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## BEGONIA EMMA PALMER

Plant of Mrs. Chet Van Dusen San Diego, Calif. 41950 A.B.S. Show

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" Photo by Ken Garrison Clarke

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DECEMBER 1950

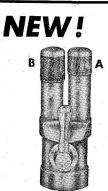
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Monthly Publication of The American **Begonia Society** 

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The next Board meeting of the American Begonia Society will be held in the Los Angeles City Hall, Room 1305, 7:30 p. m., January 22, 1951. Use Main St. elevator. Park lower garage, south entrance on Main Street.

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#### Feature Articles-

## CONTENTS

- BY BESSIE R. BUXTON	257
GONIAS - BY FRANK REINELT	255
ALICE WILLCOX	261
LINGTON	260
CONDENSED MINUTES	267
COVER PICTURE - B. EMMA PALMER	256
LIBRARY NOTES	254
QUESTION-ANSWER COLUMN	259
ROUND ROBIN NOTES	261
YOUR EDITOR RECEIVED	252
	ALICE WILLCOX LINGTON



LEAVES – PLANTS Most of the older varieties and limited stock of many new ones, including Fringettes, White Girl, and Fantasy Write for List ORCHARD NURSERY Successors to E. H. THOMAS RR No. 1, Box 483 Lafayette, Calif.

#### CORRECTION-

The name of Mr. P. J. Miller was erroneously set in the masthead of the November issue as Chairman of the Slide Library. Instead Mr. Jack MacLanahan is the correct appointee, as now appears in the masthead. His address is 4080 Tivoli Avenue, Venice, Calif.



## A.B.S. MEMBERSHIP UNDER NEW RATE

At a special called meeting held Oct. 23, 1950, in the City Hall in Los Angeles, Calif., the resolution that was presented and passed at our annual meeting relative to the incrēase in membership fees, was again read, after proper publication in The Begonian, and by a vote of 54 in favor and 4 opposed, same was approved and ratified.

While the American Begonia Society as a whole comes first, the Magazine is secondary, as your membership includes the monthly magazine. However, it is our desire to give you a better magazine, and, as our membership fees are practically all used for the publication of the magazine, it is suggested and is our policy that:

All new and renewing members whose dues are received before Jan. 1, 1951, will be accepted at the current rate of \$1.50 per year; Effective January 1, 1951, all dues will be

\$2.50 per year.

Meanwhile we trust this Christmas will see all our members enjoying greater happiness and contentment than ever before.

Sincerely, Frank S. Moore, National President



### YOUR EDITOR RECEIVED-

An inquiry from Sr. Stanislaus, Dibert Bldg., Charity Hospital, New Orleans, La., who is trying to grow Begonias in the T. B. Sanitorium to cheer his patients. He wished to know if any members would like to help by sharing seed, cuttings or bulbs. We hope the spirit of Christmas will bring some gifts to him for such a worthy cause.

A great feeling of Thanksgiving and Cheer in our heart as we put the finishing touches on this issue of The Begonian, our 12th, ending a year of service to the A.B.S. These emotions came from contemplating a long list of grand people we've been able to meet and know, personally or by letter, solely by reason of this work with the A.B.S. In addition we have had the pleasure of making many, many new acquaintances among plants and learning more about old ones. We can only hope our readers have had as much good fortune during these months and that we can all be equally joyful as we look forward to the blessings of The Christmas-tide together.

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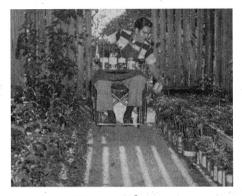
# Begonias From A Wheelchair

By Manson E. Hume Orlando Florida, Veteran World War II

Mrs. Florence Carrell, your Seed Fund Chairman, has encouraged me to set down the story of my innoculation with the Begonia Bug, as follows:

Not wanting to waste my life away in a wheelchair, I decided on a hobby to keep me occupied. Living in Florida where growing plants is the hobby of most people, I too soon became interested in them.

Being a Veteran of World War II, I took advantage of Public Law 16 (for disabled veterans). When I finished my schooling, I had quite a nice little Nursery started on my property (see photo No. 1), but as the plants grew larger they became harder for me to handle alone. I wanted something that I could manage by myself. Growing pot plants seemed the answer.



### No. 1—The Beginning Courtesy Mr. Hume

A friend gave me two rex begonias, r. c. curly star dust and r. c. mountain baze. I started propagating from leaf cuttings. Mrs. Helen Winquist, of Winter Park, Fla., donated many leaves to help swell my stock of rex begonias. Since the very first two begonias until this day, I have been trying to compile all the information I can locate on growing begonias.

One day I decided to try my luck at growing begonias from seed. It was in "The Begonian," April, 1950, (my first copy) that I saw seeds of *rex* begonias advertised for sale, \$1.00 for a large package. My seeds arrived and by the time I unwrapped many sheets of paper and came to a cotton square, I was beginning to think someone had made a mistake, but when I removed the cotton and found a folded square of cigarette paper no longer than half an inch, I began to feel that it would be an expensive hobby to grow *rex* begonias from seed. My first impression of begonia seeds was, "Just some dust lodged between the folds of cigarette paper." But before I attempted to plant them I asked many questions and found out that the "dust," as I called it, would produce hundreds of plants.

One day not very long after was D-day (dirt day). I fastened a cart to the back of my wheelchair and headed for the oaks on our property (see photo No. 2). With rake, a sieve made from half an apple crate and screen wire, and shovel, I raked and sifted a cart load of leaf mold and sandy top soil (typical of Florida soil). I sprayed the soil with Spergon, a fungicide, to check damp off. I had three glass coffee jars and one pyrex dish with a cover. I made little screen flats to fit into the jars, dampened the sifted soil. and placed some in each flat and the pyrex dish. I then cut thin white paper the size of the flats, submerged the papers in water for a few seconds, and shaking the excess water off, I laid the papers flat on a board across my knees and sprinkled the seeds sparingly over the surface of each. The seeds, being brownish, showed up clearly against the white background. The dampened paper held the seeds to it; I then turned each paper with seeds on it upside down on a seed flat and rubbed my fingers gently over the surface of the paper. I removed the papers when the plants started to show. I placed each tiny flat in a glass jar on its side and then placed the jar top on tightly.

I sent to Mrs. Carrell of the Seed Fund for the advanced collection of seeds. Mrs. Carrell was very generous and I was kept busy from sun up until sun down planting begonia seeds of known and unknown varieties.

My next project was the building of flats to care for the seedlings when they were large enough to move from the jars. After the flats were finished, I took the cart into our grove to get leaf mold from a pile of decaying leaves. The potting soil I made consisted of two pails full (scrub pails) of leaf mold, one of sand, one of well-rotted cow fertilizer, one of top soil, three quart oil cans full of pulverized sheep manure, and one quart oil can full of Cold Smoke, a fungicide and insect repellent, mixing each cart full thoroughly and shoveling *Turn to next page*  the mixture into the flats. Over the top of each I sifted about a quarter inch of leaf mold. When transplanting the seedlings into the flats, I placed a pinch of sand around the base of each tiny plant. I took pieces of milkcolored shower curtain and placed one over each flat. Not having a greenhouse, I used that means to produce the same effect, and very successfully, too.

Mrs. Hume and I are now building a stockade-type begonia house, with benches all around the walls. The enclosure measures fifty by fifty feet. I drive our car (handcontrolled), with trailer attached, to a cypress mill twenty-two miles from Orlando, each time bringing back about 100 cypress slabs (the outer slabs cut from the logs). I saw the slabs the size we need and Mrs. Hume nails them in place. We have a roof over one section which houses three benches. When it is finished, it will be planted in tropical plants and ferns and the beautiful begonias will rule over all. The name of the house will be "Rainbow House" for the lovely rex begonias.

So far I have not experienced any cold weather or hurricanes since growing begonias in Florida. My slat house is poor protection against them, if we should get either, but never-the-less I will do my very best to grow successfully all the lovely begonias I can get my hands on.

I have never been happier in my life and begonias had their part in making me feel that way—but Mrs. Hume is still my shining star.



No. 2–"D-Day" Courtesy Mr. Hume

GOD has given me my life and the beauty of the plants I grow with His help; and it is with this thought in mind that I extend a welcome to those of you who wish to see the beauty of the land that God has willed to me-Sincerely,

Manson E. Hume

(Men like this bring the Sermon on the Mount out of History and Literature and into our daily lives as a practical religion, forcing us to re-examine ourselves with a critical eye to our dissatisfactions and petty complainings —especially us hale and hearty folk.—Editor)

## LIBRARY NOTES

The following new acquisitions are now ready for circulation and should bring many hours of pleasant winter reading to our members:

CAMELLIA RESEARCH—A report of the Horticultural Research Committee of the Southern California Camellia Society on current research developments in this field, covering plant propagation, flowering, hybridization, factors influencing plant growth and problems of pest and disease control.

MISSOURI BOT'ANICAL GARDEN BUL-LETIN-Volumes 35, 1947; Vol. 36, 1948, and Vol. 37, 1949-three separate volumes. HOME GARDEN, Vol. 15, January to July,

1950.

500 COMMON GARDEN MISTAKES CORRECTED—A fine pamphlet prepared by the editorial board of Home Garden and of interest to all gardeners. The chapter on mistakes to avoid in growing House plants should prove of value to all begonia enthusiasts.

Requests are piling up for the new acquisitions and it would be greatly appreciated if books were returned as soon as possible in order that waiting members may receive them. Do not be discouraged—each order is filled in turn and all will be cared for as quickly as the books are returned to the librarian.

Happy holidays to all. Gladys C. Nolan, Librarian.

## CHRISTMAS GIFT SUGGESTIONS-

The twelve months of 1951 in the American Begonia Society, including twelve issues of "The Begonian" with the latest news of your favorite plants and loads of helpful gardening information: Send \$2.50 for each subscription to Elmer Lorenz, Membership Secretary, Box 2544, Los Angeles 54, Calif.

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A.B.S. Official Pins—Send \$3.32 to Mrs. Edna Korts, 3628 Revere Avenue, Los Angeles 26, Calif., for each pin desired.

Official Membership Signs-Two for 25c sent direct to Mrs. Dorothy Behrends, 1633 Golden Gate Ave., Los Angeles 26, Calif.

Twenty Years of Breeding Tuberous Begonias

By Frank Reinelt

We present herewith the conclusion of Mr. Reinelt's speech at the National Convention.

The object of good breeding is to select two of the finest members of the multitude, intercross them, raise a large population of children, and again select the two best in the next generation. In this manner advance is fairly rapid. However, if one breeds in close relationship like that one can only inherit, with some improvement, the qualities that were in the parents originally, hardly creating anything new. The finest advances we have made were done by interbreeding superior plants which have been widely separated, each possessing qualities balancing the deficiencies of the other. The crucial point of breeding is the imagination of the breeder and his selective ability to choose the right things when he sees them. With good cultivation one can transform mediocre flowers into very good ones, but in breeding, only the plant that stays good under any condition is the logical parent. If begonias are grown on a single stem, without branching, as is done in Europe for show purposes, they will have magnificient blooms, especially when well groomed, and one would hardly believe that they are the same plant when they are grown under ordinary conditions and branched, as the flower then will often be half the size and of much poorer form. Only exhaustive tests by making numbers of crosses and growing large numbers of seedlings determine the value of each parent for breeding. Advances are often so rapid that the very best new seedlings of one season are completely superseded by another.

We have often propagated individual plants for five years until we had a hundred bulbs or so, and this at a very high cost, only to sell them cheaply, because the breeding had advanced meanwhile, and the new seedlings which we were selling at lower prices were often better than the named varieties we were trying to propagate. Propagation of tuberous begonias, with the exception of the basket type, is very slow, as one can hardly ever make more than half a dozen cuttings a year from a tuber, and these again have to be grown for two seasons before they make a saleable bulb. On the other hand when very fine plants are crossed, often twenty percent of the seedlings are as good or better than the parents, and if one raises a large population, one can select a quantity of fine plants which would otherwise take years to propagate from cuttings.

Of course, the charm of a name has high value. The same plant as a seedling may be worth only a dollar, but if named can be sold easily for five dollars. There are exceptions to every rule. Sometimes in some colors, advances are not as rapid, especially in the cases of white or dark red, which lose their color if interbred with other types.

Methods of cultivation vary with climatic conditions. Production of tubers in America is highly concentrated around Monterey Bay purely because of climatic conditions. We can plant our seedlings outdoors in April and harvest the tubers the end of December, which provides the very long season of growth necessary to form large tubers. Sandy loam is always the best productive land for tubers, the coarser and sandier the better. In heavier soil, tubers may grow better, but there is danger of wetness late in the season when a high percentage will rot unless extremely well drained.

We have used fish meal for years as a feeding medium, but have lately switched to liquid fertilizer applied through the water system in small doses which is giving better results as the plant food can be better balanced according to the necessities of the plants. In the younger stage, the emphasis is on nitrogen to give them a quick start, and later in the season we switch to phosphorus and potash for strength.

Leafmold is used only for potting plants as it is too expensive for outdoors and forms a bushy growth, often with small tubers. In pots, however, it is preferable since it can be used coarse, providing good aeration and drainage for developing the root system.

Tubers are lifted the end of December, when all the growth dies down, are washed of all soil so they will dry quickly in the sun and stored in trays in a cool warehouse. Practically all the bulbs sold in commerce are one year old and will reach a size anywhere from one-fourth inch to four inches in diameter. They are graded in standard sizes, two inch diameter being the top size, as these are best for average growing, forming better plants than the smaller bulbs. In basket begonias larger bulbs are preferable as they will grow more shoots and form larger specimens than the smaller tubers. Seedlings are often more satisfactory for bedding purposes and form larger plants than plants grown from small tubers. They also provide a long season of Turn to next page bloom and more uniform effect, especially in warmer districts. They are at their best in late summer and early autumn when the weather is cooler. Again, for early flowering, tubers are preferable.

As the quality and improvement of begonias has gone on, the popularity has increased in proportion, particularly here on the Pacific coast. Veritably millions of seedlings are grown each year not only by the bulb producers around Monterey Bay, but by great numbers of nurseries all up and down the coast and to some extent in the east.

The demand for seed has forced us to give over five large green houses with thousands of plants entirely to seed production. Our output annually is approximately six ounces of seed, certainly no large amount for such a large outlay and effort. Begonia seed is, of course, very small and one ounce contains approximately two million seeds.

I distinctly remember a letter from an army official during the war asking for quotations on begonia seed by the pound. When we explained to him that it takes twenty acres to accommodate the seedlings from one ounce of seed at a minimum cost of \$2000.00 per ounce, he quickly settled for a few packages.

The reason for the high cost of seed of double begonias is the difficulty in obtaining enough pollen for pollination. As doubleness of the male flower eliminated the male organ entirely, it would seem impossible at a first glance that any seed at all could be produced. However, doubleness, an inherited factor developed entirely by breeding, is the result of all the stamens being changed into petals and can in some cases be reversed by partly starving the plants. Occasionally, the factor for doubleness is so strong that the plants never weaken and produce only double flowers the entire season. In others the double flowers appear only in the beginning of the season and later gradually become semi-double producing stamens with pollen.

The quality of seed is entirely governed by the quality of the parents. If pollen is used from plants that are entirely semi-double, the result will be a high percent of semi-doublesthis way larger amounts of seed are obtained, but with corresponding lower quality. Verv fine plants that give semi-double flowers with pollen only in rare cases either at the very end of the season or by forcing it out with artificial means, crossed on the very best doubles that do not weaken will, of course, give the finest results, almost one hundred percent doubles and of very high quality. Such seed is extremely difficult to produce at staggering cost and the small amount of it we do produce is used only for our own plantings from which the new advances are again selected for further breeding. Parents of such ability are propagated and when available in larger quantity are incorporated into the commercial production of seed. In this manner the quality of the seed slowly climbs up from year to year.

# Our Cover Picture --B. EMMA PALMER

#### By Marie Minter

One of the new begonias seen at the 1950 Begonia Convention was the hairy fibrous exhibited by Mrs. Chet Van Dusen of San Diego, named *B. Emma Palmer*. Mrs. Van Dusen won a first in competition with her plant and the Effie Chapman Cup for the best fibrous in the show.

The original cross has never been recorded, but it seems to be of *B. Scharffi* parentage. It originated in the Palmer gardens and was named in honor of the lady who made the cross.

The plant is a tall grower, sending up many canes. In the ten-inch pot that was exhibited, the plant stood at least three feet tall. Plants that are growing in the ground at Rosecroft gardens have attained a greater height, so this particular begonia would be valuable as a back-ground plant in one's lath house. It is also good as a pot begonia because of its tendency to put out new growth from the bottom, making a well rounded plant at all times.

The whole plant is covered with white, coarse hairs. The leaves are ovate and acuminate, dark green on the upper surface, red flushed beneath. The edges of the leaf are slightly dentate. Veins on the under surface are deep red, almost purple, and prominent. On the upper surface the veins are depressed, giving the leaf surface a cupped appearance between the veins.

The canes are deep red at the base, fading in the newer growth to a light green. Flower and leaf stems are light red.

The flowers are large, white, covered on the back with pink hairs. They appear in large clusters, mostly standing upright but sometimes drooping with weight. Occasionally they have an extra leaf appearing in the inflorescence, much the same as with *B. Neely Gaddis.* Whether this extra leaf is going to be characteristic of the plant cannot be foretold at this particular time but it was observed in the plants growing at Rosecroft this year.

As with all the hairy fibrous begonias, this particular plant stood the test of our recent cold winter weather and should prove to be a very worthy addition to anyone's collection. It is currently being introduced through the Rosecroft gardens.

## NEW ENGLAND BRANCH ACTIVITIES IN 1950

By Bessie R. Buxton

We have had a happy and successful year, which closed October 13th with the annual meeting on the last day of the Harvest Show, in Horticultural Hall, Boston, where our first meeting was held, the previous April. At that time, we saw a fine collection of kodachrome slides of the Logee begonias, including the new semperflorens kinds originated by the late Ernest Kimball Logee.

A report was given of the germination of A.B.S. seeds, the *Philippine species* having the highest percentage, *Richardsiana* almost as high, *nelumbiifolia* not so good. *Griffitbii* germinated well, but has proved difficult to grow.

At the May meeting, after visiting begonia collections of members, we heard an excellent talk on begonias by Mr. John Ellis. He advised against allowing the rex or any begonia with variegated foliage to bloom, as the plants deteriorate after blooming. Better growth is maintained without bloom. When cuttings are desired, cut plants to six inches high, and take cuttings from the resulting new growth. The tall growth is flowering wood and such cuttings make weaker plants. For potting compost, he uses equal parts of loam, leaf mould and sand. Peat does not break down properly in the soil. It is useful only to hold moisture or as a mulch. Charcoal should be added to potting soil to eliminate stagnation. Begonia soil should be acid and moist, but not stagnant, as they damp off easily. Cuttings may be rooted in a 4 inch pot, partly filled with compost and covered with one inch of sand. Insert cuttings in the sand and as roots develop they will strike down into the compost and stronger growth results. Bottom heat of 70° is helpful to stimulate root growth. Seeds may be sown in pans half filled with drainage material covered with a compost of two parts humus, one part loam and one part. Cover with finely sifted sphagnum sand moss and sow seeds on the moss. Cover the pot with glass to aid germination.

Pot begonias lightly. If reporting, be careful not to bruise the fibrous roots as this checks growth. Remove a little of the old soil, which should always be moist before reporting, then set the plant in the center of the larger pot, being careful to keep the crown at least one inch below the edge of the pot. Fill in new compost around the sides of the ball of soil and press down lightly only on the sides, never in the center. Do not overpot as begonias like to fit snugly in the pot. A low temperature gives stunted growth.  $65^{\circ}$  is the lowest that is safe for begonias.

Condensation at night is harmful and will

cause brown leaf edges and spots. Water early

in the day to avoid this. Always use rain water when possible. Do not use very cold water on begonias; it should be at least room temperature.

For fertilizers, he recommended Electra, Eureka or Clay's. Milorganite is rich in nitrogen but needs the addition of potash for best results. Barnyard manure is best, because it is largely humus. Chemicals are too stimulating and too quick growth means a weakened plant. Cotton seed meal is good, but is mostly nitrogen, and this, too, needs the addition of other elements. Another good compost mixture is three parts loam, one part humus and one part manure, with a 3½ inch potful of Electra added to a bushel of soil.

Mite is the worst begonia pest. Spray the plants early in the day, once every ten days, with a nicotine solution. Force must be used to kill these pests. Either use a spray gun, directing the spray down into the leaf axils and terminals, or if dipping the plant, shake it up and down to force the insecticide into all the crevices. Drafts are injurious to begonias and will stunt growth.

The June meeting was in historic Concord, and one of our members instructed us on "Preparing Begonias for Exhibition." Every vestige of algae should be removed from the soil and the pots washed very clean. Stake plants securely with the least amount of stake showing. Use green wire, S.L.N. or similar stakes and keep them out of sight as far as possible. The time to begin to prepare for a Show is one year before the date of it. House grown plants should not be in competition with greenhouse-grown plants.

In July we were privileged to visit two of the beautiful private estates on the North Shore, where we saw beds of tuberous begonias, set in emerald lawns under tall elms, and still finer specimens grown in the sheltered greenhouses. We lunched at the colonial home of our Essex member-little old Essex where they have been building boats since 1682 until the present day. Our meeting was held in the ancient Malt House, built in 1712, and the home, also, was full of olden time treasures. This was an experience meeting. and one member recommended Chlordane sprinkled on potting soil to prevent insects and diseases. Another member showed a fine collection of rex begonias and a neighbor loaned some very handsome specimens grown in her home.

The August meeting was at the Logee greenhouses in Danielson, Conn. The forenoon was spent in the greenhouses, admiring *Turn to next page* 



NEW ENGLAND'S JEWELS Photo by P. E. Genereux, E. Lynn, Mass.

(The displays pictured in the above photo, roughly divided by the curtain cords, were left wall, Logees, next Mrs. P. I. Merry, Mrs. H. H. Buxton, then corner and end—Mrs. Greenlaw; right wall, first half, Mrs. Walter Harding, begonias, second half, succulents, Mrs.

the gorgeous begonias of many kinds. In the afternoon, one of our members gave an excellent talk on the chemistry of soils. She stressed the importance of reading widely on the subject, then discussing freely with other growers, and finally adapting the accumulated knowledge to home conditions. Begonias, she said, have a high lime requirement. Oak leaf mould in New England is very different from oak leaf mould in other parts of the country. Leaf mould from live oaks in California, for instance, differs both in physical and chemical content from ours. Lacking lime in begonia soil, acid accumulates. The soil must be loose and porous to admit the important oxygen.

In September we visited the homes of two of our New Hampshire members. An award of Merit was given some new rex hybrids made by Mr. James H. H. Bodge of Brunswick, Maine, and it was voted to give his name to one of them, a whorled-leaf specimen, (B.*Duke of Windsor x B. Curlycue.*) The seedlings distributed at the April meeting were shown at this time and awards made to the two best specimens, as unlike as black and white, although the seeds were from the same plant. This meeting was devoted to discussion of plans for the Harvest Show in Boston in October. See Branch Reports.

LOOKING FOR BEGONIAS—those new or hard to locate varieties? Mrs. Mary Choate, 3970 Grandview Blvd., Culver City, Calif., has offered to answer inquiries for these elusive plants and tell you where they may be available to the best of her information. AND DON'T FORGET THOSE SEED FUND PACKETS for which you should write to Mrs. E. Carrell, 214 North Yale St., Fullerton, Calif. Carlo Fronda. The center table of specimen plants is fronted by 4 inch pots of Ernest Logee's last semperflorens doubles introductions and behind can be seen *rex 'Peace'* on the right and *B. Templini* on the left.—Mrs. H. H. Buxton.)



#### December Newsletter

Mrs. Carrell's many friends will be sorry to hear of the tragic death of her mother in an automobile accident last month, but she has faithfully sent in the following Seed Fund item despite her trouble.—*Editor.* 

New Begonia seed at 50c per packet:

*B. alto da serra*, a fibrous-rooted plant 3 feet high and bushy. Foliage dark green above, crimson beneath, both sides velvety, flowers white.

B. Cantareira, a rhizomatous plant with velvety leaves, green above, crimson beneath.

*B. luxurians*, cane-stemmed type, grows to 10 feet, leaves 8 inches across, palmately divided into 12-15 leaflets.

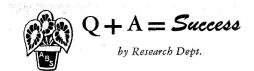
B. macrocarpa, a fibrous-rooted plant, 3 feet high, bushy, stems brown, scurfy, leaves pointed, green above, dull red beneath, African sp.

B. Sureil, from India.

B. Ludwigii.

B. Mazae.

We still have some collections of begonia seeds as listed in the October Begonian. Order now so you will not be disappointed seed going fast. Seed is now packaged and will be mailed out same day as order received. Your skipper, *Florence Carrell*.



Question: How long does it take fern spores to germinate?

Answer: The time varies. I have had some come up in five days time and others which germinated in two years.

Question: Why do some spores off a frond seem to germinate much faster than others off the same frond?

Answer: This is probably due to the fact that some of the spore cases were fully matured while the others were immature in a certain degree.

Question: How can one tell when the spores are ripe for planting?

Answer: Gathering fern spores and planting dates may not coincide. It depends a good deal on the variety which one is trying to propagate by this method. If the fern is known to go dormant during the winter months, the spores can be collected during the late autumn, then sown the following spring. If the fern is of the type that does not go completely dormant, then I believe that the spores may be planted at any time, providing one has the proper facilities for keeping them at a fairly even temperature during the winter months.

It is almost impossible to tell with the naked eye just when the spore cases are fully mature. Examination under a good magnifying glass will usually show when the case starts to open to discharge the spores. In the case of some ferns where the cases are so close together that it is difficult to determine which are ripe, the best thing to do is shake the frond over some white paper. The resulting dust is your fern spores.

In gathering fern spores, try to get leaves that are fully matured and show signs of ripening. Usually the base of the leaf will have the fully matured spores while the tip will contain those that are not fully ripe.

Question: What method do you use for planting fern spores?

Answer: I use the jar method for everything, preferably jars with tight-fitting lids. Good success may be obtained using other methods such as flats with glass over the top, etc., but due to the uncertainty of the time it will take any given fern to germinate, I have found the jars most satisfactory. Growing ferns from spores requires an awful lot of patience if one is bound and determined to have some of the rarer varieties, and small jars don't take up as much space as flats.

I put some crushed rock in the bottom of the jar, fill the jar three-quarters full of very damp peat moss, sow the spores on top, put on the lid and let nature take its course. In the experiments which I have conducted with such fern spores as I have been able to get through our Seed Fund, I find that peat moss does not break down quite as fast as other materials. When the jars are filled quite full, they can sit for a long time before the material disintegrates. Some jars which have been on for two years still have an inch of material in the bottom of the jar.

Question: Is it necessary to have heat to germinate spores?

Answer: No, but I believe that better success can be had if the spores are kept in more or less of an even temperature. Good success has been had by people having no facilities for keeping the jars warm, but where one is uncertain about the perticular fern you are trying to raise, then I believe that controlled conditions are more favorable.

Question: May ferns be grown in a nutrient solution?

Answer: Yes, any nutrient solution such as is used for germinating orchid seed may be used.

Question: How do I know my ferns have germinated?

Answer: Most ferns come up in the moss stage first except some varieties of *Polypodium* and they have tiny flat leaves. It isn't very long after you notice the green moss stage, that the prothallus takes shape. This is usually a round disk-like shape about a quarter of an inch in diameter.

Question: How soon do I transplant ferns? Answer: Unless you are experienced I would advise leaving the ferns alone until they are quite good sized before moving them for the first time.

Question: May the small prothallus be transplanted at any time?

Answer: I wouldn't advise it as a general practice. Sometimes spores germinate on the sides of the jar, or even on the sides of a pot. These may be lifted off, being sure to keep them right side up, and placed on the soil mixture. There are tiny roots on the under surface of the prothallus that can hardly be seen with the naked eye.

Question: When is the earliest time one may transplant ferns?

Answer: People who are experienced working with ferns usually start blocking out their ferns when the first true fern leaf appears. Use a fine steel knitting needle to cut the prothallium in fine squares, place in small pots with soil mixture of  $\frac{1}{2}$  peat or leaf mold,  $\frac{1}{4}$ sand and  $\frac{1}{4}$  well-rotted cow manure. When these begin to show their second leaf, divide again, and as each frond appears, keep dividing until you have single plants. Pack the pots Turn to page 265

Beginners' Corner

## USE OF LIQUID FERTILIZERS

By Cal Wellington, Westchester, Calif.

Years ago, nurservmen and others interested in plant growth felt the need for a more practical and efficient method of fertilization than the common manures and composts in use at that time. To satisfy their need, they devised methods of soaking manures and other organic matter and using the water therefrom as a liquid manure. The liquid fertilizers of today, however, are a far cry from the crude methods of the pioneers in this field. With the advent of chemical fertilizers, it became a simple matter to dissolve chemical salts in water and produce almost any desired formula, then to dilute it with still more water until the desired concentration was obtained.

There are many advantages in this method of fertilization. Application is quick and easy. Burning of plants due to heavy concentration is easily avoidable. Waste due to rotting of bags in storage is impossible and the handling of heavy and bulky bags to get a few pounds of plant nutrients is no longer necessary.

One of the chief advantages is that the fertilizer is put on with the water, therefore it must go where the water goes, thus encouraging deeper root action. Care should be taken, however, not to fertilize a plant that is dry.

Another advantage is that most liquid fertilizers are quite acid in reaction, thus they tend to combat the high alkalinity of most western soils and waters. This is particularly true of the organic liquids.

For many years, chemical liquid fertilizers have been available to the home owner and small scale gardener in a wide variety of formulas under various trade names and brands. In more recent years, thanks to the efforts of bio-chemists and others interested in better plant growth, organic fertilizers in liquid form have become available. One of the chief differences between organic and chemical liquid fertilizers is the source of nitrogen, that vital element of plant growth which is most commonly deficient in soils and which all plants require in greater amounts than other nutrient elements. Sources of nitrogen in chemical liquid fertilizers ar eusually either nitrates, ammonia, or urea, the 'synthetic organic.' Sources or organic nitrogen in liquid fertilizers are usually peptones, ammino acids, or other natural organic materials. In the soil, chemical nitrogen leaches out much quicker than do the organic forms. In the plant, over-use of chemical nitrogen tends to force abnormally fast growth, causing the plant to become soft and spindly, therefore more easily damaged by extremes of either heat or cold.

In applying liquid fertilizers, it is important to follow the manufacturer's directions. Usually one ounce of concentrate will make a gallon of solution. Where just a few plants are to be fed, a bucket or sprinkling can is usually satisfactory. For use on lawns, flower beds, or larger areas, there are several types of appliers on the market. Some are very good, others not so good. By their nature, organic liquids are bound to be of heavier viscosity than chemical liquids, so in purchasing an applier it is well to select one that will handle all types of liquid fertilizers.

#### GENERAL REMINDERS

Nature is wise. During the fall the leaves are shed to protect tender plants against winter cold. Fresh autumn leaves are excellent protection for begonias. Their surface rhizomes and green canes are sheltered against frost. Because new fallen leaves are coarse, there is plenty of room for air circulation about the crown of plants to prevent molds and rot from destroying tissue. This danger exists in using screened leaf mold and composts. They maintain a soggy moisture condition because of lack of aeration.

This system of winter protection applies also to potted begonias. Open lath structures are difficult to heat. Therefore, plunge the pots to ground level and throw about six inches of sycamore, maple, oak, or other leaves over the beds.

Shavings from lumber mills are a useful and inexpensive substitute for leaves. Because shavings take longer to decompose, the plants will require more nitrogen fertilizer than normal until the shavings are humus. The addition of Humisite or some other bacteria inoculant will hasten the rotting of shavings or leaves.

Begonias will lose their foliage anyway from prolonged cool weather or a couple of light frosts. However, the object is to prevent the crown and rhizome from freezing. Keep the beds moist and place pans of water every six feet to give further aid against frost.

The above hints only apply to certain mild portions of California and other places where the ground does not stay frozen hard. Therefore, most begonia growers have to house their plants in warm shelters over the winter.

Begonias are stimulated into growth by heat and light. Moisture and food are relative. In the case of winter culture the days are shorter and the temperatures lower. Plants out-ofdoors require very little water and nutrients. Indoors growth can be maintained by adequate light and temperatures of 65 degrees and up.

# Two Gentlewomen of Verona

By Mrs. Alice Willcox, Verona, New Jersey



Mrs. G. M. Bradbury and Mrs. Alice Willcox and their exhibit in the Verona Garden Club Fall Show.

#### Courtesy of Mrs. Alice Willcox

Mrs. G. M. Bradbury and I entered the above pictured exhibit at our local show held September 20th in the Verona Presbyterian Church.

Streamers from the map of the world at the back led to begonias which originated in each and those begonia countries for which we had no plant were starred.

Begonias exhibited were:

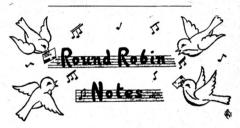
From Brazil: metallica, Scharffi, venosa, semperflorens, compta; from Colombia: foliosa; from Mexico: fuchsioides, heracleifolia Sunderbruchi, manicata aureo-maculata, hydrocotylifolia, imperialis, Feasti, peltata, Bunchi; from Natal: Richardsiana and d. weltoniensis; from China: cathayana; from Bolivia: tuberosa multiflora; from Costa Rica: erythrophylla helix; from Jamaica: nitida; from India: ulmifolia and rex-cultorum "Faery"; from Dominica: unnamed seedling; from Malaya & Brazil: Helen W. King, argentea guttata and lucerna.

On the right-hand table were specimen plants of Helen W. King, Medora, maculata rubra, President Gaulin and maculata alba (cane-stemmed); Nelly Bly and Scharffi (hirsute); erythrophylla helix and Mrs. Townsend (rhizomatous); indian maid and pink camellia (semperflorens); fireflush, vesuvius and nigger tree (rex); tuberhybrida gorgeous and pendula Lloydi; and Limminghei (glaucophylla scandens) (trailing type).

On the left-hand table were soil mixtures and methods of propagation. In a fish tank wedges of *ricinifolia* leaves and terminal branches of *semperflorens* and *maculata rubra* were rooted in sand and vermiculite. In a clay pot of sand whole leaves of *ricinifolia* were sprouting from the leaf stalk and a *rex*  leaf was sprouting both from the leaf stalk and a cut vein. Terminal branches of *lucerna*, *Thurstoni* and *maculata rosea* were rooted in water. Proper proportions of soil, sand, leafmold, and manure for potting were displayed in jars along with bonemeal, charcoal and iron rust and signs suggesting best day and night temperatures.

Begonia literature on display consisted of pictures of blooms of tuberous varieties, copies of The Begonian, and Begonias for American Homes and Gardens by Helen K. Krauss and Begonias and How to Grow Them by Bessie Raymond Buxton.

(Mrs. Willcox is a very new member of our Society and she and Mrs. Bradbury put on this intelligently staged exhibit entirely from their own resources, as the Elsa Fort New Jersey Branch is many miles away.—Ed.)



Mrs. Barton, Flint, Michigan—Finds "differences of elevation, in light rays and areas of circulatory degrees in the same room bring different responses from my begonias." — "Southern light burns leaves of *calla Begonia* or turns them red on the edges."

Mrs. Kartack, Wisconsin — *Begonia Rossi* grows very prolific and find it the best of the rubras for self-branching, always making a shapely plant." Finds that "*Elaine* is a slow grower."

Mrs. Perry, Brier Hill, Pa.—"In the spring I root my rhizomatous begonias by setting the pot in the ground so that the end of the rhizome comes in contact with the soil, it will root and can be cut off and potted. In late summer the plants can be cut back and they will send up new shoots. The cuttings are then divided into inch-long pieces and covered with sand in the propagating pan, where each will form a new plant." — "Plastic covers placed on 7 inch bulb pans make good miniature greenhouses for starting leaves or coddling any of your delicate plants—if, you watch the ventilation."

Mrs. Kline, Mt. Kisco, N. Y.—"Most species of begonias show a decided rest period, *Turn to page 267* 

## FIRST BRANCH IN STATE OF KANSAS JOINS A.B.S. FAMILY

The "Heart of America Branch," first Branch Society in the State of Kansas, was organized through the efforts of Mrs. Beatrice Turner, a former member of the Missouri Branch, who realized that the begonia growers of Kansas City, Kansas, were in need of an organized group so that many rather than a few could enjoy the benefits offered by the A.B.S. through Branch affiliation.

On August 24th a group met at the home of Mrs. Turner; only six of the nine members were able to attend. The name of the Branch was decided upon and the Constitution and By-laws drawn up and adopted. A President and Secretary-Treasurer were elected. Missouri Branch sent a Representative to help in the organizing.

A second meeting was called for September 5th and Mrs. Turner writes: "We elected a Vice-President and decided that we should meet at the homes of members, alphabetically, so that each might be given a chance to show his begonias. Mrs. Leora Calmese, an ardent begonia grower and collector, and an active member in the Missouri Branch was the guest speaker. After a very interesting talk on Begonias, Mrs. Calmese presented each member of the new Branch with a choice begonia cutting. Two other members of the Missouri Branch were visitors."

Already the Branch has shown an increase in membership and thirteen attended the regular meeting held October 10th. Mrs. Turner reports: "We are very fortunate to have the Botany teacher of the Wyandotte High School as a member and he has offered to help us in 'Soil Construction.' . . . I read a paper prepared by my son during his Botany course last year. Mrs. Bessie Buxton's book, "Begonias and How to Grow them," had been used as reference. We are about the most enthusiastic bunch you ever heard of."

The following are the Branch officers: President, Mrs. Beatrice Turner; Vice-Pres., Mrs. George Knouff; Sec'y-Treas., Mr. Homer Meek; National Representative—to be elected at a later date.

The Heart of America Branch was voted upon and accepted at the Annual Meeting of the American Begonia Society held in Inglewood, California, September 2nd.

The A.B.S. extends a hearty welcome and best wishes to our first Branch in Kansas and may your enthusiasm in Branch work continue.

> Louise Schwerdtfeger, Director of Public Relations.

"BUY BEGONIAN"

## **BRANCH NEWS**

EAST BAY: Our October program consisted of "Slides of Norway," taken by one of our members, Mr. Evan Berg, this summer while on a trip to Europe. Mrs. Berg and Mrs. A. F. Munson had a display of fine treasures brought back from Norway and Sweden. Martin L. Boyd gave a short talk on "Tuberous Begonias This Time of Year." Fuchsia slides, the featured flower of the meeting, were shown with commentary by John Paul Edwards. Decorations were fuchsias with one table of new varieties arranged by Mr. and Mrs. C. T. Lehew. Mrs. W. L. Stockinger also made a lovely arrangement of Fuchsia Seventeen.— *C. F. Jensen.* 

FOOTHILL: Election of officers and other important matters will come up at our December meeting and it's hoped all members will make it a point to attend this important session. Speaker for the evening in November was Mr. Charles Kline of Chuck's Nursery, Covina, discussing possible bedding plants for spring color, various perennials and biennials usable, and shrubs for background and color. Several plants under discussion were later donated by him for the plant sale.— Edwin O. Williams.

FORT: In September I was privileged to entertain our branch. A paper on the Evansiana Begonia prepared by Mrs. Rachel Hardy was read by Mrs. Lucia Jackson, after which we discussed its characteristics and studied plants on display. President Essie Morris assigned *Scharffiana*, *Dregei*, and *Lacerna* begonias to us for study and to learn the correct spelling for the next meeting.

In October we held another tour of the woods, collecting various mosses, wintergreen with its beautiful red berries, small cedars and fall leaves for our interior decorations. After visiting two charming woodland glades we started in search of another and proceeded to become very entertainingly lost. Upon rediscovering civilization we returned to the home of Miss Lola Price where we recuperated over delicious hot vegetable soup.

November found us at the home of Miss Harlene White, who served a delightful repast, after which we discussed the begonia assignment and studied those on display followed by a business meeting and welcoming of new members, then exchange of names for our Christmas Party to be held at the home of Mrs. Elsa Fort, December 16th. — Arianna Paynter.

GLENDALE: Will have the pleasure, December 27th, of hearing Dr. Samuel Ayres on "A Horticultural Holiday in Australia and New Zealand" from whence he has recently returned with some magnificent pictures. The public is very welcome to share this treat.— Violet A. Moore.

MIAMI: October 24th we held a Begonia Show open to the public and judged by accredited judges, awarding 1st, 2nd, 3rd, and honorable mention prizes. Many pleased visitors congratulated us on putting on such a show so soon after the disastrous hurricane.— *Mrs. A. E. Sackett* 

MISSOURI: Our October meeting is our only all-day affair-a covered dish lunch with Hattie Taylor of Raytown, about 10 miles from Kansas City. She's a wonderful hostess and has a lovely outside garden as well as enclosed west porch for her begonias. She uses two fluorescent lights to help her plants on Our beloved President Polly cloudy days. Cooper has moved to Houston, Texas. How we miss her. Lucille Taylor, Second Vicepresident, conducted the business meeting, at which we passed a resolution to charge \$1.00 local dues. Our plant sale included cuttings of the wood rose grown by Mrs. O'Day.

We had a non-competitive display at the Independence, Mo., Garden Club's show October 14th under the direction of Mrs. Taylor and Mrs. Hester which was very lovely but which I missed as I was visiting the St. Louis Botanical Gardens, etc., (only seeing about 7 begonias, however). Mrs. Arnold of Santa Barbara visited the show. We have also had visits from Mrs. Jessie Bergesen of Chicago and Mrs. Ethel Breur of Atlantic, Iowa. We would like to issue an invitation to any begonia lover anywhere in the U.S.A. to visit us; if not at a regular meeting time, a quick gettogether will be planned.—Leora Calmese.

NEW ENGLAND: In conjunction with the Mass. Horticultural Society, we again played host to the Harvest Show in Horticultural Hall during October. We were in sole charge of the house plant division which was held in a separate room where they could show to best advantage. Plans under way for many months came under the capable chairmanship of the George Greenlaws of Lexington, who filled the position heretofore held by the late beloved Ernest Logee. Thanks to the Greenlaws we again held our top billing. Enough cannot be said for their efforts.

As before the plants were divided into a number of classes including 50 sq. ft. begonias, 100 sq. ft. flowering and foliage, 25 sq. ft. of the same and 50 sq. ft. of foliage alone also special classes. The Merrys of Needham; Logees of Danielson, Conn.; Mrs. Charles Haddrell, Marblehead; Mrs. Ester Fronda, Ashland; Greenlaws, Lexington; William Starr, Southbridge; Mrs. Arthur Farnham, Andover; and your reporter were prize-winners.

The attendance for the three days, despite rain, far exceeded last year, and the interest shown in Begonias particularly brought the A.B.S. several new members.

On the last day the annual meeting was held and the following officers were re-elected unanimously for 1951—Mrs. Lester Fox, Dracut, Mass., president; Mrs. Arthur Farnham, North Andover, Mass., vice-president; Mrs. Bessie Buxton, Peabody, Mass., secretary; Mr. William Atherton, Wakefield, Mass., treasurer.

We hope from time to time to bring to the attention of Begonians that, although we are far from sunny California, we are having our successes in this cold spot.—Mrs. Walter Harding. (Superb!—Editor.)

PHILABEGONIA: Met at the home of Mrs. Helen Krauss, Wynnewood, Pa., October 13th. After a brief business meeting Mrs. Elsa Fort, president, passed around the flower-pot of begonia seedlings (seeds of which had been sent from Africa by Mrs. Krauss last February) showing good growth. The highlight of the meeting was the showing of colored slides by Mrs. Krauss of pictures taken by her and her husband on their around-the-world tour last winter. Wherever possible and when weather permitted she had made it a point to get pictures of native flowers in bloom out-of-doors. Her descriptions and comments held us spellbound for more than an hour. There were colorful pictures of the Kirstenbosch Botanical Gardens in South Africa; Rome and Florence, Italy; Nice, Paris, Monte Carlo and the Riviera, Lisbon, London; George Washington's ancestral home-Sulgrave Manor-as well as Ann Hathaway's and Shakespeare's homes in England. Truly a most enjoyable afternoon. -Mrs. Charles C. Keeler.

SACRAMENTO: Meeting of October 17 was one of our most outstanding to date. We were most fortunate to have as our special guest the president of the American Begonia Society, Frank S. Moore and his wife, Violet. Mr. Moore gave us an interesting outline of the activities of the national society and closed with inspirational lines of poetry.

The speaker of the evening was Mr. Robert Saxe of San Francisco, who told us how to have "Fun In Gardening." His priceless wit and spontaneous humor kept his audience laughing from beginning to end of his talk.

He divided gardens into the formal and informal categories, with the Versailles palace gardens as a perfect example of the formal, and Golden Gate Park of the informal. Remarking that the garden was an outdoor living room, he said that what constituted good taste indoors also applied outside the walls. Among the spiritual aspects of gardening, he mentioned the virtues of long-suffering, patience and tolerance. The constant battle with insects, dogs and other humans develops long suffering, he maintained, while patience and tolerance were "musts" for all gardeners. The true gardener, he said, looks forward to the garden of tomorrow, forgetting the disappointments and failures of his past efforts. He plants bulbs in the fall knowing they will bring joy in the spring whether he is there to enjoy them or not.

He himself is an "Alpine" gardener, and brought along some dozen and a half of the dwarf trees that are his hobby. They included cypress, spruce, pine and juniper, none more than one foot tall, and all from ten to twentyfive years old. Each was a perfect specimen. His instruction on cultivating the plants were very simple. The trees are kept in small pots, mostly four-inch. The soil is changed every two years and the plants returned to the same pots. Some of his trees were sent from England, and he dug up others himself in the High Sierras.

He is also interested in hybridization, and is now working on new varieties of primula.

"There is no greater joy to the gardener than to know that God and he have given something new to the gardens of the world." He said that gardens were increasingly an escape from the cares of the world, and becoming more and more necessary to everyone in these particularly troubled times.

Merry Christmas and a Happy New Year to all from Sacramento Branch.—Ruthanne Williams.

SAN FRANCISCO: In October we welcomed our National President and his very lovely wife, Mr. and Mrs. Frank S. Moore. While our gardens were not at their best, we hurriedly planned a small tour of our best, inasmuch as they were unable to attend our meeting. At that time we welcomed Mr. and Mrs. Small, National Director, in our first meeting in our new hall, and hope more of you will come to see us soon.

Billie Allyn, our "Get Acquainted" chairman, deserves our very sincere thanks for a job well done. During her term she has worked hard at getting members together. On November 4th she arranged a very gracious dinner at the Del Mar Restaurant and all attending had a perfect evening. Many thanks, Billie, and let's hope these informal get-togethers continue.

Our very talented Mrs. Roth addressed our last meeting demonstrating clever Christmas gift wrapping ideas. We all wish to extend to each and every one our hearty wishes for a very Merry Christmas and a Happy New Year. —Paulyne A. Meyer.

SAN GABRIEL: October meeting was a real California pit barbecue at which we entertained our National President, Mr. Frank Moore, and President-elect Calvin Trowbridge and many, many members and friends. Later Mr. Neil Campbell entertained with his slides and witty talk on Holland and tulips. We will have another fine program in December to which you are all invited. We wish to extend to all National Officers and all members of the A.B.S. a Merry Christmas and Prosperous New Year. May our Society grow and GROW and G-R-O-W! — Clarence W. Johnston.

SANTA MONICA: Featuring plants grown by its members from seed, leaf or stem, we combined with the African Violet Society to stage our first show at the Brentwood Mart Sept. 30th-Oct. 1st. Non-competitive, with Gordon Baker Lloyd as M. C. in the patio and Aleen demonstrating corsage-making, and with gay costume dances staged by Mr. and Mrs. Edward Lebac during dinner and merchant-donated prizes awarded to many of the 500 guests, it was a great success. Outstanding rexes of Mr. and Mrs. Jack MacLanahan lined walls above cane and fibrous begonias. Ferns grown by Mr. and Mrs. Jasper Long filled large baskets and, with philodendron from Mary's Garden, made a bower of green at one end. Gloxinias and many other shade plants were displayed. Huge baskets of cut dahlias donated by Mr. Bert Slatter of Inglewood added brilliant color among holiday flower arrangements and nursery and florist displays. Sylvia Leatherman of El Monte displayed ferns and begonias and lectured on their care. Outside, the roof garden held a tiny lath house filled with tuberous begonias and fuchsias and an ivy-draped rustic well was surrounded by shade plants of all kinds faced on the sunny side by a simulated desert with fine cacti and succulents. Mrs. J. R. Hall, Chairman, did a wonderful job with the brawny and brainy aid of her grand committee.

TEXAS: Our members gathered up armloads of potted plants, hammers, nails, etc., and rushed off to the South Texas State Fair to enter our first exhibit. We arranged, rearranged, argued, and just had a grend old time. Our allotted space was an 8 ft. by 16 ft. lath house. We centered the view of interest on a Chinese garden which was built on a table draped in black and trimmed with gold ribbon, a vase of yellow mums and dahlias on each side of a Chinese scroll hung at the back and draped with a fish net. On black cloth-covered banked benches all around the booth we displayed a large variety of shade plants with hanging baskets on the walls. We clustered our rex begonias and African violets with ivy growing on driftwood in Spanish moss was used overhead and front. between plants. The Fair was held October 19th to 28th at Beaumont, Texas, and 215,-970 patrons passed in front of the garden dis-

264

plays, and we heard many times the words "Ah, Begonias!" This was the first Begonia exhibit to be shown in this vicinity and aroused much interest and many compliments.



Photo courtesy of E. Weaver

We gathered a lot of valuable information on our display. One thing was that our plants stood the ten-day test inside a dry building with temperatures ranging from 70 to 80 degrees. Members are proving that Begonias can be grown here in the Southwest. We have carried our plants through the summer with our bright hot sun and temperatures up to as high as 100 degrees.

NOW, TO ALL YOU A.B.S. MEMBERS HERE IN TEXAS: We feel awfully small down here in big ole Texas. How about a neighbor Branch? Good wishes to all A.B.S. members.—E. Weaver.

WHITTIER: Elected the following officers for the new year: President, Mrs. Edith Humistan; Vice-president, Mr. C. L. Chapman; Secretary, Mrs. Gretchen Bauchop; Treasurer, Mrs. Heide Hackler; Representative, Mrs. Lysle Hackler.—Gretchen Bauchop.

#### QUESTION-ANSWER, cont. from page 259

in a bed of peat moss in order to keep plants damp all the time. Over the tiny pots place a pane of glass or use a jar. This is kept over them until the ferns have about five tiny leaves, then it is removed.

Question: Is there any critical stage in the development of a fern?

Answer: Yes. When the prothalli have formed, they contain the sperm and egg and these must be brought together by moisture. One should never let the surface dry out in this stage. You usually have enough water in the jars under controlled conditions, if the lid has a fine mist on it. You do not want the prothallus floating in water but you must have enough moisture to assure fertilization.

Question: What soil mixture seems suitable for the average fern?

Answer: I believe a soil which is neither acid nor alkaline is the best to start out with.

Some ferns are natural acid lovers while others favor the other extreme. One must experiment to find the suitable medium. If a fern isn't doing too well, then the soil content must be changed in some way, usually on the alkaline side.

Question: Can you give me some cultural hints on growing ferns in the house?

Answer: Ferns love moisture, especially in the air. In a dry air the ferns should be watered frequently and about every other day spray the foliage with a fine mist spray. You can also set the ferns on a saucer or tray filled with pebbles, keeping enough moisture in the pebbles to assure evaporation around your ferns.

Question: What is the difference between Cibotium Barometz and Cibotium Schiedei?

Answer: Cibotium Barometz frond resembles the Cibotium Schiedei but the growth is different as well as the color. The Barometz is more stiff and upright where the Scheidei droops and is more delicate and lighter green.

Question: How can I grow Selaginellas successfully?

Answer: They have to be kept quite moist but not soggy, in quite a bit of shade. Some forms of these Club Mosses are very suitable for growing in the house in brandy snifters.

Question: What are some good house ferns?

Answer: Davallia canariensis or rabbit's foot fern, holly fern—Crytomium falcatum, Nephrolepis or Boston fern and its varieties, and Pteris ferns of all kinds seem to do well in the house.

Question: What are these long green strings hanging from my Boston fern?

Answer: These are runners. By pegging them down into small pots filled with suitable soil, they will take root and form new plants.

Question: Does it do any harm to remove them from the plant?

Answer: Not in the least.

Question: When is the best time to repot and divide ferns?

Answer: Usually in the spring when new growth starts from the bottom. They may be divided any time they are in active growth and this may be determined by the new growth.

Question: When is the best time to repot a Staghorn fern?

Answer: January and February are considered the best months. It is a slow ticklish job. Every day loosen the barren fronds a little at a time. When fern is loose, remove from the basket. The roots are very fine. Repot immediately and fasten barren fronds to new basket by wrapping raffia around the fronds. Do not remove raffia until the fronds are fas-

Turn to page 267

## **Branch Meeting Dates and Places**

BELLFLOWER BRANCH Ist Monday, Dec. 4, 7:30 p.m. I.O.O.F. Hall, Ardmore and Palm Sts. Mrs. Mildred Marshall, Secretary 8733 East Flower St., Bellflower, Calif. EAST BAY BRANCH 2nd Thursday, Dec. 14, 7:45 p.m. Willard School, Ward Street C. F. Jensen, Sec. 3720 Cerrito Ave., Richmond, Calif. EL MONTE COMMUNITY BRANCH 3rd Thursday, Dec. 21, 8:00 p.m. Christian Ch. Fellowship Hall, 304 E. Valley Mrs. Mary Bradley, Cor. Sec. 701 Asher St., El Monte, Calif. FOOTHILL BRANCH Jast Friday, Dec. I, Jan 5, 8:00 p.m. Woman's Club House, 1003 Azusa Ave., Azusa Mrs. Mabel Goheen, Secretary 360 W. Sierra Madre Ave., Glendora, Calif. FORT, ELSA BRANCH 1st Saturday, Dec. 16 Mrs. Marion R. Thompson, Secretary 129 White Horse Pike, Magnolia, N. J. GLENDALE BRANCH 4th Wednesday, Dec. 27, 8:00 p.m. Tuesday Afternoon Club, 400 N. Central Ave. Mrs. D. H. Bradley, Secretary 1432 E. Wilson, Glendale 6, Calif. GRAY, EVA KENWORTHY BRANCH 3rd Monday, Dec. 18, 7:30 p.m. Community House, LaJolla Tillie Genter, Corres. Secy. 7356 Eads St., LaJolla, Calif. GRUENBAUM, MARGARET BRANCH 4th Tuesday, Dec. 26, 10:30 a.m. Home of Members Box Lunch 12:30, Program following Mrs. Ernest Jones, Sec. R.F.D., Willow Grove, Pa. HEART OF AMERICA 2nd Tuesday, Dec. 12, 7:30 p.m. Members' Residences Mr. Homer Meek, Secy-Treas. 1306 N. 28th, Kansas City, Kans. HOLLYWOOD BRANCH 2nd Thursday, Dec. 14, 7:00 p.m. Plummer Park, 7377 Santa Monica Blvd. Mrs. Walter J. Butt, Cor. Secy. 861 So. Harvard, Los Angeles 5, Calif. HUB CITY BRANCH Srd Monday, Dec. 18, 7:30 p.m. Roosevelt High School Cafe 1200 E. Olive, Compton, Calif. Mrs. Mildred Ogden, Secy. 114 East Olive St., Compton 3, Calif. HUMBOLDT COUNTY BRANCH 2nd Monday, Dec. 11, 8:00 p.m. Los Amigos Club, Loleta, Calif. Miss Margaret Smith P. O. Box 635, Ferndale, Calif. INGLEWOOD BRANCH 2nd Thursday, Dec. 14, 8:00 p.m. 325 No. Hillcrest, Inglewood, Calif. Mrs. Minna Slatter, Secy. 4600 6th Ave., Los Angeles, Calif. LA MESA BRANCH 2nd Monday, Dec. 11, 8:00 p.m. Porter Park Mrs. G. W. McManus Rt. 1, Box 1070, La Mesa, Calif. LONG BEACH PARENT CHAPTER 3rd Tuesday, Dec. 19, 7:30 p.m. 2255 Elm St., Long Beach, Calif. Mrs. Mary Congdon, Treas. 1500 East 4th St., Long Beach, Calif. MIAMI, FLORIDA BRANCH 4th Tuesday, Dec. 26, 8:00 p.m. Simpson Memorial Garden Center Miss Elizabeth S. Hall, Sec. 2572 Trapp Ave., Miami 35, Fla. MISSOURI BRANCH 4th Tuesday, Dec. 26, 8:00 p.m. Member's Residence Mrs. Ruth Edwards, Sec. 2539 Holmes, Kansas City, Mo. 266

NEW ENGLAND BRANCH Mrs. H. H. Buxton, Sec. 114 Central St., Peabody, Mass. NEW YORK SUBURBAN BRANCH Sec.-Treas.: Mrs. Dorothy F. Michaelson P. O. Box 818, Denville, N. J. NORTH LONG BEACH BRANCH 2nd Monday, Dec. 11, 7:30 p.m. Houghton Park Club House Harding & Atlantic, No. Long Beach F. John Nachbor, Secy. 6217 Butler Ave., Long Beach 5, Calif. ORANGE COUNTY BRANCH Ist Thursday, Dec. 7, Jan. 4, 7:30 p.m. Farm Bureau Hall, 353 So. Main St., Orange Sec.-Treas., Mrs. W. L. Everett, R. 2, Box 146 Orange, Calif. PASADENA BRANCH A DADEINA DRANCH 3rd Monday, Dec. 18, 7:30 p.m. Casita del Arroya, 177 S. Arroyo Blvd., Pasa. J. F. Thompson, Sec.-Treas. 739 No. Wilson, Pasadena 6, Calif. PETALUMA BRANCH 3rd Friday, Dac. 15, 8:00 p.m. McKinley Rec. Center, Washington & Vallejo Sts. J. Earl Wilson, Secretary 111 Hill Blvd., Petaluma, Calif. PHILOBEGONIA BRANCH Mrs. Liilian Watts, Sec. 405 Cotswald Lane, Wynnwood, Pa. 4th Friday, Dec. 22, 8:00 p.m. Community Hall, 1620 Pier Avenue Redondo Beach, Calif. Mrs. Arline Stoddard, Sec. 522 So. Guadalupe Ave. Redondo Beach, Calif. RIVERSIDE BRANCH 2nd Wednesday, Dec. 13, 8:00 p.m. Member's Residence Mrs. Zena L. Twomley, Sec. 7154 Magnolia Ave., Riverside, Calif. ROBINSON, ALFRED D. BRANCH
4th Tuesday, Dec. 26 8:00 p.m.
3030 Homer Street, San Diego 6, Calif.
Mrs. Edyth Sherwood, c/o Mrs. Leta Wescott
1767 Sunset Cliffs Blvd., San Diego 7, Calif. SACRAMENTO BRANCH 3rd Tuesday, Dec. 19, 8:00 p.m. Garden Center, McKinley Park Mr. J. C. Roberts, Secretary 293 40th St., Sacramento, Calif. SALEM. OREGON BRANCH 1st Thursday, Dec. 7, Jan. 4, 7:30 p.m. Salem Y.M.C.A. Mrs. Dan Scharf, Secretary 2750 Lancaster Dr., Salem, Oregon SAN DIEGO BRANCH 4th Tuesday, Dec. 26 Lions' Club, 3927 Utah St. Mrs. D. M. McDaniel, Sec. 1059 Meade Ave., San Diego 3, Calif. 1059 Meade Ave., San Diego 8, Calif.
SAN FERNANDO VALLEY BRANCH
2nd Monday, Dec. 11, 7:30 p.m.
Garden Center, 11134 Weddington, No. Hllywd.
Mrs. Nel Schoenbrom, Secretary
7961 Balboa Blvd., Van Nuys, Calif.
SAN FRANCISCO BRANCH
1st Wednesday, Dec. 6, Jan. 3, 7:30 p.m.
603 Taraval St.
Sec., Mrs. Wm. Meyer
1422 27th Ave., San Francisco 22, Calif.
SAN GABRIEL VALLEY BRANCH
4th Wednesday, Dec. 27, 8:00 p.m.
Masonic Temple, 506 S. Santa Anita Av., Arcadia
Mrs. Dorothy deHart, Sec.
509 So. Rosemead Blvd., San Gabriel, Calif. 509 So. Rosemead Blvd., San Gabriel, Calif. SANTA BARBARA BRANCH 2nd Thursday, Dec. 14, 7:30 p.m. Rm. 5, Com. Center, 914 Santa Barbara St. Santa Barbara, California Roy G. Pierce, Secy. 914 Olive St., Santa Barbara, Calif. SANTA MONICA BAY BRANCH 1st Wednesday, Dec. 6, Jan. 3, 7:30 p.m. 225 - 26th St. (upstairs), Santa Monica, Calif. Mrs. J. R. Hall, Secretary 933 17th St., Santa Monica, Calif. See next 6 See next page

200

SANTA PAULA BRANCH 4th Thursday, Dec. 28, 6:30 p.m. Steckel Park Mrs. Beryl Ernsberger, 621 Santa Paula St. Santa Paula, California SEATTLE BRANCH 3rd Tuesday, Dec. 19 Member's Homes Mrs. Thomas Myers, Secy. 6057–31, N. E., Seattle 5, Washington SHEPHERD, THEODOSIA BURR BRANCH 1st Tuesday, Dec. 5, Jan. 2, 7:30 p.m. Alice Bartlett C. H., 902 E. Main, Ventura, Calif. Alice Bartlett C. H., 902 E. Main, Ventura, Cali Mr. Robert Renshaw, Seey. 560 So. Coronado, Ventura, Calif. SO. ALAMEDA CO. BRANCH 3rd Thursday, Dec. 21, 8:00 p.m. Faculty Cafeteria, High School, Hayward, Calif. Mrs. Harvey Manning, Cor. Seey. 21455 E. 14th St., Hayward, Claif. SOUTHGATE BRANCH 4th Tuesday, Dec. 26, 7:30 p.m. South Gate Municipal Auditorium South Gate Municipal Auditorium Mr. Ray Venable, Seey. 8624 Garden View Ave., Southgate, Calif. **TEXAS STATE BRANCH** 4th Friday, Dec. 22 Mr. E. Weaver, Fres. 1325 Thomas Blvd., Port Arthur, Texas WESTERN PENNSYLVANIA BRANCH 2nd Tuesday, Dec. 12, 11:00 a.m. Phitps Conservatory, Schenley Park, Pittshurd, Pa Pittsbugh, Pa. Mrs. John C. Schmucker, Scc.-Treas. Box 233, Brownsville, Pa. WESTERN RESERVE BRANCH, CLEVELAND, O. 4th Wednesday, Dec. 27, 8:00 p.m. Garden Center, 10013 Detroit St. Cleveland, Ohio Cleveland, Ohio Mrs. Edward Lobser, Cor. Sec. 25912 Westlake Rd., Bay Village, Ohio WHITTIER BRANCH 4th Tuesday, Dec. 26, 7:30 p.m. Union High School, Toom 10 Lindley Ave. Entrance, Whittier, Calif. Mrs. Gretchen Bauchop, Secy. 9741 S. Santa Fe Springs Rd., Whittier, Calif.

#### QUESTION-ANSWER, cont. from page 265

tened tight against the new basket-probably in a year or even less.

Question: Can you identify different ferns?

Answer: Not by name. I know an Adiantum or a Polypodium when I see it but to give the varietal name is beyond me. I tried studying ferns for a time but I found there was much more confusion existing in the varietal names of ferns than in begonias. Each dealer seems to have his own ideas on what the name of some of the hybrid ferns should be so I gave it up as a bad job.

#### **ROUND ROBIN**, cont. from page 261

dropping their leaves, and should receive little or no water until they show a new impetus to grow. Some rexes will do the same. During this period of dormancy do NOT re-pot and especially do NOT fertilize. Since the roots are inactive when the plant is shedding its leaves, they could not possibly absorb the extra food, in fact it would be harmful to fertilize.'

Mrs. N. Baker, Dallas, Oregon-Uses sawdust in her plant trays. "Find that B. picta, Josephi and some of the India species go dormant (they are tuberous) and the smaller the tuber the shorter the growing period."

Note from Houston, Texas-"Winter before last we had snow and the temperature was down to 16 degrees. One of my friends here had a bed of beautiful "beefsteak" begonias (erythrophylla, Feastii). They all froze down-but came the spring and they came forth again better than ever. Was amazed to find them so hardy.'

L. Schwerdtfeger, Santa Barbara, Calif .---"R. R. members are delighted with the new R. R. stationery. Your Robin-pals would be thrilled to find a supply of this air-mail paper among their Christmas gifts. 50 letterheads and 50 plain sheets for only \$1.00. I will enclose a gift card in your name with each order and mail direct for you."

MINUTES meeting American 1305, City Hall. CONDENSED American Begonia Society, held in room 1305, City Hall, Los Angeles, Calif., Oct. 23rd, 1950, President

Begonia Society, neid in room 1300, Cary Lan, Los Angeles, Calif., Oct. 23rd, 1950, President Moore presiding. Regular meeting called to order at 8:00 p. m. Salute to the Flag and statement of aims and Purposes of the Society led by Mr. Walton. Present for the meeting, Board members Messrs. Moore, Walton, Trowbridge, Lorenz, Spaulding, Sherer, Small; Mesdames Korts, Nolan, Choate, Hixon, MacLanahan, Hartwell Branches represented: Inglewood, Parent Branch,

Hixon, MacLanahan, Hartwell Branches represented: Inglewood, Parent Branch, Hollywood, Glendale, San Gabriel Valley, Hub City, Bellflower, Whittier, Riverside, El Monte, San Diego Branch, Pasadena, Santa Monica. In the regular routine of business reports of Treasurer, Membership Fees, Business Mgr., Edi-tor were read; accepted as read; and placed on the table to be available to anyone desiring to look them over. look them over.

President stated he was unable to secure a larger room for this meeting and as many members were unable to be seated, he thought best to go into the matter of the Proposed Constitutional Amend-ment, as published in the October Begonian, im-mediately.

Walton read the Proposed Constitutional Amend-Walton read the Proposed Constitutional Amend-ment; President Moore commented briefly on ad-vances in paper costs, printing, etc., making it imperative to drop down to 20 pages in last month's Begonian; also stated "we want to get back to 24 or 28 pages;" he had recently visited the San Francisco Branch, Sacramento Branch, Hayward Branch and Petaluma Branch and found a majority of their members in favor of the princ a majority of their members in favor of the raise in dues.

President appointed Messrs. Terrill, Shultz and MacLanhan as a committee to pass out the bal-lots-one vote to a family unless both members were paid up-and to make the tally when voting was

s completed: 58 votes cast: 54 voted "yes," 4 voted "no."

Resolution goes into effect Jan. 1, 1951. Committee thanked and dismissed. President Moore stated "it is our desire to give you a better magazine, and as our membership fees are practically all used in the publication of the magazine, I will prepare a statement for the Dec. issue of the Begonian which will go into the text and intent of the Resolution. Meantime I will prepare a letter for the membership secretaries and this letter can be read at the hunder meetings and this letter can be read at the branch meetings and be given as much publicity as possible, which will greatly facilitate matters for all concerned.

#### REPORTS

Librarian's report showed several additions to the library-the 1948 files (bound) of the Missouri Botanical Garden Bulletin containing the complete account of the source of Begonia MacDougalli; pamphlet "500 Common Garden Mistakes Cor-rected," donated by the American Garden Guild, Inc., 6 copies each of Geo. Otten's "Tuberous Rooted Begonian" and A. C. Hottes "How to in-crease Plants" on hand for resale to members.

Many fine branch reports.

Respectfully submitted, Gonda Hartwell, Sec. Meeting adjourned.

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THE BEGONIAN