend*) erect rhiz., Beg '53, p 194.
- x Ellen Dee (*limminghei* x *dichroa*) scandent fib by Woodriff, Ore., '48. In Beg '58, p 229.
- x Elsa Fort (*imperialis* x *mazae*) rhiz by Schwerdtfeger, In Beg '53, p 74.
- x Emerald Jewell (*imperialis* x *pustulata*) rhiz by Susie Zug, 1955. In Beg '58, p 203.
ABS Reg No. 135.
- x Emmeline semp seed sent to ABS from Italy. In Beg '57, p 280.
- x Erics-Magni (*crispula* x *goeensis*) rhiz by B. Lindquist, Sweden '52. Published in 1955,
"Svensk Botanisk Tidskrift BD, 49, H.1-2" ABS Reg No. 147. In Beg '58, p 206.
- x Erika Weber hairy fib by Elsie Frey, Cal. '50. In Beg '52, p 254.
- x Evansialis (*imperialis* x *evansiana*) erect rhiz by Art Longmire, Cal. '46. In Beg '53, p 73.
- x Evelyn Grant (*McBethi* x *dichroa*) smooth fib by Elsie Frey, Cal. '45. In Beg. '52, p 254.
- x Faustine (*Margaritacea* x *Lulu Bower*) small cane by Constance Bower, Cal. '52.
ABS Reg No. 144. In Beg '58, p 205.
- x Fido (parents unknown) rhiz by Don Horton, Cal. '54. ABS Reg No. 139. In Beg '58, p 204.
- x Fiesta semp s red and yellow Merry Gardens, Maine, 58/59 cat.
- x Fire Crest large dbl orange tub from B. & L., Eng. AM in JRHS 9/'56.
- x Forestfire (*Viaudi* x *Paul Bruant*) fib by Lillian Bradbury, Cal. '52.
- x Flamingo (*dichroa* x *undulata*) fib by Hunter, Rosecroft Beg. Gar., Cal.
friburgensis, Brade cane species from Brazil. Beg '57, p 232.
- x Gaytime (rex x *India spotted*) rex by Schwerdtfeger. On Crider list 1956.
- x Georgia Lou Fisher rex by Carl Fisher, Cal. '52. In Beg '54, p 81.
- x Glorietta (*Houghtoni* x *laetevirides*) hairy fib by Elsie Frey, '50. In Beg '58, p 229.
- x Golden Gleam (*imperialis* x *Dayi*) rhiz by Edna Cowel, Cal In Beg '53, p 72.
- x Golden Harvest large dbl yellow picotee tub by B. & L., Eng., AM Sander Medal 1958.
In JRHS '57, p 447 (picture)
- x Gothaer Kind *gracilis* semp from Erfurter, Germany. In JRHS 3/'56.
- x Green Eyes rex by Susie Zug, Cal. '54. In Beg '56, p 181.
- x Green Skeezar (*Dayi* x *liebmanni*) small rhiz by Ziesenhenn, 1947.
- x Gretel (*incarnata* x *Moss Agate*) rex by Elsie Frey, Cal. '56. ABS Reg No. 132.
In Beg '58, p 203.
- x Gruss an Erfurt (*imperialis* hyb from Germany) In Vogelmann p 34 (picture)
In Beg '53, p 50.
- x Guardsman vermilion tub from B. & L., Eng., '52. AM, in JRHS 9/'58.
- x Hansel (*incarnata* x *Moss Agate*) rex by Elsie Frey, '56. ABS Reg No. 131.
In Beg '58, p 203.
- x Harvey (*Manicata aureo crisa* x *dark mazae*) rhiz by Elsie Frey, 1950.
hepatica maculata, Zies. rhiz found found in Mexico by MacDougall, 1952.
- x Herimperia (*heracleifolia nigricans* x *imperialis*) in Montreal Bot. Gar. Picture in Bohmig,
Begonia. In Beg '53, p 50.
- x Hopi Star rhiz of Susie Zug, Cal. In Beg '57, p 103.
- x Houston (*incarnata sandersii* x 42S seedling) fib by Ziesenhenn, 1956. ABS Reg No. 155.
- x Hugo (seedling of *hugeli*) fib pink fl of Susie Zug, Cal.

- x Hugolette (seedling of hugeli) fib of Susie Zug, Cal.
- x Husband's Favorite silver rex in Logee's '56 cat.
- x Improved Scarlet Glow dbl vermilion pendula tub from B. & L., Eng. AM in JRHS '57, p 358.
- x Indra (rubro-venia x India spotted) small creeping rhiz by Susie Zug. In Beg '52, p 31.
- x Interessanta (hydrocotylifolia x imperialis maculata) rhiz from Vilerts. In Montreal Bot. Gar., picture in Bohmig, Begonia.
- x Inzae (involutrata x mazae) rhiz of Susie Zug, '51. In Beg '52, p 31. ABS Reg No. 27.
- x Inzae Waves (involutrata x mazae) fib of Susie Zug, '51. In Beg '52.
- x Ione (imperialis x Chimborazo) rhiz of Schwerdtfeger in Beg 4/'53.
- x Iron Cross rhiz brought from Singapore by Mason, Eng., 1952, in Bedson, Begonias, p 41. In Beg '56, p 248 (picture).
- x Jane (imperialis x mazae) rhiz by Schwerdtfeger. In Beg. 4/'53.
- x Janet Kay (imperialis x francisii) rhiz by Schwerdtfeger, Beg 4/'53,
- x Jean Pernet cane pink fl In Beg '53, p 230, Logee's '56 cat.
- x Jim Kirby yellow dbl tub by B. & L., Eng. AM in JRHS '57, p 525.
- x Jocko (Leslie Lynn x) rhiz by Beth Bath, Cal. '57. ABS Reg No. 149.
- x Juliet salmon pink tub by B. & L., Eng. AM in JRHS 7/'51.
- x Karin dwarf semp white fl dark lvs. Correct name for Frosty and Indian Bride.
- x Key West (MacDougalli hyb.) trailing rhiz by Susie Zug, Cal. *kraussiana* sp in Montreal Bot. Gar., grown as *B. schulziana*. *kublmani*, Brade upright fib from Brazil. In Schwerdtfeger 1954 list.
- x Lady Laura May rex by Beth Bath, Cal. In Beg '57, p 226.
- x Lady Vi (laetevirides x Viaudi) fib by Ziesenhenné, Beg '56, p 19.
- x Laura Jane (acetosa x acida) rhiz of Schwerdtfeger, Cal., 1957 list.
- x Lavender Blue rex of Susie Zug, Cal., in Beg '56, p 181.
- x Lavender Lace rex by Susie Zug, in Beg '56, p 181.
- x Leo Shippy star rhiz in Merry Gardens, Maine, 58/59 cat. (picture)
- x Liebestar (liebmanni x Silver Star) creeping star rhiz by Susie Zug, 1952. ABS Reg No. 29, in Beg '54, p 151.
- x Lila rex in Beg '51, p 69 (picture)
- x Lily of the Valley (dichroa x undulata) fib by Hunter, Rosecroft Gardens, Cal.
- x Lois Applegate (Houghtoni x laetevirides) fib by Elsie Frey, 1950.
- x MacBride's Napoleon (Reichenheimi x MacDougalli) star rhiz by Ziesenhenné, 1946. In Beg '53, p 75 (picture).
- x Madame Queen (manicata a-m crispa x Leslie Lynn) large upright rhiz by Beth Bath, Cal. ABS Reg No. 150, in Beg '58, p 226 (picture)
- x Mandarin dbl salmon-orange tub by B. & L., Eng. AM in JRHS, '57, p 357.
- x Maple rex by Susie Zug, in Beg '56, p 180.
- x Margaret Collins carmine tub by B. & L., Eng. AM in JRHS 9/'58,
- x Marie Minter small rhiz by Marie Turner, Cal., in Beg '56, p 177.
- x Maytime (scharffiana x) hairy fib by Hunter, Rosecroft Gardens, Cal.
- x Melisse (Margaritacea x Lulu Bower) small cane by Constance Bower, Cal. '52. ABS Reg No. 143, in Beg '58, p 205.
- x Meximperia (imp. Otto Forster x mexicana) by Dr. Morel, France. ABS Reg No. 152, in Beg '58, p 27 (picture).
- x Michael L. Barnes rhiz pink fl in Merry Gardens, Maine, 58/59 cat.
- x Ming Toy min rex by Esther Allen, Cal., in Beg '57, p 249.
- x Missouri rhiz by Mrs. Breshears, Mo., 1955. In Beg '56, p 19.
- x Mohegan rex in Montreal Bot Gar. In Logee's '56 cat.
- x multiflora 'Splendour des Tuileries' semi-dbl orange-salmon, in Bedson '54.
- x Muriel Day (imperialis x liebmanni) rhiz by Ziesenhenné, Beg '53, p 73.
- x Nadine (imperialis x dichroa) rhiz by Schwerdtfeger, Beg '53, p 74.
- x Nancy Lou star rhiz of Lillian Bradbury, Cal.
- x Nina Baldwin (27S seedling) tall fib by Ziesenhenné. In 1954 Schwerdtfeger list.
- x Ninette dbl pale pink tub by B. & L., Eng. AM, in JRHS '57, p 357.
- x Olympia dbl crimson-scarlet tub by B. & L., Eng. AM in 1953
- x Orange Tom Thumb bedding semp from England. In Beg '57, p 257.
- x Orange Dainty trailing fib by Woodriff, Ore. In Beg '58, p 109.
- x Organdy (parents unknown) heterosis semp dwarf from Benary, Germany, 1949. ABS Reg No. 145, in Beg '58, p 206.
- x Oriole (dichroa x undulata) fib by Jerome Hunter, Rosecroft Gar., Cal.
- x Patty Bar (fuscomaculata x barkeri) rhiz by Schwerdtfeger, Beg '56, p 92.
- x Peace large leaf rex in Logee 1956 cat., Beg '51, p 275.
- x Pebble Lane (speculata x Sir Percy) rhiz by Zug, Cal. '55. ABS Reg No. 137, in Beg 57, p 104.
- philodendroides*, Zies. rhiz by Brooks, Mexico. In Beg '54, p 301.

- x Pink Charm (Bijou de Jardin x Calla Lily) semp by Mrs. Ross, Maine. Beg '52, p 202.
- x Pink Rubra cane by Mrs. T.B.Shepherd, Cal., 1927, In Beg '57, p 54.
- x Polly Cooper (micranthera fimbriata x incarnata) semi-tub by Frey, Cal. '52.
- x Prelude camellia rose tub by B. & L. '53. AM in JRHS '58, p 403.
- x *purpusii*, Houghton found by C. A. Purpus, Mexico, 1914. In Beg '52, p 197 (picture).
- x *quadreocularis*, Brade, now identified by Kuhlmann, Instituto de Botanica de Sao Paulo, as *B. egregia*, N.E. Brown, Brazil, 1887.
- x Queen Wilhelmina rex large silver leaf in Logee 1956 Cat.
- x Rambouillet semi-dbl red multiflora in Bedson, p 25, Mosher's Nursery, Wash.
- x Ramirez (laetevirides x) tall hairy fib by Ziesenhenné, in Beg '58, p 62.
- x Raythel (Fernando Costae x epipsila) hairy fib by Schwerdtfeger, Cal.
- x Rebecca pink dbl tub by B. & L., Eng., AM in JRHS '57, p 357.
- x Red Admiral vermilion dbl tub by B. & L., Eng. AM in JRHS '57, p 357.
- x Reddy dbl blood-red semp Mason in JRHS '58, p 358.
- x Red Perfection rex gracilis semp from Erfurter, Germany, AM in JRHS 3/'56.
- x Regel (imperialis x scharffiana) rhiz by Schwerdtfeger, Beg '53, p 73.
- x Reseda (acida x rex hyb.) small rex by Susie Zug, in LS 1954 list.
- x Richard 1st (dichroa x White Shasta) cane by Elsie Frey, Cal. '44.
- x Robin (rex x dregei) uprgiht rex from Elsie Frey, Cal. in Logee '56 cat.
- x Rosanna (fuscomaculata seedling) star rhiz by Don Horton, Cal. ABS Reg No. 148, in Beg '58, p 226.
- x Rose Pearl s pink semp from Watkins & Simpson, Eng. AM in JRHS 3/'56.
- x Rose Perfection semp gracilis from Erfurter, Germany. HC in JRHS '56, p 141.
- x Rover (parents unknown) erect rhiz by Don Horton, Cal. '54. ABS Reg No. 138, in Beg 58, p 204.
- x Royal Duke large dbl crimson tub by B. & L., Eng. AM in JRHS 9/'56.
- x Ruby Glow min rex by Elsie Frey, Cal. '58.
- x Rudy (florida sp. x ludwigii) silver leaf fib by Ziesenhenné, 1952.
- x Sacramento Star (mazae x macdougalli) rhiz in Schwerdtfeger 1954 list.
- x San Miguel (venosa x scharffiana) hairy fib by Virgil Stark, Cal. '53.
- x ABS Reg No. 134 in Beg '58, p203, picture p 56.
- x Scarlet O'Hara min rex of Mrs. Lewis, Cal. In Montreal Bot Gar.
- x Scarlet Supreme (Hebe x dichroa) tall cane by Ziesenhenné, Cal.
- x Sequoia (speculata x rex hyb) giant rhiz by Susie Zug, '50. ABS Reg No. 28, in Beg '52, p 146.
- x Seranata (Inglewood x barkeri) rhiz by Ziesenhenné, Cal.
- x Sheik's Desire min rex by Elsie Frey, Cal. '57.
- x Silver Dust (ludwigii x Silver Star) rhiz by Susie Zug, Beg 8/56.
- x Silver Glow curly leaf rex Logee's 1956 cat.
- x Silver Jewell (imperialis x pustulata) rhiz by Susie Zug, in Beg '56, p 99.
- x ABS Reg No. 136, Beg 58, p 204.
- x *silver pustulata*, var of *pustulata*. Beg '52, p 109.
- x Sir Joshua (incarnata x rex) large rex by Elsie Frey, Cal. '58.
- x Sir Mac (Joe Hayden x Paul Bruant) fib by Winona Jensen, Cal., in Beg 8/'57,
- x Smog rex by Helen Bailey, Cal. 1938. In Beg. '56, p 10 (picture).
- x Snowbank s white gracilis semp by George J. Ball, III. HC in JRHS 3/56.
- x Sonie (Dark Carnot x Silver Whirl) spiral rex by Beth Bath, Cal. ABS Reg No. 151,
- x Sorex (socotrana x rex) rex from Engler, Germany, '51. Bohmig: Begonia.
- x Star Blush large leaf rex from Elsie Frey, Cal. 56.
- x Starlight min rex from Elsie Frey, Cal. '57.
- x Starling silver and red rex by Elsie Frey, Cal. '56.
- x Stilleto cane from Polly Cooper, Texas, in Beg '58, p 232.
- x Sunbar (Sunderbruchi x barkeri) rhiz by Schwerdtfeger, Cal.
- x Tangerine (imperialis x micranthera) rhiz by Elsie Frey, Cal. Beg 4/'53,
- x The President large dbl red hiemalis in Logee's 1956 cat.
- x Theodosia Burr Shepherd rex by Walter Knecht, Cal.
- x Tingley Mallet, syn of Mme. Lionnet.
- x Twinkle Star rex of Susie Zug, Cal., in Beg '56, p 181.
- x Van der Meer's Glory large s orange hiemalis AM in JRHS '56, p 141.
- x Venice (acetosa x venosa) hairy rhiz by Elsie Frey, Cal. ABS Reg No. 133, in Beg '58, p 203.
- x Whirligig rex by Susie Zug, in Beg '56, p 181.
- x Whittier large rex by Mrs. P. J. Miller, Cal., in Beg '54, p 7.
- x Yvonne (Orange Supreme x dichroa) cane by Schwerdtfeger, Cal.
- x Zaida (mazae x epipsila) rhiz by Schwerdtfeger, Cal.
- x Zuensis (paulensis x Credneri) hairy fib by Susie Zug, '56. ABS Reg No. 146, in Beg '58, p 206.

Seeds, Seedlings and Hybrids

By DON HORTON

Seasonal Relationships of Plants

WE OFTEN speak of coolweather and hot-weather annuals. These designations correctly imply that there are differences in plants as far as seasons are concerned.

Anyone who has been gardening for any time at all is well aware of that fact, but the novice is likely to be confused about the proper planting seasons for many plants. In harsh climates where there are winters with snow and freezing temperatures there is no temptation to plant other than primarily in spring. But in mild climates, such as California's, where the winters can be mistaken for spring, people are sometimes wont to plant seeds at the wrong season.

Many old time gardeners do not know the reasons why plants must be put in at certain times. The terms hot-weather and cool-weather plants certainly give a major clue. Certain plants will grow well when the weather is warm. These include such annuals as zinnias, asters, marigolds, dahlias, morning glories, tomatoes and beans. Certain other plants grow well only during cool weather periods, hot weather usually being injurious or lethal to them. These are the plants that would be put out in the fall in mild climates, and include pansies, primulas, snapdragons, winter sweet peas, stock, Iceland poppies, carrots and lettuce.

Tropical plants are used to a climate where they can grow the year around and thus seed of most house plants can be started in the house or greenhouse most any season. Begonias, African violets, gloxinias, fern spores, etc., can be planted at any time of year. One notable exception to this is tuberous begonias which, because of their summer and fall blooming season, must be started from seed planted in December and January.

Temperature, then, is not the only factor influencing proper plant development. Length of day, or perhaps more

properly, length of night, determines when most plants are to flower. Tuberous begonias are influenced by this phenomenon, which is known as photoperiodism.

This is also illustrated very well by chrysanthemums, which are fall bloomers. When nights reach a certain length, bud initiation begins and the plants flower. It was found that by using cloth to cover the plants an hour or so before sunset that they could be made to flower earlier in the season. Conversely, by illuminating the plants with light bulbs for several hours after sunset they would be delayed in flowering. This led to the belief that the length of day governed the flowering period of chrysanthemums—the shorter the day the sooner the flower.

The truth of the matter, it was discovered, is that the longer the night the quicker the flower. Turning lights on the plants for only a short period in the middle of the night upsets their natural flowering period and causes them to delay flowering. A few minutes of light in the middle of the night now accomplishes what several hours of light after sunset did before.

Another seasonal relationship of plants

(Continued on Page 284)

SEASON'S GREETINGS

PHILOBEGONIA BRANCH

A.B.S.

SEASON'S GREETINGS
and All Good Wishes for a
HAPPY HOLIDAY SEASON
to All the Branches

RIVERSIDE BRANCH

Clayton M. Kelly Seed Fund Flight

No. 1. B. Rex—miniature. For the very first time, we can offer seed of this popular begonia and consider it a real achievement to be able to do this. Seed were produced by crossing *B. dregei* and rex hybrids therefore it should be noted that from one planting at least three or four *B. dregei* will appear, the balance will be the true and lovely miniature rex. This is an ideal little plant for those who garden in small areas or collect the rare and unusual. Seed supply is limited therefore please do not request more than one pkt. Price \$1.00 per small pkt.

No. 2. B. Thwaitesi (?). Seed were sent from Madagascar and the plant is described as resembling the above mentioned however we have not been successful in finding any trace of this plant in America; it seems to have disappeared from cultivation and no one could find an adequate description. We found in a book from England that it is the "final word" in foliage begonias, being something like a rex; the leaves are a rich coppery-green with red-purple, and grayish white blotches; the underside is blood red. Both sides are thickly set with deep purple, velvety hairs. Flowers tinged with pink, in an umbel. If this is the true *B. Thwaitesi*, we hope it has been rediscovered, as it is very desirable for itself and for hybridizing purposes. Seed germinated readily and we anxiously await the results. We offer seed as they came to us, namely as **resembling** *B. Thwaitesi*. Price 50c per pkt.

No. 3. B. luxurians, syn. B. sessilifolia—Brazil. A contact in Brazil sent a few seed of above to seed fund but we purchased many more from Sylvia Leatherman who went into the rain forest while on a recent trip to Brazil and collected seed at great personal discomfort to herself—being bitten by various and sundry insects that inhabit the forests of Brazil. This is a rare and beautiful begonia and is much admired by the true collector. It is sparsely rough-hairy; stems erect and branched; leaves compound, palmate, up to sixteen narrow, green, toothed leaflets; sinus crested with one to several redimentary leaflets; flowers small and white in clusters. Highly ornamental and because we have so

many seed are offering you a real bargain. 50c per pkt.

No. 4. B. cantareira — Brazil. Also known as *B. acetosa*. Low growing, leaves are large obliquely heart-shaped with rounded basal lobes, green, hairy beneath; many flowered and showy. 50c per pkt.

No. 5. B. echinosepala Regel—Brazil. See cover picture on Feb. 1947 Begonian. Much branched and distinguished by the comparatively small two and three-quarters inches long and five-sixteenths to one inch wide finely toothed leaves. Flowers are medium large and the white petals of male flower have rather large hairs in the middle of the outer side for which the species is named. 25c per pkt.

No. 6. B. foliosa—Most fern-like and smallest leaved of all begonias. Plant is of medium growth, bushy; stems and branches arching and drooping; leaves very small, ovate and deep green; flowers white or pink tinged usually in pairs—nice hanging basket begonia. 35c per pkt.

No. 7. B. Mexican species No. 1331—Beautiful rhizomatous plant having large, bright green leaves with crested margins. Flowers white on tall panicles. Grown outdoors in California for its tropical effect. 25c per pkt.

No. 8. B. involucrata—Costa Rica. Medium, bushy; stems covered with white tomentum; leaves broad-ovate, light green, three to five finger-like lobes toward the apices and not unlike lobes of the sassafras, soft hairy. Flowers white, unusual and distinctive species. 25c per pkt.

No. 9. B. vitifolia—Interesting plant with ivy-like leaves, pink and white flowers in large clusters. 25c per pkt.

No. 10. B. Rhizomatous mixed—Seed from John Cole, So. Africa. From a large collection of begonias—some are not grown in this country. A nice surprise in store for you. 25c per pkt.

No. 11. B. Cinderella Rose—A remarkable new type of *semperflorens* begonia bearing bright, rose-pink flowers, each with a large, attractive, yellow center, creating the appearance of being double. This is a hybrid and not all plants will be true to type. 35c per pkt.

No. 12. B. metallica—Brazil. Erect, bushy, hairy; leaves coarsely toothed, glossy olive-green with metallic purple veins above, red-veined beneath; flowers large light pink, pink bearded without, large and showy. 25c per pkt.

GREENHOUSE PLANTS

Columnea gloriosa superba—Epiphytic trailer with rooting stems, small oblong leaves covered with red-brown hairs, large, solitary, fiery red flowers to three inches long, with wide open yellow throat and helmet-like upper lip. Good basket plant and one of the most beautiful of all the *Columneas*. 35c per pkt.

Philodendron selloum—Self-heading, lush, dark green, pendant leaves. Popular plant grown out doors in mild climates for landscaping effects. 25c and 50c pkts.

Billbergia vittata—*Bromeliaceae*—Species with leathery, olive to purplish-brown leaves silver banded, inflorescence of violet flowers and red bract leaves. 25c per pkt.

Billbergia hybrids mixed—Several varieties of some of the best hybrids. 25c per pkt.

Dyckia leptostachya—*Bromeliaceae*—Rosette of dark green leaves with red base; inflorescence of orange flowers from long stems appearing along side of center. 25c per pkt. **Cultural instructions will be supplied with bromeliad seed.**

Peperomia sellowiana—Dwarf cespitose species from Brazil. Not in cultivation in this country, nice pot plant. Seed are scarce, please state a second choice. 35c per pkt.

Streptocarpus wendlandi. Natal. Stemless plant with a single, huge leaf, with olive-green corrugated whorls, densely hairy, purple beneath; the tall flower spikes sprouting from the leaf may bear as many as thirty small, violet-blue flowers. 25c per pkt.

Anthurium hugeli—Rosette of leathery leaves with depressed veins and crenulated edges. 25c per pkt.

—**Bertolonia argotraea**—Velvety brown leaves, occasionally speckled with silver, and maturing to deep green rosettes of wine-red backed foliage. A delightful miniature with slender stems of orchid star flowers borne over a long period of time. 25c per pkt.

Solanum pseudo-capsicum—Jerusalem cherry. Shrubby plant with small, white, star-like flowers followed by large globular, orange-scarlet, cherry-like fruit; popular pot plant at Christmas. 25c per pkt.

OTHER GENERA

Leptospermum scoparium—N.Z. tea tree. Best known species in cultivation, foliage silky when young, flowers white. Grow it out doors in mild climates—greenhouse elsewhere. 25c per pkt.

From South Africa we have seed of the beautiful **Protea**—now the national flower of that country and protected by law in wild state. One of A.B.S. members living in Texas has plants that were grown from seed offered some time ago—soil that is soggy wet is fatal to *Protea* seed; keep reasonably moist while germinating.

P. latifolia—25c per pkt.

P. Susannae—25c per pkt.

Clivia Belgian hybrids—Aristocrats of the amaryllis family. Wide, dark green strap leaves, flowers large, deep red-orange and are held on heavy, stiff stems. Grow in deep shade. 2 seed for 25c.

Gasteria—South African plants of the lily family. Suitable for growing outdoors in mild climates, but can be used as greenhouse plants. Essentially stemless plants with a dense, basal rosette, flowers greenish tipped red or pink.

G. angularis—25c per pkt.

G. disticha—25c per pkt.

G. variegata—25c per pkt.

We have received information from the collector who sent seed of Brazil begonias that were offered in September and October The Begonian—he hopes to have this work completed soon. He is not a member of A.B.S. so we must await his pleasure.

Mrs. Florence Gee
Seed Fund Administrator
4316 Berryman Ave.
Los Angeles 66, Calif.

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Aqua Pura

(Continued From Page 275)

the fact that the pot should be plunged to the rim and not allowed to stand in an inch or so of water. To allow the pot to stand in a little water will have a strong tendency to build up a layer of high concentrations of soluble salts which will damage the root systems.

The third method is the constant water level method. This method requires a watertight bench and soil with good capillary action. The bottom of the bench is filled to a depth of one to two inches of gravel. The remainder of the bench is filled with fine sand into which the pots are plunged to their rims. A constant level of water is maintained one inch below the base of the pots. The pots then have a constant moisture content due to the capillary action of the sand and soil.

Whether the plant be a small specimen or large tree, water is the governing factor in its success and well being. Without it there would be no life. A little thought to its uses within the plants we grow will make us a little more mindful to see that they do not go thirsty.

Dallas, Texas

—B—

Attention to good drainage can make the difference between specimen plants and runts.

Don Horton

(Continued From Page 281)

is that of dormancy. All plants rest at one time or another, even plants that never lose their leaves. Deciduous plants are used to an environment where the temperature gets very cold, and in order to prevent them from leafing too soon and having tender growth frozen, they have a sort of built-in clock which says that they must have a certain amount of cold before a warm spell will cause them to leaf out. For example, standard varieties of peaches need somewhere between 900 and 1000 hours of temperatures below 40° F. before they will break dormancy in the spring. In our warm areas they seldom receive this much chilling and we must rely on new varieties of peaches that have a "short chill" requirement.

There are other plants, such as eastern lilacs and peonies, that have a much greater chill requirement and cannot be grown at all in the milder climates of California. Recent experiments with a new growth substance, gibberalic acid, have shown some promise in breaking dormancy chemically, instead of with cold. Elberta peaches treated with gibberalic acid have been made to leaf out while receiving far less than 900 hours of chilling.

—B—

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Leaves From Our Begonia Branches

BESSIE RAYMOND BUXTON

Met at the home of Mrs. Frederick Kingsbury. Before the meeting four groups of begonias were judged for the awards of the year.

The Bessie Buxton silver vase for a house grown best in show went to Mrs. George Follett for *B. "Emerald Giant,"* a rex. The silver bowl for best group of five strictly house-grown begonias was awarded to Mrs. George Follett. The Haddrell cup was given for *B. luxurians* grown by Percy I. Merry. Logee cup for best rex in show, *B. "King Edward,"* went to Mrs. George Follett.

Second award in the Buxton Vase class was for *B. imperialis* of Mrs. Nancy Alvord. In the Logee Award class second went to *B. "Princess Margaret,"* also shown by Mrs. Alvord. Haddrell Award class third, *B. cucullifolia,* went to Mrs. Frederick Kingsbury.

A very interesting talk on growing begonias and other plants under fluorescent lights was given by Mrs. Bernice Brilmayer.

—B—

GLENDALE

A "special event" supplemented the regular meeting Oct. 22, the Glendale Branch Annual Begonia and Shade Plant Show.

Not only a "special event," but a "special speaker," our good friend, Rudolf Zieshenne of Santa Barbara, was there.

There were divisions for semperflorens, rhizomatous, rex and fibrous—four classes for each type—a division for ferns, and then "other shade plants." There were first, second and third place ribbons.

Plants for the plant table were furnished by Mr. Zieshenne.

—B—

INGLEWOOD

Sylvia Leatherman, our National Research Department Director, shared with us some of the exciting details of her

recent trip to Brazil, augmenting the narration with color slides Nov. 13. She had a great deal to tell us of the many new and unusual plants to be found so far to the south of us.

The Executive Board furnished a Thanksgiving Basket, which was raffled with the proceeds going to the Arboretum Glasshouse Fund.

—B—

LONG BEACH

On Jan. 6, 1959, the Parent Chapter will have the installation of new officers and the annual hamburger feast, a joyful occasion, at the home of J. Paul Walker, 515 W. 20th, Long Beach. Mr. Walker will install the officers. The welcome mat is out, but reservations are necessary.

—B—

MISSOURI

The meeting at Mrs. Hattie Taylor's home Tuesday, Sept. 16, was very well attended. Sixteen were present and a good luncheon and meeting resulted.

We are happy to have some old members reinstated in the last two months.

Next month we returned to our regular meeting place at Linwood and Paseo in the World War II Memorial Bldg. Each member explained how he prepares plants for bringing them indoors. As none of us has a greenhouse, we have as many different methods of caring for our plants as we have homes.

—B—

PHILOBEGONIA

The branch had its June, July and August meetings on the shores of the Atlantic ocean, visiting different homes of members. Of course begonias were discussed and the whys and wherefores as to how they were doing in the hot weather exchanged. Those who have greenhouses could say that they were doing very well. Others who had put them outside had good reports also, but

the plants that had to stay in the house all summer did not fare as well.

In this month's lesson, teacher Ruth Allen tried to explain the different types of families of plants. All feel that a repeat of this lesson could be taken. Spike, raceme, catkin, umbel, corymb, spadix—my, my, how we have to pay attention to our teacher.

Mrs. Alfred Bailey was elected president at the November meeting. Other officers are: Mrs. Robert York, vice-president and representative director; Mrs. Ralph DeCou, secretary; Mrs. Curtis Paschall, treasurer; Mrs. Perry Long,

chaplain; Mrs. Ruth Allan, program chairman; Mrs. William Browning II, historian.

—B—

RHODE ISLAND

A beautiful begonia display—featuring magnificent specimens of rex begonias—filled a 10x10 booth at the flower show sponsored by the Rhode Island Federated Garden Clubs, Rhodes on the Pawtuxet, near Providence, Oct. 1-4. The newly formed Rhode Island Branch set up and maintained a display at the invitation of the federation. Mrs. Geraldine Daly and Mrs. Virginia Withee supervised. The exhibit was so well planned and executed it attracted the attention of all visitors to the show—excellent public relations for the Rhode Island Branch and the Society at large.

—B—

SAN GABRIEL VALLEY

Mrs. R. C. Leatherman discussed and illustrated her recent trip to Brazil at the October meeting.

"Begonias" were discussed by Mrs. Cecil McGuire, Blue Whale representative, at the Nov. 14 meeting. A pot luck dinner for members preceded.

—B—

Copy Deadline

All copy for *The Begonian* must be received by the editor not later than the first of the month preceding publication date.

CHRISTMAS GREETINGS

from the

ELSA FORT BRANCH
of New Jersey

SEASON'S GREETINGS
AND ALL GOOD WISHES FOR A
HAPPY HOLIDAY SEASON

SAN GABRIEL VALLEY BRANCH

SEASON'S GREETINGS

from

GLENDALE
the Friendly Branch

*Merry Christmas with best wishes
for your happiness in the
New Year*

LONG BEACH
PARENT CHAPTER

Merry Christmas with best wishes
for your happiness in the New Year

SMOKY VALLEY BEGONIA SOC.
SALINA, KANSAS

May all the Joys of Christmas Cheer
usher in your Happiest Year !

Redondo Area Branch
of A.B.S.

Gibberellin

(Continued From Page 268)

developing in the growing point, and two small sideshoots also are forming. I'm now hoping the plant will make a complete recovery.

I have not used any of this acid on my healthy plants because I sincerely believe that the real road to success depends on good cultivation. I am hoping to try this acid on tubers which are bad starters next season. In this instance, however, I understand that the tubers will have to be immersed in a solution of the acid for a few hours. Is Gibberellin the answer to blindness and dormancy? I hope other begonia enthusiasts will experiment on these lines next season.

—B—

Begonias generally are native to rainy, mountainous areas. Growers would do well to imitate such a climate.

*To wish you the blessings
of Christmas and a blessed New Year*

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Calendar

Dec. 9—West Valley—Installation of officers at Orcutt Clubhouse, 21816 Lanark, Canoga Park, 7:30. A garden party, Christmas dinner.

Jan. 6—Long Beach—Installation and annual hamburger feast. 515 W. 20th, reservations necessary.

Kenworthyi Habitat

(Continued From Page 267)

Soque, but the number of Soque words they use, for plants and animals and things of the countryside, could make a dictionary.

As a result of our little expedition I am happy to report to the begonia fraternity that the picturesque and rocky habitat we came to see is likely to remain a wilderness area indefinitely—a secure home for *Begonia kenworthyi*, and a shrine to the memory of Eva Kenworthy Gray.

—B—

Often begonias which are vividly colored in full or partial sunlight will grow only green leaves in deep shade.

*Season's Greetings
and All Good Wishes for a
Happy Holiday Season*

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Minutes, National Board, Oct. 27

The regular monthly meeting of the National Board, A.B.S., was called to order by President Slatter at 7:40 p.m. October 27, 1958. "Aims and Purposes" of the Society were read by Public Relations Director Clarence Hall.

Minutes of the previous meeting were read and approved.

Treasurer Pearl Parker gave her report of the month and presented a full report on the convention finances. Pres. Elect Lovejoy reported that the Convention books had been audited and found to be in order.

Pres. Slatter reported that he had visited several branches during the month, among them being Sacramento; that the Sacramento meeting was held in the new Garden Center Building and that it is a very beautiful building, available to all garden clubs.

Pres. Elect Lovejoy reported he had visited the San Diego branch and had enjoyed a very nice meeting.

Vice President Alva Graham reported she had been working on the new supplementary list of Begonia names and that it would soon be finished.

Membership Secretary Walton reported 64 new and 137 renewing members for the month with a total income of \$519.45. At Mr. Walton's request motion was made and carried to increase the Membership Secretary's revolving fund from \$25.00 to \$40.00 per month.

Mr. Walton then stated that he had obtained a quotation of \$185.90 for 5000 cultural bulletins. Motion made and carried that we order 5000 copies.

Begonian Editor Mrs. Brest sent a written report as she was unable to be present. She stated that due to the increased amount of special advertising for the December issue of The Begonian she believed the magazine should be increased to 28 pages for the one month. Motion made and carried that the December issue be so increased. Motion made and carried that 300 copies of the Supplemental list of Begonia names be printed at the time the list is being printed for The Begonian.

Advertising manager John Thieben gave his report showing \$158.45 collected and turned over to the Treasurer, leaving a balance due of \$123.50.

Seed Fund Chairman Florence Gee not being present, her report was read by Mrs. Parker showing \$93.00 remitted to the Treasurer.

National Librarian Mrs. Sault was unable to be present but sent a written report showing the progress of the Library department.

Public Relations Chairman Clarence Hall gave his report, stating he had received what he considered sufficient authorization for the use of Mrs. Buxton's name by the New England Branch. Motion made and carried that permission be given for the New England Branch to change the name to "Bessie Raymond Buxton Branch." Mr. Hall stated that the Charters issued to the Raytown Missouri and Central Florida Branches seemed to have been lost and could not be returned but since they are no longer operating they be dropped from the branch directory.

Motion made and carried that the names be eliminated from the Directory. Mr. Hall also stated that since the Los Angeles Branch had returned its Charter he was offering a motion that the name be dropped from the Directory. Motion seconded and carried.

Research Director Sylvia Leatherman gave a report on her department and her recent trip to Brazil.

Slide Librarian Mrs. Anderson stated she had nothing particular to report.

Mrs. Schwerdtfeger, Director of the School of Judging, gave a report on that department and flower show judging.

Mrs. Korts, chairman of the committee appointed to make a recommendation for remembrance of Board members who have passed on, submitted the suggestions of the committee. This responsibility to be placed with the Public Relations Chairman. Motion made and carried that the Board accept the recommendations of the committee.

Motion made and carried that the balance on hand from the convention funds be transferred to the General Fund. Mrs. Schwerdtfeger reported that it was the recommendation of the Convention Committee that \$250.00 be transferred from the Convention Fund to the Arboretum Glasshouse Fund. After discussion of the recommendation no action was taken but Mr. Walton moved that a committee be appointed to organize projects for raising money for the glasshouse. Pres. Slatter stated that since time was running short he did not feel that proper discussion could be had. It was then moved, seconded and carried that the motion be tabled for future consideration. Pres. Slatter stated that the San Gabriel Branch had requested appointment of a committee to determine what should go into the Glasshouse, as it would be made up of diversified begonias. He then appointed Mr. Howard Small, Mrs. Louise Cramer, Mrs. Eitel Arbuckle and Mr. Rowland Maddox, and stated that he would also serve on the committee. Motion made and carried that the Glasshouse committee be accepted as submitted.

Pres. Slatter stated he had received a request from the Seed Fund Chairman Mrs. Gee for 100 copies of Bromeliad Cultural Bulletins; that he had secured a price of \$3.00 for them. Motion made and carried that the bulletins be ordered.

Branches reporting—El Monte, Glendale, Hollywood, Inglewood, Long Beach Parent Chapter, Ventura and West Valley.

Treasurer Mrs. Parker reported that the Savings Bonds thought to be maturing at this time are in reality 12 year bonds and suggested it would be better to keep the bonds until they mature. Motion made and carried that the bonds not be cashed until maturing date.

Motion made and seconded that \$13.50 shown on the Treasurer's report as "President's Fund" be transferred to the "General Fund." After some discussion a motion was made and carried that the transferring motion be tabled for future consideration.

There being no further business the meeting adjourned at 10 p.m.

Respectfully submitted,
Irma Jane Brown, Secretary

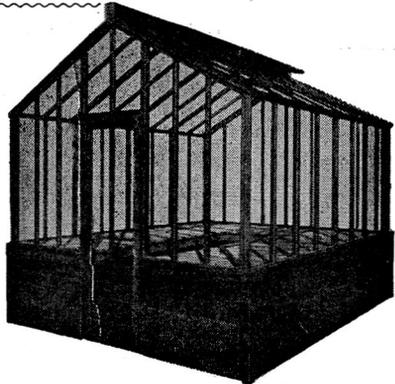
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Branch Meeting Dates . . .

VISITORS ALWAYS WELCOME AT THESE MEETINGS

- BRITISH BRANCH**
F. J. Bedson, Secy.
Kent, England
- BUXTON, BESSIE RAYMOND BRANCH**
3rd Saturday, Homes of Members
Mrs. Lester H. Fox, Secy.
170 Marsh Hill Road, Dracut, Mass.
- DALLAS COUNTY BRANCH, TEXAS**
1st Thursday, 7:00 p.m.
Members' Residences
Mrs. Ruth Cook
923 S. Edgefield, Dallas 8, Texas
- EAST BAY BRANCH**
2nd Thursday, 7:45 p.m.
Willard School, Telegraph at Ward,
Berkeley, California
Mrs. E. H. Ellerbusch, Secy.
1051 Ordway, Berkeley 6, Calif.
- EL MONTE COMMUNITY BRANCH**
3rd Friday, Members' Homes
Daisy Morrow, Cor. Secy.
2821 N. Musgrove Ave., El Monte, Calif.
- FOOTHILL BRANCH**
3rd Thursday, 8:00 p.m.
La Verne Community Bldg.
2039 Third St., La Verne
Mrs. C. W. Hall, Cor. Secy.
358 E. Arrow Hwy., Upland, Calif.
- FORT, ELSA BRANCH**
1st Saturday, 1:30 p.m.
Miss Lola Price, Secy.
628 Beech Ave., Laurel Springs, N.J.
- GLENDALE BRANCH**
4th Wednesday, 8:00 p.m.
Tuesday Afternoon Club, 400 N. Central
Irma Jane Brown, Cor. Secy.
3628 Revere Ave.,
Los Angeles 39, Calif.
- GRAY, EVA KENWORTHY BRANCH**
3rd Monday, 7:30 p.m.
Community House, La Jolla
Mrs. Charles Calloway
1311 Torrey Pines Rd., La Jolla, Calif.
- GRAY'S HARBOR BRANCH**
2nd Monday, 8:00 p.m.
Hoquiam Public Library, or
Messingale and Rosenear Music Store
Aberdeen, Washington
Mrs. Jessie B. Hoyt, Secy.
1013 Harding Road, Aberdeen, Wash.
- GRUENBAUM, MARGARET BRANCH**
4th Tuesday, 10:30 a.m.
Homes of Members
Mrs. Adolph Belser, Cor. Secy.
Welsh and Veree Rd., Philadelphia, Pa.
- HAWKEYE STATE BRANCH**
3rd Friday, Members' Homes
Ruth Anderson, Secy.
Underwood, Iowa
- HOLLYWOOD BRANCH**
3rd Wednesday, 7:30 p.m.
Plummer Park, 7377 Santa Monica Blvd.
Mrs. J. C. Jenks
6807 DeLongpre Ave.
Los Angeles 28, Calif.
- HOUSTON, TEXAS BRANCH**
2nd Friday, 10:00 a.m.
Garden Center, Herman Park
Mrs. A. F. Morin, Secy.
2014 Commonwealth, Houston 6, Texas
- HUMBOLDT COUNTY BRANCH**
2nd Monday, 8:00 p.m.
Los Amigos Club, Loleta, Calif.
Miss Margaret Smith, Secy.
P.O. Box 635, Ferndale, Calif.
- INGLEWOOD BRANCH**
2nd Thursday, 7:45 p.m.
Inglewood Women's Club
325 North Hillcrest, Inglewood, Calif.
Mirra A. Rich, Secy.
2022 W. 84th Place, Los Angeles 47, Cal.
- LONE STAR BRANCH**
3rd Monday, members' homes
Mrs. Geroge Wilkins, Secy.
3621 N. Fitzhugh Ave., Dallas 4, Texas
- LONG BEACH PARENT CHAPTER**
1st Tuesday, 7:30 p.m.
Linden Hall
208 Linden Ave., Long Beach, Calif.
Mrs. Rosa Cox, Secy.
3592 Lewis Ave., Long Beach 7, Calif.
- LOUISIANA CAPITAL BRANCH**
First Friday, Homes of Members
Mrs. Amy Reddy Rushing, Secy.
4938 Annette St., Baton Rouge, La.
- MIAMI, FLORIDA BRANCH**
4th Tuesday, 8:00 p.m.
Simpson Memorial Garden Center
Mrs. Ray Rosengren, Secy.
5530 N.W. 21 Ave., Miami, Fla.
- MISSOURI BRANCH**
3rd Tuesday, 1 p.m.
World War Memorial Bldg.
Linwood and Paseo
Mrs. Hattie Taylor, Secy.
P.O. Box 25, Raytown, Mo.
- OCEAN COUNTY, NEW JERSEY BRANCH**
1st Tuesday, 12:30 p.m., members' homes
Mrs. Anna Peck, Secy.
23 So. Gateway, Toms River, N.J.
- ORANGE COUNTY BRANCH**
2nd Thursday, 7:30 p.m.
Garden Grove Grange Hall
Century and Taft Streets
Garden Grove, Calif.
Mrs. Lionel Evans, Secy.
10381 Orangewood, Garden Grove, Calif.
- PASADENA BRANCH**
Meetings on call.
Homes of Members
Col. C. M. Gale, Secy.
40 N. San Rafael, Pasadena 2, Calif.
- PHILOBEGONIA BRANCH**
2nd Friday, Members' Homes
Mrs. Ralph DeCou, Secy.
107 Potter St., Haddonfield, N.J.
- PORTLAND, OREGON BRANCH**
4th Friday, 8:00 p.m.
Members' Homes
Mrs. Helen Parrott, Secy.
3955 S.E. Kelly, Portland 2, Oregon
- REDONDO BEACH AREA BRANCH**
4th Friday each month
2308 Rockefeller, Redondo Beach, Calif.
Mrs. Pearl Riggles, Secy.
2042 Kathy Way
Torrance, Calif.

- RHODE ISLAND BRANCH**
1st Saturday each month
Homes of Members
Mrs. Geraldine Daly, Secy.
Daly's Gardens, Coventry, R.I.
- RIVERSIDE BRANCH**
2nd Wednesday, 7:30 p.m.
Shamel Park, 3650 Arlington,
Riverside, California
Mrs. Ethel Prior, Sec.
4345 5th St., Riverside, Calif.
- ROBINSON, ALFRED D. BRANCH**
3rd Friday, 10:30 a.m.
Homes of Members
Mrs. Harlie Brown
3233 Tennyson, San Diego 6, Calif.
- SACRAMENTO BRANCH**
3rd Tuesday, 8:00 p.m.
Mrs. Leslie H. Watkins, Secy.
3070 Land Park Dr.
Sacramento 18, Calif.
- SAN DIEGO BRANCH**
4th Monday
Hard of Hearing Hall,
Herbert & University
Mrs. Leah Jones, Secy.
120 Upas St., San Diego 4, Calif.
- SAN FRANCISCO BRANCH**
1st Wednesday, 8:00 p.m.
Forest Lodge, 266 Laguna Honda Blvd.
Mrs. Louise Allmacher
1963 45th Ave., San Francisco, Calif.
- SAN GABRIEL VALLEY BRANCH**
4th Wednesday, 8:00 p.m.
Masonic Temple, 506 S. Santa Anita Ave.
Arcadia, California
Mrs. Marilyn Jewett, Secy.
18324 E. Alford St., Azusa, Calif.
- SAN MIGUEL BRANCH**
1st Wednesday
Youth Center, Lemon Grove, Calif.
Mrs. Constance White, Secy.
9344 Broadway, La Mesa, Calif.
- SANTA BARBARA BRANCH**
2nd Thursday, 7:30 p.m.
Girl Scout Clubhouse,
1838 San Andres St.
Mrs. Rudolf Ziesenhenn, Secy.
1130 Milpas St., Santa Barbara, Calif.
- SEATTLE BRANCH**
3rd Tuesday, 7:45 p.m.
Green Lake Field House
7201 Green Lake Way
Mrs. Arthur Martin, Secy.
8539 Latona Ave., Seattle 15, Wash.
- SHEPHERD, THEODOSIA BURR BR.**
1st Tuesday, 7:30 p.m.
Alice Bartlett C.H., 902 E. Main,
Ventura, Calif.
Mrs. Oakley Murphy, Secy.
119 E. Simpson, Ventura, Calif.
- SMOKY VALLEY BRANCH**
3rd Thursday of each month
John C. Irving, Cor. Secy.
1940 Simmons, Salina, Kan.
- SOUTHERN ALAMEDA COUNTY BR.**
3rd Thursday, 8:00 p.m.
Strowbridge School Multi-Purpose Rm.
21400 Bedford Dr., Hayward, Calif.
Mrs. Chester Bartlow, Cor. Secy.,
553 Arden St., Newark, Calif.
- TALL CORN STATE BRANCH**
Mrs. Edna Monson, Secy.
South Taylor, Mason City, Iowa
- TARRANT COUNTY BRANCH**
2nd Monday, 10:00 a.m.
Homes of Members, Ft. Worth, Texas
Mrs. Joe X. Schad, Secy.
Rte. 1, Box 17, Saginaw, Texas
- TEXAS STATE BRANCH**
1st Tuesday night in members' homes
Mrs. R. J. Wilson, Secy.
4620 Evergreen Dr., Port Arthur, Texas
- TREASURE ISLAND BRANCH**
4th Monday, 7:30 p.m.
Homes of Members
Mrs. Harold Renshaw, Secy.
2521 37th St., Galveston, Texas
- WEST VALLEY BRANCH**
2nd Tuesday, 7 p.m.
Orcutt Playground Clubhouse
21816 Lanark St., Canoga Park, Calif.
Mrs. J. H. Holley, Secy.
22126 Gault St., Canoga Park, Calif.
- WESTERN PENNSYLVANIA BRANCH**
2nd Wednesday, 11:00 a.m.
Homes of Members
Mrs. Albert S. Lash, Cor. Secy.
1228 Oklahoma Ave., Pittsburgh 16, Pa.
- WHITTIER BRANCH**
1st Thursday, 7:30 p.m.
Palm Park Community Center,
1643 Floral Drive
Mrs. Pearl Benell, Secy.
10331 Colima Rd., Whittier, Calif.
- WILLIAM PENN BRANCH**
3rd Tuesday, 2:00 p.m.
Homes of Members
Miss Margaret Robins, Secy.
Mermont Gardens, Bryn Mawr, Pa.

(Ed.: If your Branch has elected new officers, will you send in any changes so that this record may be kept current? Please include FULL address of your secretary. Thank you.)

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- ☆ Picking up a decanter bottle of *Liquid* WHALE to energize the green leaves and stems and set long lasting blooms on your house plants for Christmas and the New Year.
- ☆ Mulching the garden with a two-inch layer of well moistened BLUE WHALE Soil Builder and Conditioner. BLUE WHALE's nutrients are available according to the temperature of the ground and the needs of the plants. There is no waste as the pure sphagnum holds the plant foods in BLUE WHALE until they are used by the roots. Mulching saves water, helps protect from freezing and thawing and hot weather, cuts down weeds—mulching with BLUE WHALE insures the "little and often" feeding which is nature's way to healthy plants, as long as the peat moss keeps its structure.
- ☆ Having acid (3.4) *Liquid* WHALE on hand to apply to shrubs at first budding for larger, longer lasting, heavier-textured flowers.

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