

# THE BEGONIAN

DEVOTED TO THE SHELTERED GARDEN

Monthly Bulletin of the American Begonia Society



NOVEMBER, 1938



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## ELECTRIC HOT BED

By Lambert Day

At this time of the year one begins to ponder and speculate on plans for next season's flowers. Tuberous begonia seeds should be started in November so as to insure early blooms.

For the successful growing of tubers from seed they must have a warm uniform temperature so that they will have an uninterrupted growth. Cold weather coupled with prolonged spells of dampness can lead to nothing but disappointments. For the amateur, temperature control sounds at first to be out of the reach of many of our pocketbooks or else a lot of trouble and operating expense.

The little box that we are about to describe can be built from things already on hand in the average home work shop, incurring only slight additional expenditures. The maximum cost of electric power based on last year's use was close to a dollar per month, but by the covering up of the box at night with canvas and blankets, was reduced to fifty cents. This cost was figured upon current house lighting rates as we do not have power rates. The temperature was set at 70 degrees and remained within two degrees of this even on the coldest nights.

A box with inside dimensions of approximately five feet in length by three feet in width will accommodate six standard flats. By first starting seedlings in seed pans and then transplanting into standard flats as they are big enough to prick out, you will be able to accommodate over a thousand begonia seedlings (by putting 13 rows of 13 per flat) until they are large enough for 3" pots and in Southern California, ready to go into the cloth house. Of course one does not have to confine the entire box to tuberous begonias as there are any number of interesting plants that require similar growing conditions.

The box may be any size to meet individual requirements. Make the box as air tight as possible by putting battens over cracks and weather stripping around the top edge. The box should be sloped toward the front. Our box is about 1' deep in front and 2' at the back. It is covered with a glass sash hinged at the top so it may be raised for working in the box and also for ventilation.

In the bottom of the box is built a removable frame constructed of 1" x 2" pieces. Upon this is strung about 50' of number 28 B & S gauge nichrome wire on porcelain insulators. This grid of wire is center tapped so as to form two banks

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or coils of wire each of twenty-five feet. This comprises the heating element and is connected in series with the thermostat. Also across the electric line in series with the thermostat a  $7\frac{1}{2}$  watt red lamp globe is used as a pilot for setting of the desired temperature. For a box half the size only half of the wire would be needed reducing the operating cost proportionately.

The temperature control is a simple device that depends on the different expansion and contraction coefficient of dissimilar metals. Cut a  $1" \times 7"$  strip of number 28 gauge copper, brass, or bronze. Next cut a piece of black iron of the same gauge and dimensions. Then the copper and iron should be soldered, riveted or bolted securely together to prevent any possible chance of slippage. This completed unit is for the thermostat arm. It is now ready to be marked and drilled. First bisect the arm lengthwise and draw center line which is the longitudinal center of arm. Next measure  $\frac{1}{4}"$  in from one end and draw line. Now measure  $\frac{3}{8}"$  on each side of longitudinal center line and mark on second line. These two points are for the first two holes and should be  $\frac{3}{4}"$  apart. These holes are for fastening arm down to supporting block and are drilled with a number 19 twist drill for thread clearance of 8-32 machine screws.

The other hole to be marked and drilled is for the contact point. Measure from same end  $6\frac{1}{4}"$  and mark on longitudinal center line. Drill this hole with a number 9 twist drill for clearance of 10-32 thread which is the size of the contact point used. The contact point with the head on it may now be put on with the head next to the iron face and fastened with a nut.

We are now ready for the base which may be made of bakelite, hard rubber, fiber or similar material. It is  $\frac{3}{16}"$  or  $\frac{1}{4}"$  thick,  $2\frac{1}{2}"$  wide and  $11"$  long. Our first step again will be to mark the longitudinal center. Measure  $3"$  from one end and draw line at this point. Measure  $\frac{3}{8}"$  on each side of longitudinal line and mark. These points are to be drilled with a number 19 twist drill and are for fastening on supporting block and thermostat arm. These two holes should be countersunk on the reverse side to accommodate the two flat headed machine screws. From the same end measure  $9\frac{3}{16}"$  and mark on the longitudinal center. Drill this hole with a number 21 drill and tap with 10-32 thread.

Two more holes may be drilled thru base at any point for mounting completed unit in propagating box. The first three

inches on the base is to accommodate the socket for pilot light but no mounting instructions are given as manufacturers vary position of mounting screws.

The block that supports the thermostat arm above the base is made of the same material as the base and is  $\frac{1}{2}"$  thick by  $1"$  high and  $2\frac{1}{2}"$  long. Two holes are drilled  $\frac{3}{4}"$  apart thru the base to correspond with the holes already cut in arm and base.

A piece of  $\frac{3}{8}"$  brass rod  $\frac{1}{2}"$  long is now drilled lengthwise with a number 21 drill and tapped with a 10-32 tap. This is used as a coupling unit in which to screw the remaining contact point and running thread. Put on an extra 10-32 nut to act as a lock nut on the base. This may be tightened down to hold the adjustment of contact points after thermostat is adjusted. Be sure to turn off the current before tightening. The thermostat may now be completely assembled, shaping the arm as illustrated. The copper side of the arm must be put on the inside, otherwise the arm will work backwards. The socket may now be put on and completed thermostat installed in box as pictured.

Before starting to adjust or regulate the temperature check carefully to see that everything is wired according to the diagram. After being satisfied that this is the case turn on the current and turn knob of thermostat clockwise until contact points are together. The pilot lamp should light and the heating element begin to emit heat. The heating element will not get hot enough to turn red as it is designed to operate at black heat. A thermometer is placed in the box in such a position as to be visible when the box is closed. The box is now closed tightly and the thermometer watched until the temperature rises to the required degree. Turn the regulating screw in a counterclockwise direction until the pilot light goes out. Then turn clockwise until lamp just lights. This should be the proper place to leave the adjustment. If the unit is working properly the light will come on and off at fairly regular intervals.

Certain refinements may be added such as, installation of a fuse block, a wall outlet box with twist lock receptacle so as to prevent plug from being pulled out accidentally. If the thermostat interferes with your radio you may place a one-tenth micro-farad condenser on each side of the electric line. The other side of the two condensers are tied together and grounded. The closer that this filter is placed

*(Continued on Page 8)*

# EASTERN SECTION

MRS. H. H. BUXTON, Eastern Editor

A neighborhood class for the study of Begonias has been started in eastern Massachusetts, and 23 enthusiasts came to the first meeting which was held in the greenhouses of the Essex Agricultural School in Danvers. Five towns were represented. Mr. A. G. Perkins, of the school faculty, talked on soils and fertilizers, and Mr. H. L. White, also of the faculty, discussed potting, propagation, watering and feeding. A general question period followed, which showed keen interest. Mr. White told about the American Begonia Society and urged those present to join. It is planned to hold future meetings in the homes of members, visiting each town in turn. This is a very informal group, without officers or dues. These can come later if necessary. Such a study group could be formed almost anywhere by a single person. A notice in a local paper, perhaps a note or telephone call to a friend, is sufficient. The eager response to this opportunity shows that many people are interested in begonias and would study them if it were made possible in their vicinity.

## From a Letter

By Mrs. Frederick O. Houghton,  
Milton, Mass.

My Begonia family consists of a *Sunderbruckii*, an *Alba Odorata*, a *Templini*, and a *Calla Lily*, of which the first two are my favorites. Besides these I have several of whose names I am not sure: a tall bamboo-like plant with small leaves and small greenish-white flowers, two others which I think are *Haageana*, another that is probably *Coralline Lucerne*, and yet another unknown.

In winter my plants are kept in the plant room that is provided with hot water heating. It has east, south and west exposure. Most of the begonias live on the east side and do very well, with the exception of *Templini*, which is leggy as well as a poor grower. In summer we sink the pots in the ground in partial shade and water sparingly. They are moved back to the house in September.

## An Inquiry

By Mrs. Ernest C. Drew  
Narberth, Penna.

Some time ago I was given, under the name "maple-leaved," a begonia about a foot tall, with slender rosy stems and small deeply lobed, sharply angled leaves

of a light green, with a rosy spot at the stem. It later bore small white blossoms. Consultation of Mrs. Buxton's pamphlet on Begonias suggested that it might be *McBethii*. The delicate stems tended to droop so much that friends to whom I gave divisions used them in hanging baskets.

In the fall I gathered and planted seed, which germinated and grew nicely. To my surprise the baby plants each developed a little "pea" at the base. (The original plant was not apparently tuberous, but that may have been because it was a slip.) Also, the seedlings were definitely olive in complexion and some even had silver spots. I was puzzled, indeed, until I read in the Begonia Club's Round Robin (*Horticulture*, Dec. 1, 1936) a description of *Begonia Dregei* (pronunciation, please?) which fitted. The spots are characteristic of the first leaves only, as the later growth is plain. There is however, considerable variation among my plants in leaf color, shape, size, and in growth habit. Some are dull olive green, some much lighter and more yellow, some are deeply and sharply cut, others have almost rounded lobes, some are compact in growth, others open and erect, though none is yet so gracefully drooping as the parent.

What are they, *McBethii*, *Dregei*, or a hybrid?

Editor's Note: According to Mr. Dyckman the begonia is apparently *Dregei*, one of the semi-tuberous begonias. Its seedlings are usually very variable. The pronunciation is *Dreg'-e-i*, the first e short and the last two vowels long.

## Begonias in a Greenhouse

By William C. Atherton  
Wakefield, Mass.

Growing a miscellaneous collection of begonias in a greenhouse affords one much pleasure as ideal atmospheric conditions are more easily obtained than in the dwelling house, where artificial heat is necessary.

For potting soil: leafmold, fibrous loam and sand with a little charcoal make a good combination. Drainage seems to be quite important. Some of my begonias are grown under the benches where they get very little sun, in a very thin layer of soil covering a deep stone drainage system.

The Rex begonias thrive under those

conditions, developing much larger leaves; also *Chiala rosea*, which with its lustrous dark green leaves makes a beautiful sight under artificial light. *ebрина* is allowed to grow out horizontally under the bench, where it seems to flourish. Most of the other begonias are grown in pots on the north bench. Here *Subvillosa* opens its pure white flowers all summer, and *Cathayana* with its rich foliage always attracts attention. *Margaretaceae* with its glossy brown leaves is another favorite. (Ed. note: Dyckman says *Margaretaceae* is of the Mallet type with red leaves with a silver sheen.) Then there are the double tuberous begonias, very beautiful indeed. *Prunifolia* outdoes itself by producing large clusters of white flowers in the autumn. Mrs. W. S. Kimball and *Fau-reana* both drop their leaves and the *Calla Lily* begonia grows none too well.

Slat-shading reduces the temperature several degrees in summer and is very satisfactory. Nursery Volck (half strength) used occasionally has proven a good remedy for red spider and rust.

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## A NEW BEGONIA?

By Robert Hoefler  
San Francisco, Calif.

Begonias have been mentioned at least twice this year in the **National Geographic Magazine**. In the April issue is a full page color plate showing the outdoor cultivation of begonias in Belgium. In the September number is a descriptive article of Hainen (an island off the Chinese Coast) in which the author, Leonard Clark speaks of finding thousands of red begonias on the summit of a mountain about 5000 foot elevation, growing in crevices between the huge boulders.

The territory where the begonias were found has never been explored and as Hainen is an island there is a possibility that this is a new species.

Do not forget that Mr. Kelly is anxious to get any surplus bulbils of *Evansiana* or *Sutherlandii*. They should be collected now.

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# ANNUAL MEETING

The annual meeting of the American Begonia Society will be held in Long Beach, at the Community Hall, Ninth and Lime, at 7:30 P.M., on Thursday, Nov. 10th. The annual election of officers will be held. There will be short talks on the seasonal care of begonias, and the proper care of begonias for the display at the San Francisco Exposition.

## Inglewood Meeting

The regular meeting of the new Inglewood Branch will be held Friday, Nov. 18, from 7:30 to 9:30 P.M., at the Community Building of the George W. Crosier School. Mr. H. P. Dyckman will talk on the seasonal care of begonias.

## Ventura Meeting

The Theodosia Burr Shepherd Branch will meet November 8th, Tuesday at 7:30, at the Coca Cola Hall in Ventura.

We wish that every member might have been present at our last meeting in Long Beach to hear that dean of begonia growers, A. D. Robinson of Point Loma, give one of his most inimitable talks on begonias. The wit and keen human understanding with which Mr. Robinson interleaves the results of his researches into begonia history and culture, make a rich combination that must be heard to be fully enjoyed. We expect in the near future to publish an article by Mr. Robinson concerning the begonias of which he spoke, continuing the series in the August Begonian. From the very first the officers of our Society have relied upon the sound counsel and the generous assistance that Mr. Robinson has always cheerfully given, yet this is the first time that he has appeared upon the program of the society. The ovation given him at this meeting but faintly expresses the position he holds in all our hearts.

The suggestion by Mrs. Buxton, in the Eastern Section, might be a solution for members in outlying communities who might wish to see a chapter of the American Begonia Society organized in their part of the country. Our members in San Francisco and San Diego, as well as those in Oregon, Washington, Florida, Pennsylvania, Minnesota, and other similar distant points should take some active steps toward the formation of branch organizations in their localities.

The illustration on the cover is of the Tuberous Begonia Fimbriata Plena, or Carnation type, furnished through the courtesy of Vetterle and Reinelt.

For the second successive month we are happy to report the organization of a new Branch of the American Begonia Society. There were 70 members and prospective members present at the organization meeting. Many begonia fans in western Los Angeles County were unable to attend the Long Beach meeting regularly, and very wisely conspired to hold a meeting of their own. With somewhat the same problem we would be glad to see our members in Orange County, and those in the San Gabriel Valley, also undertake the formation of branches. The suggestion of Mrs. Buxton, found in the eastern section of this issue, in regard to begonia study groups would be an excellent means of getting such organizations started.

The temporary officers of the Inglewood branch are as follows: President, F. M. Harrison; Vice-President, Mrs. Pauline Ney; and Secretary-Treasurer, Mrs. Lucy Graham.

It is not too early to send to Mrs. Liedler your dues for the coming year. Get it off your mind. If you delay it may be forgotten in the rush of the holiday season, and you may miss a copy or two of the BEGONIAN before you realize it.

Commercial Growers and Dealers: Have you ever considered that a display board in your establishment showing the special bulletins of the Society, and the BEGONIAN, would add to your customers interest in begonias and help the Society as well?



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## BLACK FLY REMEDY

By A. H. Weisberg, State University,  
Missoula, Mont.

During my first three or four years with begonias I was troubled with those black flies mentioned in the last issue, and also the aphids and very tiny white maggots on the surface of the potting soil and also on the bottom of the pot.

About three years ago I read in "1001 Garden Questions Answered" that coal soot has some fertilizing value. I cleaned out the pipe which leads from the coal furnace to the flu and mixed a 3 inch pot of soot with a half bushel of potting soil. During the past three years no begonia or other potted plant growing in soil containing coal soot has ever had aphids, maggots, or black flies. Plants purchased from various sources sometimes showed aphid infection, but when the aphids were sprayed and the plant repotted in the soot treated soil, that ended the aphids for them.

I do not pretend to state that the use of soot is a sure preventative of the above mentioned pests, I merely give my experience for what it is worth. Coal soot is plentiful enough here where coal is the ordinary fuel, but I imagine it is pretty scarce in California. I take out bushels of it every winter and if anyone wishes to try it and is willing to pay the postage, I will send a pound or so gratis, as long as the supply lasts. Perhaps soot from the gas furnace pipe will do just as well.

## NEW BEGONIAS

Mr. Rudolf Ziesenhenné, of 1130 North Milpas Street, Santa Barbara, is one of our most enthusiastic and thorough-going students of Begonias, and the literature concerning them. He writes:

"I am trying to keep complete records of all the horticultural forms of begonias produced. I would appreciate it if anyone producing a "new begonia" by cross-pollinating different Begonias would write me, giving the following information in regard to the new plant: its name, the male and female parents, a description of the plant, and the date it was put on the market. This material will be available to members of the Society and other interested persons. By the cooperation of each member, we can be sure that an accurate record is kept."

This is a most important matter that should have the active assistance of every member concerned. It will greatly facilitate the work of the Nomenclature committee. Mr. Ziesenhenné is to be commended for his interest and zeal in this proposal.

Our new Membership Directory is out, the size and form of the Begonian. You should order your copy at once. Visit your neighboring members, and visit members on your trips.

## Notice to Advertisers

Due to the increased size of the Begonian and the greatly increased circulation (we have passed the 500 point this month) the advertising rates will be materially increased for the coming year. Liberal discounts will be given to members, however.

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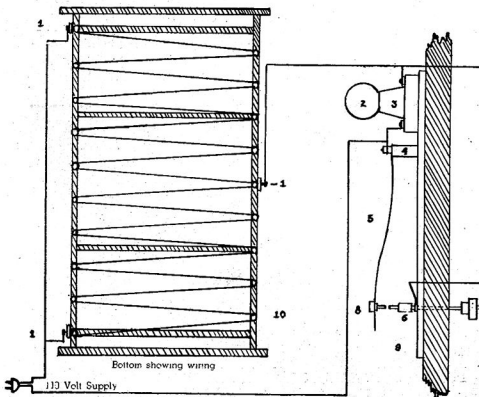
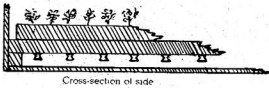
## ELECTRIC HOT BED

(Continued from Page 3)

to the thermostat the more effective it becomes.

The following is a list of parts required which should be obtained for approximately two dollars. If you do not wish to be bothered with making the thermostat arm, a substance known to the trade as bimetal may be purchased at a cost of about one dollar.

1. 3 small terminal blocks
2. 1 red 7½ watt lamp globe
3. 1 standard porcelain lamp socket
4. 1 piece ½" x 1" x 2½" bakelite
5. 1 piece each 28 gauge iron and copper 1" x 7"
6. 1 piece ⅜" brass rod ½" long
7. 1 bakelite knob threaded with 10-32 thread
8. 2 distributor contact points with 10-32 thread. One with head, the other without. (Obtainable at auto supply houses.)
9. 1 piece ¼" x 2½" x 11" bakelite
10. 19 small porcelain insulators
  - 1 piece 10-32 running thread 3" long
  - 2 8-32 x 1¼" brass flat head machine screws
  - 6 8-32 brass hexigon nuts and lock washers
  - 2 10-32 brass hexigon nuts
  - 50 feet of number 28 nichrome wire



- |                      |                  |
|----------------------|------------------|
| 1 Terminal Block     | 6 Coupling       |
| 2 Pilot Lamp         | 7 Knob           |
| 3 Lamp Socket        | 8 Contact Points |
| 4 Thermostat Support | 9 Base           |
| 5 Thermostat Arm     | 10 Insulators    |

Your editor would like an article giving full details of the preparation and use of manure water.

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