Member--Men's Garden Clubs of America • Minnesota State Horticultural Society

October 1966. Volume 24. No. 10

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### Back to Mount Olivet -- October 11

Our meeting place will be the Mount Olivet Lutheran Church, 50th St. and Knox Ave. S., Tuesday, October 11, at 5:45 p.m., with the dinner priced at \$2.00.

### An Unusual Program Promises Great Interest

Bud Christenson has arranged something quite different for us this month. Several of the fellows will talk for a maximum of two minutes on some garden experience they had had...something they have tried in the garden...an idea they would like to pursue in gardening...some new garden gadget.

Perhaps you will be called on. We suspect Bud would like to have 100% participation in this program, so it would be wise to come prepared to talk for two minutes. A hint: two minutes is a very short time to speak on a subject you know well.

Topic ideas: My Most Unusual Flower. The Best Gadget I Own. I Never Water My Lawn. Chemical Fertilizer is Best. Organic Fertilizer is For the Birds. Unwin Dwarf Dahlias from Seed. Salvaging My Neighbor's Geraniums come Wintertime. Grass Clippings Can Be Used for Mulch. Best Hint for Keeping a Garden Pest-Free. My Experience With a Lawn Sweeper. Why I Lost a Valuable Evergreen Last Winter. If I Were Building a New Perennial Bed. Some Roses Do have Scent.

### A Special Invitation To Each of You

Now that you've read the suggested talk topics in the preceding paragraph, who will write us a few paragraphs on any of these topics? Will you? There are some good ideas there which we could record permanently in THE GARDEN SPRAY.

### Our Christmas Party Will Be December 13

Remember the date. Now is the time to invite your lady friend and other guests you may plan to bring. Details are not final but will be announced soon. In the meantime, chairman Jack Peterson suggests we make our plans.

### OVER THE GARDEN GATE

by Bill Hull

### How Asphalt Increases Crop Production

One of the most interesting new stories recently, deals with the use of a giant watertight barrier of asphalt under dry, sandy farm land, to make land produce up to twice as much food. The news of this comes from East Lansing. Michigan, although the work seems to have been done by the American Oil Co. By doubling the soil's water-holding capacity, making more water available to growing plants, the barriers could mean reclaiming 10 million acres of droughty, sandy soils in Michigan alone, they estimated. It has been estimated this could mean doubling the production on the rice paddies of some Far East nations. Even desert lands might be reclaimed. To be spedific: in trials with cabbage, patches with asphalt under them two feet deep, yielded 505 crates an acre, compared with 260 on adjacent test patches. This amounted to a \$490 an acre boost at a price of \$2 a crate, while cost of laying down the asphalt barrier is \$250 an acre with the present costly equipment. So the first year's profit is nearly double the cost of installation. The layers would last about 15 years. In 1965 trials with potatoes, the scientists said, sand soil with an asphalt layer produced 50 per cent higher yields than irrigated plots with no asphalt.

### Death Takes World Renowned Rosarian

We are sorry to bring to your attention the sad death of Eugene E. Boerner, world famous plant breeder and director of research of the Jackson & Perkins Co. Gene, as those of us who had the honor of knowing him called him, was best known for his many rose introductions but also created the Bird Series of 'mums,' delphiniums and various other perennials. A few years ago when MGCA convention toured the Newark J & P gardens, MGCA awarded Gene its Gold Medal for plant breeding and other horticultural work.

Here are seventeen outstanding roses that Gene Boerner left as a legacy to all of us: Aloha, Diamond Jubilee, Fashion, Firecracker, Golden Masterpiece, Gold Cup, Goldilocks, Hawaii, Ivory Fashion, Jiminy Cricket, Lavender Pinocchio, Ma Perkins, Masquerade, New Yorker, Serenade, Spartan and Vogue.

"Outdoor Recreation Action" is a new quarterly publication by the Bureau of Outdoor Recreation, Department of Interior, \$1.50 a year from the Superintendent of Documents, U. S. Govt. Printing Office, Washington, D.C. It will summarize important actions and list sources of information on all actions reported.

When travelling and buying or accepting exchange plants, be sure to comply with plant quarantine regulations. I know some people who won't even accept a gift plant because of pests they may introduce to their garden. The U.S. Dept. of Agriculture is so concerned, it has issued a booklet called "For a Beautiful America, Guard Against Plant Pests." It doesn't say much that any thinking and experienced gardener would know, except to mention that plants from foreign countries should first be cleared through the Plant Quarantine Division of the U.S.Dept. Agric., Hyattsville, Maryland. The problem is that beginning gardeners are often the ones most apt to bring in plants hosting pests.

### PRESIDENT BOB SAYS ....

As program chairman last year, I remember hearing members say the meetings were too short. I didn't hear any such remarks following our September meeting. It was a full evening but enjoyed by all. I thought maybe the advance announcement of our convention fund raising kick-off would scare some away. Not only was the attendance good but the response to Archie's appeal was terrific. The flower show was the best yet, which made picking a winner for the Queen of the Shows Award extremely difficult for the judges. Congratulations to Al Nelson, the winner. Our thanks to Phil and Ann Smith and all the others who had a hand in providing the fine flower arrangements at the tables. I feel that Cortis richly deserved the fine tribute given him by Dr. Snyder for past efforts for our club, the Minnesota Hort. Society and the Arboretum.

The many talents and special interests of our members certainly makes the difficult job providing good programs much easier for our program chairman. John Kolb and Stan Bachman, both professional members, combined to give us an interesting program on lawns and spring flowering bulbs. I am sorry it was necessary to limit the time given them. Stan was especially under a handicap because he knew that every minute he talked Henry was missing out on the Twins ballgame. John's talk on lawn care was extremely practical and interesting. It covered starting and renovating, fertilizing, weed and disease control, watering and cutting. We would like his talk recorded for use in THE GARDEN SPRAY.

The Big Pumpkin contest is fast drawing to a close. Dale Durst is hoping for a good response, with announcements appearing in the Horticulturist and in local papers. Certified weight and all information must be to Dale Durst before October 20. The winner will receive \$10, with two \$5 runner-ups.

### Convention Notes

Next year's convention was incorporated on August 25 as the MGCA Minneapolis Convention, Inc. The incorporators and directors are Dwight Stone, Bill Hull, Charles Proctor and Bob Smith. At the first directors meeting, Dwight Stone was elected president, Grant Christenson, secretary and Frank Vixo, treasurer. Ed Montgomery is attorney. It was resolved that the membership consist of all members of the MGC of Minneapolis, including all classifications of members. Any member has the option of withdrawing from corporation membership by written notice within 60 days to the secretary. New members to the club also become corporation members with the same right of withdrawal. President Dwight was authorized to appoint committees and chairmen necessary to organize and act as hosts in 1967. Treasurer Frank was authorized to open a bank account at the Northwestern National Bank.

The convention committee reversed its earlier decision and decided to raise working funds by membership subscription. Archie Flack presented this plan to the membership at the September meeting and letters have been sent to members explaining this plan. Prompt response would be appreciated. Your subscription will be used to provide a cash working fund until income from other sources is received and to provide a guarantee fund for the convention. The registration fee will be set at an amount which, along with other income, will provide the necessary funds to make the convention a financial success. As in any venture, there are always risks. A profit to be gained or a loss to be sustained. If we all pitch in, this convention will be a success.

# $\frac{\text{TWELVE AREAS OF IHOUGHT}}{\frac{\text{CONCERNING}}{\text{COLD FRAMES AND HOTBEDS}}}$

by Phil Smith

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No garden is complete without a cold frame, which is a bottomless box with a transparent top; it is used to overcome unfavorable weather and provide good conditions for plant growth.

CONSTRUCTION. The standard size is 3 ft. x 6 ft. using a standard size sash or storm window, but any size convenient to the location or corresponding to available sash or flats may be used. One-inch lumber, preferably redwood, white oak or spruce, is commonly used for the sides, although a masonry construction is more air-tight, permanent and easier to keep clean. The corners of a wood frame should be braced with angle brackets. The front side is usually 8-12 in. high with the rear being 14-20 in. in order to provide a slope for rain run-off and better exposure to the sun.

The top sash may be hinged for access and ventilation, but a removable sash may be taken off for storage and this can be an advantage. Polyethylene may be substituted for glass but must be periodically replaced. A cross-tie, preferably removably notched into the front and rear sides, should be added for bracing the frame and supporting the sash. The frame should be dug into the ground approximately 3 inches. Also, the frame can be placed on a brick or other masonry foundation to prevent rotting of wood and ingress of pests.

LOCATION AND SOIL. For most uses, the frame should be placed in an open area and should face south for maximum sunshine, although an eastern exposure is also satisfactory. In the hot months, a northern exposure would be best for striking cuttings; but, unless a portable frame is used, keep the southern exposure and employ shades when propagating cuttings or growing tender seedlings. The frame should be located in the service or work area of the landscape where it can be screened from view. Good places are in the nursery border, compost area, or behind the garage or toolhouse.

The soil within the frame depends upon the type of frame and its use. If used merely for hardening-off flats of seedlings, cold-storing pots of bulbs, or wintering potted perennials plunged into the bed of the brame, then the frame should have a 4-inch bed of sand, crushed rock, gravel or cinders to provide good drainage. Or, a pallet to elevate the flats or pots may be used. However, if the frame is to be used for seeding or as a hotbed, a good soil mixture with humus and sand should be used to a depth of 6 inches, but a rooting medium of sand, moss, etc., is used for rooting cuttings.

The frame can be simply protected from pests by watering the soil each season with a solution of household ammonia, 1 oz. to 1 gallon of water, using 3 gallons for the standard size frame.

HEATED FRAMES AND HOTBEDS. A heated frame or warm frame is very useful in early spring for the early production of seedlings and annual plants, and even for rooting cuttings. The simplest means for heating is to use a lead-sheathed

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## Cold Frames and Hotbeds (continued)

electric resistance cable with a thermostat set for  $40^{\circ}$ . The cable is laid in a zigzag gridiron pattern on the soil surface with the cable rows 8-10 in. apart and a wood pallet is spaced above the cable for carrying the flats or pots. The cable may be easily removed for other uses of the frame.

A hotbed is a heated frame with the cable buried 4-6 in. in the soil, or rooting medium, and seedlings or cuttings are raised directly in the bed. Seeds of annuals can be sown in the warm frame or hotbed in late March. A heated frame is almost a necessity for those starting annuals indoors under lights because the plants should be hardened off in the frame before planting out in mid-May.

<u>VENTILATION</u>. This is the most important detail of successful operation of any type of frame and requires careful attention. The daytime temperature inside a frame can rise sharply and the sun will soon cook the plants if ventilation is not provided. Also, if the frame contains young seedlings or cuttings they may be attacked by damping-off fungi allowed to prosper because of inadequate ventilation.

A notched or stepped wooden block is handy for raising the sash to various levels, although a prop stick may also be used. Ventilating is often a chore for the wife since the frame should not be opened to the cool air of morning but should be opened when the morning's sun begins to elevate the frame's temperature, perhaps around 10 a.m. on an average spring morning. Care must be taken to ventilate the frame gradually by first raising the sash only about 2 inches so that the incoming cool air does not injure the plants. As the day's temperature rises, the sash can be opened further, but the frame should also be closed early enough in the afternoon to catch some heat for the night. If the day's wind is strong, the sash should be raised only enough to clear the inner condensation.

SHADING AND WATERING. For some frame uses, it is necessary to provide shades for the sash. Rooting cuttings, small seedlings, seedlings recently pricked out or transplanted, and of course, shade loving plants all should be shaded from direct sun. A white wash may be used but removable shades of materials tacked to a frame are better. These include wood lath, split bamboo and openweave fabrics, such as burlap. Removable shades should be taken off on a cloudy day when more light is needed.

Watering is best done in the morning on a preferably mild and sunny day in order to give the foliage an opportunity to dry during the day. Like poor ventilation, over-watering will encourage damping-off disease. If plants or seedlings are grown in pots, it is good to water them by immersing the pots in a pan or pail up to their rim. The water should be warmed to the approximate air temperature inside the frame and cold water should not be used, at least until the plants have hardened somewhat.

HARDENING-OFF. One of the most effective uses of a cold frame, or preferably a heated frame, is for hardening-off annual seedlings grown indoors, under lights or in a greenhouse. In late March, seedlings should be moved to the frame, the thermostat being set for 40°. Then by mid-May, the plants can be transplanted into the border without being harmed by cool nights or even by a light frost. When hardening-off seedlings, particular attention should be

# Cold Frames and Hotbeds (continued)

SEEDING ANNUALS. Although in Minnesota it is better to seed most annuals indoors for earliest bloom in the garden, many annuals can be seeded directly in the frame in early or mid-April. Seed directly into the soil bed or seed in flats placed on a pallet or rack. Use a light compost including garden soil, sand and peat, and soak the flats in a pan to thoroughly moisten them after seeding. No additional watering should usually be needed until after germination. The sash should be kept closed until germination starts, and then particular attention must be given to ventilation and watering.

SEEDING PERENNIALS. Many biennials and perennials can be seeded any time in the spring and summer season until September. However, unless the plants are successfully carried over the first winter for the first bloom the following season, all effort has been for naught. Therefore, it is a good idea to seed perennials directly in the soil bed of a cold frame where the plants can be given better protection for the first winter.

It is best to seed most perennials and biennials in the spring because the larger plants will winter better. However, freshly harvested seed from some perennials, such as delphiniums, can be sown in August or early September with good success. The soil bed in the cold frame should have an ample sand content to provide good drainage, and the frame should be well filled and covered with straw, hay or leaves to protect the plants throughout the first winter.

COVERING AND WINTER PROTECTION. When a cold frame is used for carrying biennials or perennials over the winter, the inside of the frame under the sash should be filled with dry hay, straw or leaves. This filler should be loosely packed to keep the plants from smothering.

It is also a good idea to cover the outer surfaces of the frame with hay or straw. If baled hay is used, the bales can be quickly and easily arranged or stacked around the frame and upon the sash. Also, a second frame or trough can be built around the coldframe and the same filled with the cover material so as to provide good insulation. The covering material should itself be loosely covered with tar paper or other waterproof material to keep the ice and snow from sealing air from the frame, which might smother the plants.

The plastic covered fiberglass blankets used by the construction trade for protecting concrete in cold weather are also good for insulating cold frames. Also, heavy mats of quilted reeds or straw may be conveniently used for winter protection and also for covering during the cold nights of early spring. When the days lengthen and the sun begins to increase daytime temperatures, the covering is gradually removed, and then daytime ventilation becomes necessary.

EARLY VEGETABLES. A cold frame or hot bed may be used for growing early vegetables if extra space in the frame is available. Lettuce, radishes, and onions are all easily grown, and seedling plants of tomatoes, peppers, cabbage, broccoli, cauliflower, etc., may also be started in the frame if you are a vegetable grower. In general, the comments given above for annual flowers should be followed for vegetables also.

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### Cold Frames and Hotbeds (continued)

PROPAGATION. A frame is useful for providing a humid environment for the rooting of cuttings in the summer. The soil should be removed and a 3-inch layer of coarse cinders or gravel is placed in the frame and tamped firmly. Then a 4-6 in. bed of rooting medium, such as a mixture of sand and peat, coarse sand, vermiculite, perlite, or a sandy soil, is added. Alternatively, the cuttings can be inserted in pots or flats provided with the rooting medium.

The frame should be located where shade from the direct sun will be provided. The air within the frame used for cuttings should be kept humid with little ventilation, and it is therefore important to use a sterilized rooting medium to guard against damping-off.

EFFICIENT USE OF FRAME. Starting in spring, a cold frame is used for sowing annuals and vegetables or for hardening-off seedlings grown indoors or in a greenhouse. Then, in May and June, hardy biennials and perennials, such as foxgloves, canterbury bells, delphiniums, and shasta daisies, can be sown.

In the summer, softwood cuttings of shrubs and evergreens may be inserted for rooting. In August and September, freshly harvested perennial seed should be sown. The frame should be used for protecting plants over the winter, such as the summer-rooted cuttings, young shrub and evergreen plants, mums, and other perennials and biennials not reliably hardy. Also, pots of bulbs for forcing may be cold-stored in the frame. One may not wish to use his frame in all of the above-noted ways, but if two frames are available, it should be possible by careful planning to make extensive use of the frames for all of the above noted purposes.

### MIDDLE AGE-HAS IT CAUGHT UP WITH YOU?

If you have stopped running for trains and winters seem colder, you are getting along quite normally. It seems that they are building staircases steeper than they used to. The risers are higher, or there are more of them. Maybe this is because it is so much farther today from the first floor to the second floor, but I've noticed it is getting harder to make two steps at a time anymore. Nowadays it is all I can do to make one step at a time.

Everything is farther than it used to be. It's twice the distance from my house to the station now, and they've added a fair sized hill that I never noticed before. The trains leave sooner, too; I've given up running for them, because they start faster these days when I try to catch them.

A lot of other things are different lately. Barbers no longer hold up a mirror behind me when they've finished so I can see the back of my head, and my wife has been taking care of the tickets lately when we go to the theatre. They don't put the same material into clothes anymore, either. I've noticed that my suits have a tendency to shrink, especially in certain places, such as around the waist or in the seat of the pants, and the laces they put in shoes nowadays are much harder to reach.

Even the weather is changing. It's getting colder in winter and the summers are hotter than they used to be. I'd go away if it wasn't too far. Snow is heavier when I try to shovel it, and I have to put on rubbers whenever I go out, because

### MINIATURE ROSES

### by Jerry Olson

Miniature roses are truly the sparkling little gems of the rose world. True miniature roses are those having all the characteristics of the larger growing varieties but on a greatly reduced proportionate scale.

The Rosa chinensis var minima was first discovered on the island of Mauritius, perhaps by way of the Orient; and then introduced to England and France around 1800. It is not a true species since it has never been found growing in a completely wild state; however it is believed to be the result of careful and painstaking cultivation by men of the Orient who selected and kept only the smallest plants. Miniatures possess all the attributes and characteristics of other roses including the finest exhibition type hybrid teas, but on a much smaller scale.

These plants are available in bush, climber, or miniature tree types which can be utilized in special little beds, borders, window boxes, pots, rock gardens or as just specimen plants. Their bloom period extends from early spring to late autumn. Prolific bloom can be maintained even thru the heat of July and August by using a heavy mulch to preserve moisture in keeping the roots cool.

The varieties which I have found to be good growers and prolific bloomers are as follows: Cinderella (white with pink edges in cool weather), Red Imp (dark red), Bo-Peep (delicate pink), Pixie Rose (deep pink - exquisite buds), Baby Betsey McCall (pink blend - near perfect form), Baby Ophelia (apple-blossom pink), Eleanor (coral pink), Pixie (white), Baby Masquerade (yellow-red blend - very vigorous), Pixie Gold (beautiful yellow buds), Scarlet Gem (orange-red prolific bloomer), Sweet Fairy (soft pink - fragrant).

After the late 1800's miniatures seemed to disappear from the scene. However, in 1918 a Swiss doctor found a plant growing there which was named Rosa Rouletti in his honor. All of the varieties listed above were developed from this rose or its progency.

In the late 1930's Jan de Vink of Holland introduced a variety produced from an open pollination of Rouletti which gave us the variety P'eon. With this development many new varieties followed. Later Pedro Dot of Spain gave us our first yellows in Baby Gold Star and Rosina plus many other fine varieties.

Here in the U.S.A. many fine miniature roses have been developed by Ralph Moore of Visalia, California.

People who can seldom grow the larger types of roses well, have had luck with the "Little Ones." Their needs are small, but they do like to be planted in a well prepared soil containing plenty of humus and the results are very rewarding.

A planting of miniatures always makes for pleasant conversation. Visitors are always impressed with how neat and compact these small plants look. Some say their minute glossy foliage and little buds look like small precious gems placed there, surely by some pixie angel.