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PICTURE ON THE COVER: This panoramic view of the National Show at Kirkland can only partly explain the amazement we feel each year that anything could be as beautiful as last year's show. Due to an excessively wet spring in the Puget Sound area, material was not as plentiful but the excellent quality of the plants and the calibre of the exhibition made it the equal of any show in the past.—Photograph by Northwest Photographers, 8910 Lago Vista Drive, Kirkland, Wash.
A Primrose Show Is Born
We thought you would like to know what goes into a Primrose Show and why
an "old hand" after all the work, finds it so rewarding.

By Alice Warnecke

The lady in the pink hat handed me her ticket. I said, "Thank you,"
as she stepped through the door. I wasn't surprised when she said, "How lovely!
I had no idea it would be like this. I have never been to the Primrose Show before this year.

I looked out over the floor again. The Show was breathtaking! I had
seen it so often that I had become accustomed to the beauty of it. I was thinking how it had looked from this
very spot on Tuesday evening.

Tuesday evening. I had come early
as I knew from experience that there
would be a lot of work to do. There
before me stretched the bare basketball floor of the gymnasium in the
Civic Center. The caretaker was let-
ting down the ropes that would pull
the baskets up against the ceiling for
the duration of the Show. Just now
all was still peaceful, but in a little
while the pace would be humming.
The general chairman of the show and
several chairmen of committees ar-
rived and the work began. Up to the
attic for the waterproof paper that had
to cover the floor completely to protect
the hard wood of the basketball court.
Next the blueprints had to be studied
again. The whole floor would be laid
out in a planned garden. The shapes
of the flower beds were all drawn to
scale on the blueprint and had to be
measured on the floor. It had to be
very accurate as the various nurseries,
growers, and garden clubs had been
given measurements for their respec-
tive plots, and they expected to have
everything ready for them early on
Thursday morning.

I brought a hundred feet of hose
from home, and this we laid in the
shapes of the various beds and then
with chalk we made a permanent out-
line. This sounds simple, but when
you have to do the whole thing on
hands and knees measuring, erasing,
and measuring again with a tape as
you go, it can be a very tiresome job.
Slightly off center of the floor a rail
fence was being put up. This fence
was an old one brought in rails that
the husband of the general chairman
took down on their property.
Several men were helping him rebuild
it on blocks so that when the sawdust
and peat moss were put into the flower
beds, the bottom rail would not be
covered.

By the time we had the beds along
both walls all outlined, the men had
the fence put up. Now we had to
measure the flower beds down both
sides of the fence. There were still
three free-standing flower beds to
measure but there would be time for
that the first thing Wednesday morn-
ing.

We hired two high school boys to
help on Wednesday. They brought
more things down from the attic that
would have to be used during the day.
Table tops of veneer, sawhorses to
put them on, and boxes to be placed
down the center to give us another tier
display room for our specimen
plants. The tables and boxes were
covered with black building paper and
then the tables were finished with
skirts of green burlap. It took all of
three hours for about eight or ten
women to get them all ready for use.

The flower beds were to be built
up with sawdust and peat moss to a
depth of four inches, so it took a lot
of wheeling to get that all on the floor.
To hold it in place, aluminum edging
had to be placed on the chalk marks of
Tuesday evening. To hold them up-
right the edgings had to be wired
to the wall under the sawdust. Sounds
complicated? It was. Took us quite
some figuring the first time we did it
—now we know just how to go about
it. After the two boys had done hours
of wheeling, the flower beds looked "real".

On the blueprint there were circles
at various places that were marked"trees", so trees had to be put in. Down
at the end of the rail fence a large
branch of willow hung gracefully over
the greenhouse on which chances
would be sold. Vine maple, blooming
apple trees, horse chestnut, all the
various evergreens soon were filling
the circles. They were all in metal
containers filled with rocks to hold
them upright and guy-wired with dark
wire, so that they looked for all the
world as though they had always
grown there.

Yes, by Wednesday evening the
basketball floor was beginning to look
more and more like a garden, but it
was still unplanted.

Thursday morning early, there de-
scoed like a swarm of locusts—the
growers, the nursery men, and the
women from the various garden clubs.
They brought in rhododendrons, azaleas,
evergreens, ferns, iris, scilla, and
primroses of every color. In the Prim-
rose Show other materials may be used
but primroses must predominate. All
day it went on. Rush here. Rush there.
Some of the plot boundaries had to be
changed somewhat as someone had too
much material, another not quite
enough. How all this confusion could
ever be straightened out by Friday
morning seemed like an insurmount-
(Continued on Page 90)
The National Auricula Show was combined again this year with the Twelfth Annual Primrose Show staged by the East Side Garden Club. The show takes months of planning, with long hours of physical and mental work. With a small garden club, such as ours, this requires good leadership as well as cooperation and initiative by all members. Our able leader this year was Mrs. John Siepman, who is also president of the American Primrose Society.

"Old Fashioned Gardens" was the theme this year. Participants truly were in harmony with the thought. Many included small vegetable plots in their displays. This was often done in old fashioned gardens. Authentic antique props were in evidence. Rocking chairs that had come west in covered wagons, butter churns, old oaken buckets with lades, and many others.

Soft organ melodies provided a pleasing background as visitors viewed the many floor and specimen exhibits.

Mrs. A. C. U. Berry of Portland graciously loaned her hand-painted Auricula Spode plates to be displayed during the Show. Mrs. Berry cannot be thanked enough as this collection is seldom loaned for any reason.

There were 697 individual entries in the Show, including one hundred in the decorative division.

Amateur Sweepstakes winner, both horticulture and decorative, was Mrs. Robert M. Ford of Seattle. Professional horticulture Sweepstakes was won by Herbert Dickson of Seattle. Marnie Tindall of Bothell won the award for professional junior in horticulture; Faith Warneck, junior amateur horticulture; Mary Lu Massey, junior arrangements. Runners-up for Sweepstakes included R. C. Putnam, professional; Miss Ida Magnus, amateur horticulture; Mrs. June Harp, arrangements; Mary Willingham, Junior professional; Peter Dines, junior amateur; Faith Warneck, junior arrangements.

Floor displays were won by Yarrow Point Garden Club, and Killarney No. 1, both of Bellevue, Washington. Ross Willingham of Seattle was awarded the grower's trophy and Brown's Iris Garden won in the Nursery Division.

This show has ended, but looking back with a feeling of tired well being, it is obvious the East Side Garden Club will look forward to another spring with enthusiasm.

Well-grown plants arranged in circular bed by Ross Willingham

Photograph courtesy Orval Agee

Our Spring Show was colourful but, as the first competitive show we have had, it was not too successful — newer members are reticent in competing so that in order to have a showing, the old standbys did their best to make the benches colourful and interesting.

Award Results:

*Best Primula in the Show — Perpetual Trophy (pewter jug)* went to Mr. V. Costley for a superb rose primrose type Jack-in-the-Green.

*Best Alpine in Show — Perpetual Trophy (crystal vase)* to Mrs. E. Conboy for a plant of Kalmiopsis Leachiina, a rose blooming shrub related to the Kalmias.
gardener hereabouts. Species seen included scapulis—singles, doubles, and duplex forms; auriculas—border, a few alpines and show forms planted in the garden, and perhaps as a result not at their best, yet Hayson's Bratitude had very good form; denticulata; frondosa; pubescens: rosea; and an unidentified tiny white-flowered variety resembling frondosa, but said to be native to New York State. The candelabras, gavryarte, and siboldii came through the winter in good condition, but were not showing color.

Following the tour, a picnic supper provided by the club members was served indoors, as the weather was still too cool for comfort late in the day outdoors.

The day was given a bit of a National Society flavour, we felt: we were honoured and pleased to have as guests for the occasion, a national member, Mrs. Wallace J. Balla and her family. Mr. and Mrs. Balla and their son and daughter flew from their home in Greenwich, Conn.; were with us nearly nine hours, and left about 7:30 in the evening, and were home in slightly over an hour! For those of us who are accustomed to travel on the ground, this just couldn't be—yet, we were there! They added much to the interest and pleasure of the day.

We regretted that the Balla family could not stay over for the field trip on the following day, when the members drove some 150 miles to the home of another National member, Mrs. Blanche Pearson, of Middleport, N. Y. Mr. and Mrs. Pearson entertained us royally, starting off with a sumptuous dinner. Later we saw two gardens, the Pearsons and that of Mr. W. A. Smith at Lyndonville, N. Y., the latter being several acres in extent. Both gardens lie in a region of sandy loam and being near Lake Ontario are blessed with occasional rain.

Polyanthus growing in both gardens were the modern types and particularly good specimens in size, sturdiness, and color. In the associated wild flower gardens, in addition to the large white, the red, and the double white trilliums, were twelve other distinct forms of trilliums growing abundantly. It is hoped that this year from this garden may come very interesting seeds for the Exchange.

Friday Harbor Primrose Club, Friday Harbor, Washington

By Edna E. Wright

The Theme "Centennial" made our Show this year more fun than usual as the committee all wore period costumes. One wall had the English Blockhouse painted in water color by our local artist, Miss Marjorie Walker. Very beautifully done with a bit of shore and sky and a bit of trees and shrubbery. Some of the trees bare of leaves but hung with moss as they are found at English Camp.

Mrs. "Pinkie" Gilmer, chairman of the flower arrangements, and her retinue of helpers made a clever scene around the English Blockhouse, placing the primroses artistically in moss from the flagstone walk that led to the door of the Blockhouse to Fir trees that edged the sides of the display.

The severe cold spell hit so suddenly on unprepared plants that our Club members suffered heavy plant losses which left us with fewer plants to qualify for exhibit. And plants for sale were unavailable in any quantity. The date at the base of each monument was fashioned of daffodils by Mrs. Drummond. And I must not forget "Cleo," the pig, with its lusty squeal who was very attractive in his pen outside the door, cursage over one ear and painted toe nails.

The members dressed in period costumes, bustles, and hoops. Our President, Marion Hannah, dressed in her hundred year old gown and bonnet, presided at the guest book which registered the usual enthusiastic attendance.

Mrs. Jensen, chairman of the "Silver Tea" carried out the motif with her red checkered table cloth set. Mrs. H. C. Price, with her usual efficiency, had charge of the plant sale tables.

Mt. Angel Primrose Society, Mt. Angel, Oregon

By Lorelta E. Dehler

Mt. Angel's twelfth annual Primrose Show had what the judges called a "very fine showing of primrose plants" despite an anticipated meager showing presaged by weather conditions.

There was a beautiful riot of color and there were more divisions represented than in the past several years. Strangely enough, there were still quite a number of Acaulis and even Aurelia, and down the line to the later Auricula. What was especially noticeable was that there seemed more variety than usual and lack of duplication or close similarity.

As always at the Mt. Angel Show, the backbone of the display was the Polyanthus and here the variety in color was outstanding.

Sweepstakes winner was Mrs. Dave Shepherd, Mt. Angel, who was last year's runner-up. She won with 173 points. Mrs. Mary Pranger, also of Mt. Angel, placed second with 121 points.

Junior Sweepstakes winner was John Hoffer of Mt. Angel. A Centennial theme was used in the cut flower arrangement division and brought out some beautiful displays.

Mt. Angel Primrose Society
Mt. Angel, Oregon

By Nancy Ford
Regional Editor

Primroses in Orbit, theme of the 1959 Tacoma Primrose Show, inspired novel displays of space-age projectiles. Oddly enough, Sputniks and primroses go rather well together.

Mr. Claud Schutt was chairman of the show held April 4th and 5th at the Washington National Bank in Lakewood, Washington.

Tacoma Primrose Society
Tacoma, Washington

By Mrs. Seth Barnett

The annual show was held on April 11th and 12th. Many compliments were received on the display of Primroses and companion flowers put on by the Club. The display was arranged like a garden with fish pond and bird bath. Mrs. Claude Ramsden designed the display.

Many entries of primroses and arrangements were entered for judging. Mrs. Virgil Tippit won Sweepstakes with the most blue ribbons. The Hazeldell Garden Club won first prize in Garden Club arrangements. (Continued on Page 90)
The Annual Banquet

For most of us the highlight of the National Show was the Annual Banquet. The banquets of recent years have been memorable and this year's was no exception.

President Anne Siepmann called the assemblage to order and Mrs. Wm. Elgin read the invocation. Mrs. Edley Wold, President of the East Side Garden Club, then made everyone welcome.

Mr. Dale Worthington of Portland gave some of the history of the Bamford Trophy and presented it to Cyrus Happy III who has won it for the third consecutive year. Mr. Frank Michaud of Alpenglow Gardens, receiving the Bamford award from Dale Worthington for Cy Happy III, 1959 winner, who could not attend.

We all like to listen to the next speaker, Dr. Matthew Riddle of Portland, who presented a scroll of honor and appreciation to Florence Levy, our Editor Emeritus, for her long labors of love in getting the Society and especially the Quarterly off the ground and internationally known. This was an honor long overdue from a Society with which she had so much to do in maintaining interest and supplying expert knowledge and advice. Her conduct of the schools for judges through the years has cost her many hours of time that she could ill afford from her labors at Barnhaven.

The principal speaker of the evening, Mr. Robert Saxe of San Francisco, titled his talk “Appreciate Your Garden”. We wish we could record the humor and bounce of Mr. Saxe’s talk but such a talk would lose much by being printed. Sufficient to say that Mr. Saxe is a very humorous and entertaining speaker, and I am sure we will all appreciate our gardens more after hearing his talk. Mr. Saxe stopped over to attend the banquet on his way to a visit to Vancouver, British Columbia.

Garden Club Collect

MAY The peace of my garden still my troubled hours—
The beauty of my garden shine through my daily life—
The inner strength of my garden give me courage—
The dependability of my garden teach me faith—
The joyous color of my garden fill my heart with song—
And may My Garden Vision unfold the Wings of My Spirit.

—ISLE TIERNEY.

The American Primrose Society

Citation of Honor and Appreciation to

Florence Levy

For, her part in organizing the American Primrose Society and as it's first Editor, making the American Primrose Quarterly the voice of authority for Primroses in America.

For, her outstanding efforts to improve the Primrose resulting in her world renowned strain with unlimited range of pure color.

For, her inspiring influence on other hybridizers in the field.

For, her setting up the standard of excellence in judging Primroses and the unyielding contribution of her time and energy in teaching judging schools.

For, her generous expenditure of cultural knowledge to amateur gardeners everywhere, her lectures, writings and judging, thus furthering the success of the American Primrose Society.

This Certificate of Recognition and Honor is awarded on this Eighteenth day of April, 1959.

New Westminster, British Columbia, accepted the trophy for Mr. Happy, who could not attend.

Frank Michaud of Alpenglow — receiving the Bamford award from Dale Worthington for Cy Happy III, 1959 winner, who could not attend.
able problem. To add to it all, people were bringing in specimen plants to be put on display after they were classified and jotted down in the entry books. By Thursday evening everyone was glad to go home.

Friday morning early all the last minute touching up had to be done. Lovely silver trophies were to be given and all wanted their flower beds to look best. The judges would be there at 10:30. Finally things were ready to have the excess paper cut off the floor with linoleum knives. Things were ready for a last minute sweeping of the walks and last minute check of the floor. Now a hasty trip to the balcony for a quick over-all look. Yes, everything looks fine. We made the deadline again. We are ready for the judges!

The judges finished their work by 1:30 p.m. Blue, red, and white ribbons were fixed to the entry cards of all the worthy specimen plants. The trophies and ribbons were awarded to the "best plant in each class", the best grower, the best nursery, and the best garden club displays.

I stood at the door at 2 o'clock and took tickets. I looked over the floor again. How lovely! I thought. I had no idea it would be like this. I've seen every Primrose Show of the East Side Garden Club for years, and I always marvel that it all starts with a blueprint and a bare basketball floor.

(Continued from Page 87)

The plant sale held with the show netted the Club a good profit. Some of our members lost primroses this winter but nevertheless the Club felt the Show was a success and worth the time and effort to stage.

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**Potting The Auricula**

*Our National Treasurer has proved her ability more than once with pot grown Auriculas.*

**BY IVANE L AGEE**

First have clean pots ready. It's a good idea to soak old pots overnight, because they will then clean more easily. In using new pots, soak them a short time; then drain well, as a pot should be damp, not dripping wet, when used.

A few of the larger growing plants might use a five-inch pot, but usually a four-inch standard size is best, as auricula should not be "over-potted". The seedlings are more easily handled in flats until they are large enough for the four-inch pots; however, one may pot them in small pots, sinking the pots in sand or soil so that they do not dry out too quickly.

When the pots are clean and you are ready to work, place a piece of broken pot over the drainage hole, then a half inch or more of drainage material, such as pea gravel or chicken grit. Have your potting soil ready and just damp enough to handle easily.

Auricula should not be watered just before re-potting. In removing the plant from the old pot, turn the pot upside down and tap the edge lightly on the edge of the potting bench. Shake the old dirt off the roots of the plant. Remove offsets that are large enough, leaving others until later. If the carrot or main root is too long, or rot is present, cut back with a sharp knife. A jar of sulphur and a small, fairly stiff brush is handy to dust the wounds where offsets and roots have been removed.

Put part of the potting soil in the new pots, carefully placing the roots and holding the plants up so that the leaves clear the pot, working the soil around the plant and using the thumbs to press the soil rather firm. The soil should be a half inch or so from the top of the pot when finished; leaving room to water. It seems easier to pot quite a few at a time and then water them all at once. Some growers soak the pots in water; but top watering is more easily controlled.

One member has a handy watering device — copper tubing about two feet long with the end bent over carefully and an adapter fitted onto the other end to screw on the regular hose. With water turned on lightly, this device has the effect of a watering can that never runs dry.

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**ANNOUNCING A NEW PRIMROSE SOCIETY IN OREGON**

OREGON PRIMROSE SOCIETY
Milwaukie, Oregon

Meets each last Wednesday of the month in the basement room of the City Hall in Milwaukie, 1:00 p.m. All A. P. S. members welcome.

Officers

President.................Mrs. Orval Agee
Vice-President ....Mrs. John P. Hannon
Secretary ............Mrs. R. E. Elstrom
Treasurer .............Mrs. William Tate
Librarian .... Mrs. Samuel G. Henricke

We are told that the new group will affiliate with the A. P. S. at their next meeting and to say that they will be welcome is the understatement of the month. We hope it does not scare the new Society too much when we say that our hope of again holding the National Show in Oregon has been revived.

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**Yellow Garden Auricula, from The Clarkes, Clackamas, Oregon**

*Photograph courtesy Orval Agee*
Editorial Office Change Of Address

As will be noted if one bothers to look at the inside of the front cover, the editorial office has been moved to 16320 Burton Road, Los Gatos, California. We give the announcement prominent display because so much of our mail is still being sent to the old address, involving re-addressing, re-mailing, and not the least important, loss of time and additional postage.

Now that we have your attention, we want to philosophise a little by saying that the Quarterly is only as good as the membership wants it to be. Articles on any and all phases of Primula culture are welcome, together with pictures. It is very difficult, sometimes, to find new pictures to print. Articles need not be literary masterpieces—the readers want to know the how and why you do the things you do in growing your Primroses. And of course articles on plant-hunting and other items of interest to members are received with enthusiasm. Galley proof is submitted for the author’s approval whenever possible and pictures are returned if requested.

Notes From The East

The mistress of Cloud Hill Farm reports on how her Primroses came through a rather extraordinarily tough winter.

By Doretta Klaber

It is fifteen years since we first moved to Northeastern Pennsylvania. The past winter was the worst we’ve had in that period as far as plants are concerned. The story is the same all through this part of the country—most more plants than ever before”—“even such hardy things as creeping thyme, vinca minor, cotoneaster horiziontals, killed out or killed back”. There was incessant heaving and thawing, cold and wet, and the few snows did not stay on the ground long.

What happened to the primroses? Those along the Primrose Path in the woods, mostly vernales, where the heavy natural coat of leaves stayed on, came through, weakened, but alive. They are slowly recovering and starting to bloom a couple of weeks later than usual. The pink vulgaris and polyanthus are the least hardy of their class and in some cases, even under the leaves, they rotted out completely. Wherever the plants were at all exposed, as on slopes near the edge of the woods where the leaves blew off, almost all of them rotted and perished. The Primrose Path is sadly depleted. Cowslips and Oxlips lived through but even they are not blooming with their usual abandon. The siebolds all came through, kisoanas look fine, and some saxatilis are coming up, these three mulched with stone chips with only a few leaves on the beds.

I’ve had trouble before with some beds at the edge of the woods, so last fall I planted them mostly with can-
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Wheeler, Mildred A. P. O. Box 63, Foxboro, Mass.

IN MEMORIAM

Mrs. Gertrude House of Portland, Oregon, passed away April 10th, 1959. She was a charter member of the American Primrose and Auricula Society, a long time member of the Northern and Southern Sections of the National Auricula and Primrose Societies in England; also a member of the Little Gardens Club of Portland, Oregon. She was frequently called on to judge at flower shows in all parts of Oregon and southwestern Washington.

IN MEMORIAM

Belatedly, we announce the death of Dr. Samuel G. Henricke of Portland, Oregon. Dr. Henricke died at his work in his Portland Pediatric Clinic.

Dr. Henricke will be remembered as the co-author with Mrs. Henricke of the very pleasing article in the 1958 Fall Quarterly. Although Dr. Henricke passed away in January and this obituary should have appeared in the Spring Quarterly, this in no way lessens the profound condolences offered to Mary, his wife, and the hope that she will find comfort in carrying on her work with her Primroses.

The Story of the Earthworm

Presenting the “Gardener’s best friend” working for him day and night in season and out; and the world is a better place for his efforts.

BY DOROTHY HEWETT

Little did we realize years ago, when my husband casually dumped the left-overs from a twenty-five cent carton of fishing worms into a can of dirt “to keep them for the next trip,” that they would someday sweep us right into the center of a large earthworm-breeding enterprise.

It transpired that the can soon became cans (plural), and then pails, and then pits, until finally that silent little army threatened to overrun the place and take up billets right in our house unless we got busy and learned that they weren’t just multiplying for the sake of multiplying; that there was work to be done with them—not just sitting and fishing; and that, whether we liked it or not, we would have to learn and teach others how to do that work.

Littler still did we realize that after we did learn how to domesticate them—then we realized that we’d become so domesticated that we’d actually invite ‘em right into our house to stay all winter, right in the middle of our already-crowded utility room and back entryway.

But littlest of all did we realize that these creatures would also soon monopolize our conversation, and that from then on every time George and Dorothy Hewett opened their mouths to speak all they’d ever talk about would be earthworms. (They had a mission and we were to be their missionaries.) And as for the other participants in these conversations, they could open their mouths for the expression of amazement only—not for talk; they were to listen and learn and then go and do likewise.

We didn’t realize all this was happening to us—but it did; and it will happen to you when you learn to domesticate the earthworm, how to raise them in boxes, in your bedroom, bathroom, basement or backyard—or all four put together. A real earthworm enthusiast doesn’t quibble over who gets space priority where—the family or the wormery. In fact, the time is already here when no self-respecting house planner will fail to provide a whole wing for the worms. Personally, I’d like to call that wing the “soilarium”—and you might as well make it roomy, for in no time at all it will be the center of attraction of all your family and all your company—take it from me.

If you think we’re overly excited about worms, stop to think that they gained and held the attention of the great English scientist, Charles Darwin, for fifty years!

He concluded: “It may be doubted whether there are any other animals which have played so important a part in the history of the world as have these lovely organized creatures.” (See Darwin’s scientific treatise on the earthworm in the public library.)
To the animal we've been pleased to call "lowly," God apparently assigned the mightiest task in the world—the task of keeping the surface of the earth forever renewed; the task of forever converting back into topsoil—humus—every bit of waste matter left over by man and beast, as well as every bit of dead vegetation, so that the earth might stay forever pure—cleaned up—and able to support all the life that lives off it in a forever condition of health, wealth, and perfect enjoyment.

Now, of course, the earthworm was given helpers to carry out this vast job—helpers in the form of billions upon billions of tiny micro-organic creatures who do miraculous preliminary work.

But the earthworm seems to be the chief executive, the coordinator, the homogenizer, the final de-odorizer, purifier, and vitalizer of the waste; because not until it has been swallowed, digested, and excreted by him in particles that break down to the size of finely-ground black pepper, has the waste matter actually become earth again.

One of the greats of our own time and country, Dr. Thomas J. Barrett, who originated the idea of harnessing (domesticating) the earthworm—raising him intensively in boxes or pits full of compost—had this to say in his beautiful book, Harnessing the Earthworm:

"In contemplative mood, we hold a handful of rich, dark earth—humus. It is without form, yet within it all forms are potential. It is without structure, yet within it all the wonders of civilization sleep. It appears dead, yet within it all life resides."

This rich, dark earth—this humus he is referring to—is the product of the earthworm. Now you have another question right on the tip of your tongue. We know this from experience with thousands of tips of thousands of tongues: "But why raise them in boxes or pits? Why not just throw them on the ground and let it go at that?"

That's the most-asked question in earthwormdom, and the answer is: Because it would take you ages to gather in the open ground, excretion by excretion, speck by speck, a handful of such glorious earthworm castings as you could gather up in a second from your box or pit. Besides, why scatter these precious deposits of new-made earth all over the ground when we want them, in concentration, right underneath our flowers, bulbs, fruits, vegetables, shrubs, and trees—in order to give them a vitality and beauty and a flavor literally out of this world?

Do you need to have spelled out to you any more reasons why you should learn to raise your own earthworms, make your own humus, and enjoy your farms and gardens as you've never enjoyed them before?

Raising Earthworms Is Fun!

The problem of breeding earthworms is a lot like the problem of keeping babies in a playpen. You want to keep the little angels in one place, so they won't be crawling all over and getting into trouble. Luckily, there's a simple solution (at least with earthworms); just put the things they like in the "pen" and they'll stay there, happy as larks.

We've found that the "culture box" makes an excellent playpen for earthworms and is also the simplest method for beginning earthworm breeders.

Any good-sized wooden box will work well. Fruit or vegetable lug boxes, approximately 17x14x6 inches, are fine and can usually be obtained from any food market. You can place the boxes in a corner of the basement, garage, or shed, under the house, or outside in a sheltered place.

This size box accommodates five hundred full-grown breeders, or half a pound of pit-run (mixed sizes), which ordinarily amounts to eight hundred or so worms from babies to breeders. Since the usual earthworm order is for either a thousand breeders or one pound of pit-run, you'll need two made-over boxes to start off with.

Basic Recipe for One Box of Culture Box Compost

Spread a twelve-quart pail of finely screened topsoil out on a flat surface (floor or work-table) until it is leveled out to a layer three inches high; similarly spread over this a twelve-quart pail of finely ground peat moss that has been thoroughly soaked beforehand in water for twenty-four hours, and then drained or squeezed free of dripping water; spread over this a twelve-quart pail of crumbled horse, cow, sheep, or rabbit manure; sprinkle whole surface of this layered pile with a mixture of food made by thoroughly mixing a cupful of dry cornmeal with one (or two, if you have it) pound canful of coffee grounds.

Note: We have purposely omitted advocating chicken manure. It is too hot for indoor culture box purposes, and, besides, it is apt to have been contaminated by poisonous poultry-house sprays and insecticides.

Now with a small trowel, start at one end of the pile and systematically toss, turn, mix, and aerate this compost, until you get to the other end of the pile, then go back and forth again—tossing, mixing, fluffing—taking only a little at a time.

The ideal moisture content is reached when you can squeeze a handful of compost in your fist and have it hold together in a wet but not dripping mould. Test your compost now.

If it needs more moisture, sprinkle some water over it gently and evenly and let it penetrate through the loose pile. Repeat this whole tossing, mixing, and moistening operation once a day for five days.

On the fifth day, before you toss it, put your hand down into the heart of the pile to test it for heat. If it is cool to the touch, your work is done; if there is the slightest warmth, keep mixing and moistening once a day until it is thoroughly cooled. Earthworms will crawl out en masse if your compost is warm; if they can't escape, they burn up—actually melt and die.

It usually takes the average earthworm hatchery from one to three weeks to fill and ship your order. Find out when you place your order and get your boxes and compost ready ahead of time. We are now going to assume that your worms have arrived and are setting in their containers waiting to be planted in your culture boxes.

1. Toss and fluff up your compost again, just in case it got lumpy or packed while waiting for the worms to arrive. Also test it for moisture and re-moisten, if necessary.

2. Lay a piece of burlap, corrugated cardboard, or a few folded sheets of newspaper over the loose-lath false bottom of box.

3. Evenly spread about a half-inch layer of dried lawn-clippings, withered small weeds, or crushed dried leaves. (Note: Use no grass that has had weed-killer or chemical fertilizer applied to it. Earthworms are very sensitive to chemicals and won't work in compost that is not to their taste, but will pile up in bunches along the walls of the box and eventually crawl out.)

4. Fill with compost to within three inches from the top of box.

5. Dump half of your breeders into
each box (don't tire them out by trying to count out exactly half—just guess it.) Or, if you've purchased pit-run, put half of those (by guess) in each box. If you are stocking your box indoors, turn on a hundred-watt light about a foot above the box to make the worms go down into the compost quickly.

If you're working outdoors, the sunlight will accomplish this. Worms don't like being exposed to strong light. If the weather is raw or dark, go inside with this operation. Cold worms scarcely move. Under right conditions they'll burrow down in five to thirty minutes. Any that remain on top after that are usually either cripples or dead. Just ignore them. When you have covered them over with the compost you'll be adding (as per step 6 below) they'll decompose and disappear.

Note: Most earthworm hatcheries put in enough extra worms to take care of a dozen or two casualties; all guarantee live, healthy delivery; most cover their shipments with both insurance and special handling.

6. Now fill your box with compost up to within an inch from the top. This gives your worms a depth of six inches of compost to work in, which is their minimum requirement.

7. Mix a handful of very dry cornmeal with three handfuls of coffee grounds. (This will be enough to do two boxes.) Sprinkle two handfuls of this in two ridges on top of compost (in each box), keeping two inches away from both sides and the ends of the box. These open spaces will give the worms a chance to escape from this feed in case it heats up temporarily.

8. Fill box to rim with dried lawn clippings or similar material. Press these into a mat by using a light board, being careful to tuck all the grass inside the walls of the box. Lay a piece of well-soaked burlap over the grass, or any kind of cloth the size of the box, being sure to tuck it in so none of it hangs over the rim. The burlap should be about half an inch from upper rim when pressed into place. Worms will crawl along overhanging burlap or grass and get out.

9. Improvise a sprinkler by punching small nail holes in the bottom of a two-pound coffee can. Pour a quart of water into the can and sprinkle your box evenly through the burlap, covering the whole surface. Avoid wetting the outside surface of your box.

After your culture boxes multiply and you begin stacking them four or five high, you can make yourself a pipe and right-angle nozzle sprinkler thus eliminating the need to lift your boxes around when all the attention they require is weekly watering. The reason we always water through the burlap and grass from new on is to distribute the water evenly and gently, thus causing a minimum flooding of the channels the worms have made for themselves down below.

Except for watering your boxes once a week, and keeping an eye on those two ridges of cornmeal-coffee mix after about the third week, your first two culture boxes will need no more attention until it comes to subdivision them into four; so you are ready to store them now.

The bottom box in the single stack is what we call "a trap." Now and then, for reasons of their own, worms—like small boys—take it into their heads to run away from home and see the world. Other times, they leave because they're too dry, too wet, too crowded, or too hungry, or just plain TOO. Maybe they get bored? Who knows?

For small boys we leave a lightly burning in the window and a piece of cake on the table. For the wandering worms we provide another box of compost down on the floor (where they usually land). They crawl in there, feeling they've gone somewhere different. A good worm man keeps this trap regularly watered, and looks inside about once a week to retrieve the vagabonds and put them back upstairs. If they didn't have this sanctuary to go to, they'd crawl around on the dry floor and be dead next morning.

The box used for the trap is not equipped with a false, loose-lath bottom, nor has it any burlap or corrugated paper on the bottom. Rather, its bottom is made of at least three pieces of box material, laid one-eighth of an inch apart from each other and from the sidewalls of the box, to give the worms all the chance in the world to crawl into the trap from the floor. The trap bottom also has a couple of lattice slides on the underside for airspace.

This trap need not be built up to seven inches, like the culture box. It can be left as is, or a shallower box four or five inches can serve, just so its upper rim is of the same dimensions as the boxes that are going to be stacked over it. Also, it need have only four inches of compost in it, because it is only a temporary feeding station, not the permanent home. The trap is a good barometer as to how good your earthworm husbandry is. Learn lessons from it.

Next above the trap comes the spacer. Make yourself a supply of spacers out of two pieces of 2" x 2" the length of the box and two pieces of lath the width of the box. Nail the laths onto the upper corners of the 2" x 2"s, securely, with three shingle nails in each corner. These spacers provide air circulation between the culture boxes in the stack, and are high enough to permit that thin pipe and right-angle nozzle to reach in and water the boxes evenly and completely without lifting them down each time. Considering how heavy the box becomes after awhile (about forty pounds), the spacer is a negligible device.

So we alternate the spacers and culture boxes until we come to the top—most spacer on the top box in the stack, and there we put a solid wooden cover for general protection from the elements (if you're keeping your stack outside) and from cats, birds—yes, and people.

Caution: Be sure your boxes and spacers are flush with one another, and that vertically the stack is not leaning in any direction, in order to avoid the whole thing tumbling over some day when a cat or a dog or you yourself give it a slight bump. Also, when storing indoors, place your stack several inches away from walls, not only for circulation reasons, but so that light may penetrate down behind.

We advocate keeping a twenty-five watt night light over the stack indoors, and, if at all possible, outdoors. The expense is practically nil, compared with the sentiment that reigns in the wormery that provides precaution against worm-wandering.

The temperature of your storage place should get no lower than fifty degrees, nor higher than seventy-five degrees, for best results. Worms work best at sixty to seventy-five degrees. Below sixty they begin to get sluggish, and at thirty-two degrees and lower they are completely dormant—merely bailing up somewhere to await better conditions. During the colder months we use a simple wafer-type thermostat that turns on a fan-type 650-watt electric heater when the temperature drops to fifty degrees. Our culture box storage room is a well-insulated...
six by fifteen-foot lean-to on an outbuilding. This economical set-up has paid for itself many times over in continuous worm production.

While it is all right to keep your stack outdoors during the milder weather, where it is protected from excessive heat, wind, and rain, you must bring it in for the winter if you live in a cold climate. It pays you well.

The "Culture Box" Technique

About the simplest method we know for breeding earthworms is the "culture-box" technique. As described above, culture boxes are easy to make.

Except for watering the boxes once a week, your original culture box needs no more attention until it's time to divide each one into two boxes. (It's been conservatively estimated that one earthworm will produce over two hundred others in one year—so you can see why subdividing is so necessary and so rewarding.)

Here's a timetable for subdividing culture boxes:

1. Prepare a new culture box similar to the first one you made. Put in about an inch layer of compost, consisting of soil, manure, and peat moss.
2. Remove burlap, grass mat, and uneaten cornmeal-coffee grounds mix from the top of original culture box and lay these materials over the inch of compost in the new box. Many baby earthworms will be clinging to these materials, and this is a good place to deposit them.
3. Expose surface of original box to the light for a few minutes until the larger worms have had a chance to go back to their channels below. Remember, the spawn and capsules are what we're after. These are mostly in the upper two to three inches of the box at dividing time. The lower three to four inches are the headquarters of the breeders; we don't aim to disturb this area any more than necessary.
4. Prop your original box. Quickly and gently start scraping out the compost, with your fingers preferably, or you may use a small garden fork, but not a solid-edged tool which will cut your worms. Let these scarpings fall in a pile in front of you, onto a cardboard or heavy paper. As this collects, empty it into the new box.
5. Keep scraping—taking a half-inch depth at a time—until you begin to see the many heads of your breeders sticking up out of their channels. Then stop, turn your box bottom side up, prop it, and similarly go to work on the bottom half until you come to the breeders there. Empty your remaining scarpings into the new box and level them out gently.
6. As you scrape, occasional breeders that failed to get out of the way will show up on your pile. Save them in a can until you're through scraping and then toss them back into the original box.
7. Set your original box down level on the table again. Sprinkle whole surface lightly with a handful of cornmeal-coffee grounds mix. Fill box to one inch from top with new compost.
8. Lay down the two ridges of cornmeal-coffee mix, top with new grass mat and new burlap, gently water with a quart of water, and store it. Divide this box again in about thirty days—watering and feeding between-time as above instructed.

Note: You will want to keep a record on each box from now on, to remind you when to feed, inspect, and divide again. We thumb-tack a card on each box, using waterproof ink to note thereon everything that we do to the box, and the dates thereof. Thus, we keep in touch with the history of our stock from the beginning on out.

Beginning about the fourth month after starting your original boxes, you will notice that the bottom four inches of material (the breeders' home) is getting blacker and blacker, and finely granulated. It will look as different from the original coarse compost as day is from night. This is your new, perfect earth, made by Nature's perfect earthmaker, the earthworm. Cherish it! Sometimes this transformation takes a little longer; sometimes a little shorter. But when it has happened, it's time to separate the breeders from this, their old home, and provide them with a brand-new home in all-new compost.

Again, you will have refrained from watering the culture box during the week you are planning to do this job. After going through the usual steps of scraping down to the breeders, as above instructed, turn the breeders' box upside down onto a cardboard under a strong light. Pile the castings up in a tall, tight cone, and give the worms time to get clear down to the bottom-center of the cone in a solid mass. This should not take more than twenty minutes. Then go back and start lopping off the top of the cone in double-handfuls—collecting this in a pail.

Then start cutting in around the base of the cone. Keep these two maneuvers up until you see the boiling mass of worms at the bottom. Lift them up in both hands and immediately plant them in a newly-prepared culture box as you did in the beginning, when they first were shipped to you.

In the castings there may still be eggs and white spawn. The eggs you can lift out with a spoon, as mentioned. The spawn will go down and roll up in balls and masses under the light, if given plenty of time, and may be planted in another box.

After you've racked up ten or fifteen culture boxes full of worms, you are ready to introduce as many as you want to spare into outdoor pits. Just be sure to remember that the worm works best in the upper six to ten inches. It's folly to throw a pile three to five feet high at him. Rather, make your pit long and shallow.

Plan to plant five hundred breeders or a thousand mixed sizes per cubic foot of compost and they will do their job quickly and well. Be sure to have a solid, or a one-half-inch wire netting bottom on your pit to keep the moles from ravaging it. Planking, siallap, or a thin layer (one inch) of concrete will do. The sides can be similar wood, four-inch concrete walls,
or concrete blocks. An over-all height of two feet provides room for ten to twelve inches of compost on the bottom and protective layers of dry leaves, wilted grass, or hay, to shield the worms from the elements. We stock our own commercial-size concrete pit with 100,000 earthworms. It has produced millions more and hundreds of dollars' worth of "the good earth."

In your outdoor pit, of course, you will not be restricted to soil, peat moss and manure for your compost. In fact, we avoid peat moss altogether in our outdoor culture. There's so much more other material to use: all the weeds on the place, fallen and waste fruits and leftovers from the vegetable garden, and table-scraps; everything and anything. But always be sure you are putting in your full one-third of screened, clean earth, and one-third of fairly fresh animal manure. Work out your own dividing and cast-harvesting methods, based on what you've learned by working with the worm in the culture box. Don't bother other people about these techniques—learn by trying and doing, and you'll simply love it!

I've really enjoyed the chance to explain the hows and why of earthworm breeding—the world's most fascinating indoor gardening hobby.

Now you're ready to begin your own project. I'm sure you personally will greatly enjoy the "earthworm game" and—more important—you garden will prosper more than ever.

Excerpts reprinted by permission from the Organic Gardening and Farming magazine. (Dec. 1957; Jan. and Feb., 1958.)

Editor's Note: Dorothy Hewett is the distaff side of the George and Dorothy Hewett Earthworm Hatchery, Alderwood Manor, and, as she says in her ad on page 108, she is too busy to welcome visitors at the Hatchery but will be glad to see and talk to anyone at her downtown headquarters in Seattle at the Farmer's Public Market.

Notes From Burnaby, British Columbia

This was written for publication in British Columbia (Vancouver) for publication in May but is applicable to other parts of the country later in the season and is all good sound advice.

By Grace Conboy

Those of you who grow Polyanthus, Primroses, and the Juliana Clan should get busy immediately and lift, divide, break back the old roots, and reset the rosettes of sturdy new growth into prepared humusy beds (bone meal and a shaking of superphosphate should already have been worked into new sites). Have a can of Aldrin 2 1/2% beside you (any can that can have holes punched into the top as a shaker). Shake a lucky pepping into each prepared hole before planting—to protect your plants from the strawberry weevil larvae. Soak newly planted stock thoroughly and watch them grow! The care you give these Vernales Primulas now, before the summer dry spells are here, will assist in setting firm bud crowns for next Spring's display.

This Spring's seedlings will have already been pricked out into a good enriched soil, in flats, plant bands, or small pots. A weather eye must be kept on these new fellows to see that they do not dry off. Watering must be done cautiously, preferably from below. A mild solution of potassium permanganate (1/2 tsp. to 1 gallon) or a tablespoon of Captan (5%) dissolved in 1 gallon of water serves as a good fungicide. By mid-June these small plants should be large enough to set into their permanent positions following the above procedure for setting out plants.

Auriculas—Show and Alpine—should be repotted in a good wholesome compost. I use a mixture of leaf mould and rotted peat with sand worked through, one cup of bone meal 1/2 cup or superphosphate and 1/2 cup of fish meal per wheelbarrow load of soil; with very good results.

During the dry spell it is well to soak your rock garden about every fourth day, especially any newly planted shrubs. The drying winds and bright sunshine we have had so early in the season will do much damage to new growth if sufficient moisture is not available.

THE SCOTTISH ROCK GARDEN CLUB

A rock garden without Primulas is like Roast Lamb without mint sauce. A lover of Primulas who is not a member of the Scottish Rock Garden Club is also missing something.

To Overseas members we offer two journals and the seed exchange. The annual subscription is 10/($1.50 plus 25c handling).

You will enjoy membership, J. T. Aitken, 75 Whitehouse Road, Edinburgh 4, Scotland—Honorary Publicity Manager.

THE NORTHERN HORTICULTURAL SOCIETY

HARROGATE, ENGLAND

This Society owns and controls gardens in Harrogate, a locality particularly favoured climatically for the cultivation of European and Asiatic Primulae. It publishes a Journal of specialized horticultural interest which will be mailed regularly to Fellows. Subscription £2. 2s Od per year.

Further particulars, and arrangements for remittance may be obtained from:

The Secretary, Northern Horticultural Society
Harlow Carr, Harrogate, Yorkshire, England

THE ALPINE GARDEN SOCIETY

Has Over 160 Members In The United States Of America

Its Quarterly Bulletin, of nearly 100 pages, is generally recognized as one of the best specialist horticultural publications in the World.

Its Seed Distribution Scheme offers a choice of well over 2,000 kinds from which Overseas Members can annually select 15 packets (donors, 20 packets) of seed which in many cases is not otherwise procurable. There is always a good choice of primulas.

The Annual Subscription, dating from the 1st of January, is $1, payable to the Secretary, C. B. Saunders, Husseys, Green Street Green, Farnborough, Kent, England, but American members may find it more convenient to send $2.80 to Dr. C. R. Worth, Groton, New York, the Society's Hon. Assistant Secretary in the U. S. A., who is empowered to receive subscriptions and to issue receipts on behalf of the Society.

THE AMERICAN PRIMROSE SOCIETY
New Book By Dorett a Klaber

A Review

Dorett a Klaber's latest book, entitled Rock Garden Plants, was written for the average home gardener, and is the most comprehensive and instructive book on the subject we have seen so far. Being the A. P. S. regional editor for Pennsylvania, Mrs. Klaber has covered the Primula clan very well. The most important thing to know about Mrs. Klaber regarding Primroses is that she grows them herself and uses them wherever she thinks they will do well.

The book is illustrated with lovely pen and ink drawings by the author and a list of "succession of bloom" sets forth a monthly program of planting for year-round color and fragrance. The book also contains specific instructions for building a dry wall and beautifying it with plants of your choice.

This book is well worth the price of $3.95 as Mrs. Klaber is not only a well known landscape gardener and horticulturist, but is tops in this country on this subject.

The book may be purchased from the J. K. Gill Company, 408 S. W. Fifth Avenue, Portland 4, Oregon.

American Primrose Society

APPLICATION FOR MEMBERSHIP OR RENEWAL
The official organ of the American Primrose Society

Mrs. Orval Agee, A.P.S. Treasurer
11112 S.E. Wood Avenue,
Milwaukie 22, Oregon.

I desire to be admitted to or to renew my membership in the AMERICAN PRIMROSE SOCIETY. Herewith I enclose dues, as checked below, which will include a year's subscription to the Quarterly.

( ) First member of the household.......................... $ 3.50
( ) Three years if paid in advance ...................... 10.00
( ) Second member (no subscription)....................... 1.00
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( ) Life Membership ................................ 100.00
( ) Commercial Listings in Capitals in Rotter 1.00
( ) Overseas Membership .......................... 2.50

Kindly make checks payable to the American Primrose Society

Gardening Glossary

The more experienced a gardener becomes, the more he wants to learn about the fine points of his hobby. Part of this progress is the acquisition of a gardening vocabulary. Herewith are brief explanations of some of the more common terms. Familiarity with them will actually smooth the path to a successful garden.

BY H. C. BARDES

ANNUALS—Plants that complete their life cycle in one year.
B & B—Balled and burlaped; a growing shrub or tree with the root ball wrapped in burlap.
BARE ROOT—A dormant plant with no ball of soil.
BIENNIALS—Plants requiring two years from seed to maturity.
BOLTING—When leafy vegetables go to seed prematurely.
BULB—An underground bud.
CANE—A woody stem growing from the ground.
CORM—An underground stem.
CROWN—The point at which top and root growth join.
CUTTING—Piece of vegetative growth cut from a plant for propagation.
DISBUDDING—Removal of flower buds to promote a large blossom.
DORMANT SPRAY—Insecticide or fungicide applied to plants before spring growth starts.
GRAFT—A form of vegetative propagation; a cion joined to a growing stock.
GREEN MANURE—Vegetative cover crops plowed into the soil.
HARDEN OFF—Gradual exposure to custom young plants to the outdoors.
HARDY PLANTS— Able to survive winter in a given zone without protection.
HERBACEOUS—Fleshy stemmed plants as opposed to woody plants.
HYBRID—A plant produced by cross-pollination of two known parent plants.
LAYERING—Propagation by inducing root growth on a stem before cutting it off the plant.
MULCH—Soil covering to reduce temperature fluctuations, moisture loss and weed growth.
pH—The measure of soil acidity or alkalinity.
PERENNIALS—Plants that persist for a number of years.
PINCHING—Taking out a plant's growing tip to induce branching.
PRICKING-OUT—Transplanting; applied to seedlings.
PRUNING—Removal of crowded or dead woody stems.
RHIZOME—Storage rootstock.
ROOT PRUNE—To cut back a root system to promote a close ball of roots or force flowering.
SELF-FRUITFUL—A monoecious plant; one that possesses both staminate (male) and pistillate (female) flowers, and thus is able to pollinate itself.
SUBSOIL—The heavy underlayer, usually low in fertility.
TOPSOIL—The upper inches of friable, rich earth.
TRANSPIRATION—The loss of water through plant leaves.
TUBER—A modified underground stem with growth buds.
WHIP—A single-stemmed young tree.

First Swiss Horticultural Show In Zurich

One of the largest flower shows in the world is currently being held on the shores of Lake Zurich, Switzerland, and will continue until the middle of October. More than a million and a half square feet of ground have been converted into a panorama of beautiful flowers for the first Swiss Horticultural Exhibition.

As part of the exhibit which covers both shores of Lake Zurich, French Gardens modeled after those of aristocratic 18th century Paris have been created and, by way of contrast, there will be a variety of modern suburban landscaping on display.

Special features of the Horticultural Exhibition include music, ballet, and theatrical performances, fashion shows, and unusual flower exhibits from all over the world.

Transportation between both shores is provided by chair lifts and several restaurants have been especially constructed to serve rare Swiss specialties to visiting tourists.

In addition to this year's Horticultural Exhibition, there are other exceptional Swiss garden spots which may be seen in bloom every year from the beginning of June through October. The Alpine Garden of Schynige Platte, 6,000 feet above Interlaken, has one of Europe's most remarkable collections of mountain flowers. Of the 900 or so known Alpine plants, 55 types can be seen here.

In southern Switzerland on the Brissago Islands in Lake Maggiore—only 1,500 miles from the Alpine display—visitors can see lush tropical gardens surrounded by a warm and romantic countryside.

For information, write to Bruno Barouli, Swiss National Tourist Office; 10 West 49th Street, New York 20, N. Y. (Telephone: Plaza 7-5944).

When shooting the strawberry weevil, always come up on the windward side and have gun bearer stand ready with extra rifle as the weevil is savage and hard to kill.

SEEDS OF THE NEW X ARENSII "MULTIFLORA"

Robert Luscher, A. P. S. Translation Editor, is just returned from Europe where he obtained a very limited amount of x Arendsii "Multiflora" seed which he is willing to share. 30 seeds for $1.00 as long as they last. Robert Luscher, Thedford P. O. Ontario, Canada.

NATIONAL AURICULA AND PRIMULA SOCIETY, Southern Section
Invites all Auricula and Primula lovers to join this Old Society
Membership of $1.50 per year includes Year Book
Hon. Sec. Mr. G. Redvers Williams,
Mount Pleasant, Eastbury, Newbury, Berks., Eng.

Flowers and Fountains—Unique floral patterns and charming fountains are among the visual treats for visitors at the Swiss Horticultural Exhibit at Zurich.
Statistics From The 1959 Seed Exchange
BY ELMER BALDWIN

Total Number of items in Exchange.................. 459
Number of items not requested.......................... 11
Number of members requesting seed...................... 217
Number of Packets sent out............................... 4,592
Greatest number of requests for a single item......... 113
Number of items for which requests exceed 100........ 1
  For which requests exceeded 50....................... 8
  For which requests exceeded 10...................... 337
Primula varieties and/or species in exchange........ 61
Total number of primula packets sent.................. 1,862
The item receiving the greatest number of requests was a primula.

AURICULAS named varieties of Show and Alpine
We now have a good stock of all the best known varieties. A few novelties are in limited quantity. Our catalogue of Primulas, rare Alpine, Heathers, and dwarf Evergreens will interest you. It is free.

Catalogue free
ALPENGLOW GARDENS
MICHAUD & COMPANY
13328 Trans-Canada Highway
New Westminster, B.C., Canada

Hardy Cyclamen
We handle all species and varieties in commerce. Send NOW for complete list.

Our prices are very reasonable, for example:
12 Cyclamen Neapolitanum large tubers, $2.50
12 Cyclamen Europeum large tubers, $2.50

DELKIN'S BULBS
4205 Hunts Point Road
Bellevue, Washington

POLYANTHUS CANDELABRA
AURICULAS DENTICULATAS
PLANTS SEEDS
List on request
Will ship to all States
SKY HOOK FARM
JOHNSON, VERMONT

IRIS - PRIMROSES
ALL TYPES OF IRIS including Dwarf, Medium, and Tall Bearded, Japanese, Siberian, Dutch, English, Reticulata and many species.
Free Iris Catalog — No color
BROWN'S IRIS GARDEN
14926 Hi-way 99, Lynnwood, Wash. (Nine miles North of Seattle limits)

Silver Dollar Polyanthus
raised from our easily germinated
Hand Pollinated Seed
All shades and colors still $1 pkt.
Order Now from our uniquely illustrated listings
Earnhaven Gresham, Ore.
Mr. H. C. Winch
MacDonald & Wilson, Limited
562 Beatty Street
Vancouver 3, B.C.

Dear Sir:

Fertosan Compost Accelerator has been giving us good results.

The breaking down of compost material to a fine brown texture, full of worms, is the result of composting with Fertosan.

We notice that our blooms are larger and the foliage much healthier. Further, we have been lightly covering the lawns with a thin coating of compost, then gently raking it in. The result has been most gratifying.

In our greenhouse we use Fertosan solution, applied overhead with a watering can. Bench fungus and the black stem rot have disappeared. Previously our loss to these two diseases was extensive.

Sincerely,

W. P. Dodgshon
Foreman Gardener

The name of this powerful bug killer is Isotox* Garden Spray—one of the famous ortho* insecticides.

Developed by the California Spray-Chemical Corporation during ten years' research, Isotox is actually a skillful combination of several new insecticides, including Lindane, Malathion, and DDD.

It's as easy to apply as watering your plants, since Isotox can be used in an ortho® Spray-Ette which attaches to your garden hose. What's more, it is surprisingly economical—costs about nine cents per diluted gallon.

Many gardeners in the West are also using Isotox in combination with Orthorix® Spray, a fungicide, so that in one spraying they control plant diseases like mildew or rust, as well as kill any one of 43 bug varieties that may be around.

Yes, modern science has given us all a little greener thumb—and an infinitely better chance to grow healthier, more beautiful roses and other flowers and shrubs with a bare minimum of special care—and worry.

JOHN PAUL EDWARDS of Oakland, California, is a leading expert on roses in the U.S., and a prolific writer and lecturer on gardening. A Consulting Rosarian of the American Rose Society, he is the author of a best-selling book on growing roses.
THEY TELL US - OVER AND OVER
NATRIPHENE
STOPS DAMP-OFF QUICK
Tablets for Trial Orders

Powdered Natrphene
For Commercial Growers

In Greenhouse Cleanup it removes all scum, algae, moss, etc., and makes flats last for years.

We have found it to be a specific for Anthracnose on Philodendrons.

"I use Natrphene on all seed I plant and water seed pans. My rooting medium is treated after each batch. I have used this same rooting medium now over 2 years. Natrphene kills fungus and stimulates plant growth."
Peter Klein

"Natrphene gives us security in all fungus and rot problems. We hope it is always available. We could not successfully operate without it."

"Natrphene is in use from the Royal Botanical Gardens in Ceylon to the bulb fields of Holland. It is the only material fully effective against both fungus and bacterial diseases of plants.

Was used successfully to control bacterial disease of Orchids.

Ohio Rose Nursery: Have been getting good results keeping "Die-Back" in check on our rose plants during storage from fall to spring.

Ship Natrphene Fungicide checked below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial box makes 16 gals. fungicide</td>
<td>$1.00</td>
</tr>
<tr>
<td>100 tablet box makes 200 gals. at 2½c</td>
<td>5.00</td>
</tr>
<tr>
<td>2½ lb. can powder for 500 gals. at 1½c</td>
<td>7.50</td>
</tr>
</tbody>
</table>

☐ Invoice same or ☐ check enclosed

Signed __________________________________________ Title ________________________________