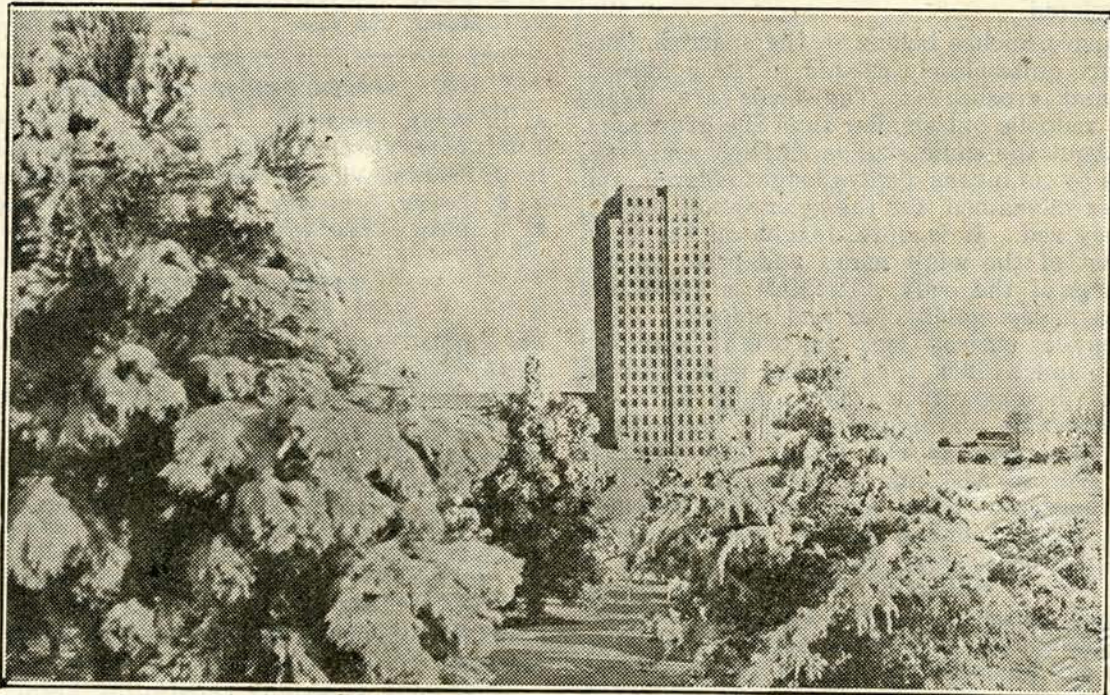


NORTH AND SOUTH DAKOTA HORTICULTURE

FEBRUARY 1936



NORTH DAKOTA'S STATE HOUSE IN WINTER

—Courtesy of The Minneapolis Journal.

634.05



THE PURPLE FINCH

O. A. Stevens

This is one of the less common birds in North Dakota for it is a bird of the forested regions. At Fargo I see perhaps one or two, or at most only a few, during the migration. At Itasca Park in Minnesota the latter part of May we find the purple finch one of the most conspicuous of birds. We find them also in the spruce trees around the Minnesota lakes, scarcely fifty miles from Fargo. They are reported to nest in the Turtle Mountains. They are also not common in South Dakota.

The general distribution of the species extends from New York to central Minnesota northward through the heavier forested parts of Canada. Westward it extends as far as British Columbia and northeastern Alberta. In western United States, a slightly different race occurs along the coastal mountain ranges. In the Rocky Mountain region it is replaced by a different species. In that region and on the coast at lower altitudes in both cases, is found the house finch which is closely related.

The purple finches belong to the sparrow family and are quite closely related to the goldfinch, redpoll and grosbeaks. The birds are larger than the redpolls but smaller than the grosbeaks, in fact about the same size as English sparrows. They are by no means always bright colored, and are rather misnamed, for the color is not purple, but a rosy red. It is quite bright on the head and breast of the adult males and paler on the other parts of the body. The tail is short and forked as in the goldfinches and redpolls.

The females entirely lack the bright color and are very much like the female rose-breasted grosbeaks in appearance. The young birds, of course, resemble the females. The individuals which I have seen in the spring have been of the dull colored sort and could easily pass for English Sparrows. They are somewhat streaked and this feature should attract attention, providing an exceptionally good view of them is obtained. As a matter of fact I usually recognize them by their behavior. They feed a great deal on tree buds, and while sitting quietly in the trees can be observed to reach out after buds or young fruits. They are fairly late migrants, appearing here about the middle of May or later.

The nests are usually placed in evergreen trees. The eggs are blue with some brown spots on the larger end. There seems to be comparatively little exact data on the food of these birds. Their habit of feeding upon buds of fruit trees and other kinds has been repeatedly observed and the birds have sometimes been thought to cause some damage in this respect. Wild fruit and seeds make up a considerable part of their food and during the summer they no doubt eat large

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numbers of insects which are destructive to the forests.

Their song is usually rated quite high. It is a loud clear warble which one writer compares to that of the warbling vireo but delivered more rapidly. It is louder and clearer, having more of the quality of that of the goldfinch or orchard oriole. The flight of the birds is somewhat like that of the redpoll.

Mr. M. J. Magee of Sault Ste. Marie, Michigan, has contributed a unique chapter to bird study through his banding records of purple finches. It is probably because his location is at a point

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NORTH DAKOTA STATE HORTICULTURAL SOCIETY NEWS LETTER



A. F. Yeager,
Secretary,
Fargo, N. D.

Mr. Simmons, Secretary of the South Dakota Society, and myself have made arrangements with **THE AMERICAN FRUIT GROWER** magazine, whereby we are to supply them with news notes each month about fruit, in return for which all members of the North and South Dakota Horticultural Societies will receive free of charge for the next year a subscription to **THE AMERICAN FRUIT GROWER**, the subscription price for which is 50 cents.

With our membership receiving **THE AMERICAN FRUIT GROWER**, **NORTH AND SOUTH DAKOTA HORTICULTURE**, and a choice of premium material, it would seem that we shall be able to add many members to our list. If you have a neighbor who should belong to our society why not get him to join, and secure for yourself (if you are a **NORTH DAKOTA** member) the special premium offered last month for new members by Mr. G. E. Millen. At the same time you have the satisfaction of knowing that you are doing something to spread the gospel of horticulture.

Your secretary has just returned from a trip to Aberdeen, S. Dak., where he participated in the sessions of the South Dakota State Horticultural Society. It was a real thrill to meet such a leader in Great Plains horticulture as John Robertson, the most noted fruit grower of the Dakotas. While many persons credit much of Mr. Robertson's success in raising fruit to his excellent location, I am inclined to believe that much more is due to his knowledge of horticulture, keen insight into plants and their requirements, and finally, his putting into practice the things that he learns. So many of us know how to do things, but do not apply them unless we are forced to do so. The South Dakota trip was a very hasty one, yet provided five of the most profitable and interesting hours that we have experienced in many a day.

While we are speaking of important personages, it is with regret that we report the passing of Mr. Geo. F. Chipman of Winnipeg. He ranks among the top half dozen private experimentors of the Great Plains. It is to be hoped that the wealth of breeding material which he has collected will be made use of by some one else so it will not be lost. Not only was Mr. Chipman a great plant breeder and a great gatherer of facts, but he had the ability of spreading his information among the people so that it would be made use of.

Sayre and Clark of the New York Experiment

Station have found that fertilizer applied to the soil moves downward but not to one side to any extent. Fertilizers were found to be injurious to roots which come in contact with them for 14 days after application. After this time the fertilizer was well enough absorbed and reduced in concentration so that it was no longer toxic.

An anonymous writer to the **FLORISTS' EXCHANGE** pours some hot shots into the botanists for tampering with scientific names. He states that we once used scientific names rather than common names because it was thought that they would be permanent, whereas common names change. As things are now, he suggests that horticulturists adopt standard common names because they seem to be less changeable than the scientific ones. We must admit there is more than a little truth in his claim. For example, since I can remember, the scientific name for apple has been successively **Pyrus malus**, **Malus malus**, and finally **Malus sylvestris**. In a recent article which we had occasion to write, it was necessary to look up all the scientific names in most recent literature in order not to be out of date. In order to be fair, however, we must admit that the botanists are appreciating the situation. There is some agitation among them to declare a ten year holiday on the changing of scientific names.

In a recent survey by the questionnaire method, Mr. Stout of Pennsylvania State College comes to the conclusion that electric hotbeds are too expensive to be considered by a commercial grower of ordinary plants, except where electric rates are extremely low. One cannot afford to pay as much as 3 cents per kilowatt hour for electricity for this purpose.

Recent mail brought a leaflet from Japan listing many varied morning glory varieties being grown by a Japanese Morning Glory Society. Evidently the Japanese taste differs from ours or else we have not appreciated the possibilities of this flower.

There seems to be considerable demand on the part of consumers for squashes of small size. It is squashes of the size of Table Queen and Buttercup that have been gaining in popularity in recent years. No doubt the plant breeder could produce the smaller varieties if they were wanted. However, we run into a situation where the seedsmen, or the persons selecting seed squashes, have a tendency to select larger specimens—we believe without very good reason. Hence, the tendency is for the smaller kinds to be increased in size by selection until they no longer match the customers' preference.

The consumers' preference is a fickle thing unless there is some good reason for it. As an example, Buttercup squash when first offered to



the trade in this locality was hard to sell because of its peculiar shape. Later, this peculiar shape became a mark of quality, so much so that this past season when we grew another variety of squash which had a similar shape though red in color and of large size, it was difficult to convince people that it was not a desirable variety because of poor quality. Thus we see that a characteristic which at first is a detriment later becomes an asset.

In potato variety tests in 15 different locations in northwestern Minnesota, Mr. M. J. Thompson has found Chippewa to be the highest yielder during the past two years, with Warba second. Of all the new varieties of potatoes now on the market, Chippewa seems to me to offer the most promise.

Another one of our good friends has sent in a fine picture of Regal lilies being grown in North Dakota. It is interesting to learn that in this case once more the lilies are being grown near the house foundation. Undoubtedly the warming effect of the house on the soil prevents hard enough freezing to hurt the bulbs. If you have such a location perhaps you might find Regal lilies worth trying because of their great beauty even though they are not hardy in the open.

The first plant, so far as I am aware, worthy of patenting which has been produced by artificial means is a variety of Regal lily which will not shed its pollen. The patent is asked for by the General Electric Company. The variety was produced as a result of treating ordinary Regal lily with X-rays.

A friend from Mitchell, S. Dak., states that she once saw ground cherries raised on a commercial scale at a profit, the fruit being sold at \$2 per bushel.

Beginning this month, Mr. Victor Lundeen, Extension Horticulturist at the North Dakota Agricultural College, is contributing some interesting items which he has picked up. We believe you will find his items interesting and valuable.

A bulletin on house plants from Purdue University of Indiana pictures an interesting propagator for starting cuttings. This consists of a large pot filled with sand in the middle of which is plunged to its rim a small clay pot the drain hole of which has been stopped up with a cork. The small pot in the middle is kept filled with water which passes through its porous sides into the sand, keeping it moist.

Twenty-nine per cent of North Dakota's potato crop is produced in one county—Walsh.

One of the most interesting recent plant discoveries is a honeysuckle the fruit of which closely resembles blueberries. We were fortunate enough to get some seed of this plant from Mr. W. R. Leslie of Morden, Manitoba. Whether it will thrive on the plains is something to be

learned, but at least it does not require the acid soil that is essential for blueberries.

If you want the best authority in its line, a fine investment would be **THE MANUAL OF CULTIVATED TREES AND SHRUBS**, by Rehder. The original edition of this was published at \$10.50, but can now be had for \$5.00 from the Macmillan Company.

A correspondent asks what treatment to give pear-shaped or knobby potatoes so they will grow perfect. Misshapen potatoes are not due to disease which can be controlled by seed treatment. Knobby potatoes are quite likely to be knobby because of unfavorable weather conditions and may be perfectly satisfactory seed stock.

Mr. F. L. Skinner of Dropmore, Manitoba, reports that he has been successful in crossing sand cherry and *Prunus tomentosa*. What a nightmare our fruit varieties will be for the botanist of 50 years from now!

The Rhode Island Experiment Station reports that a tall strain of Paris Golden celery produces longer stalks and is otherwise as attractive as Golden Plume. They also report World Beater pepper as the largest yielder.

A correspondent to **THE MARKET GROWERS JOURNAL** says that he raised a huge crop of cucumbers by planting the seed around a 20-inch bottomless box filled with manure. The plants were watered by running the water through the manure.

Strawberries contain nearly 90% water. However, in the remaining 10% are found Vitamins B and C, and citric acid.

FORMOSA LILY EASILY GROWN

Mary Louisa Hellings, Titusville, N. J., in
Horticulture.

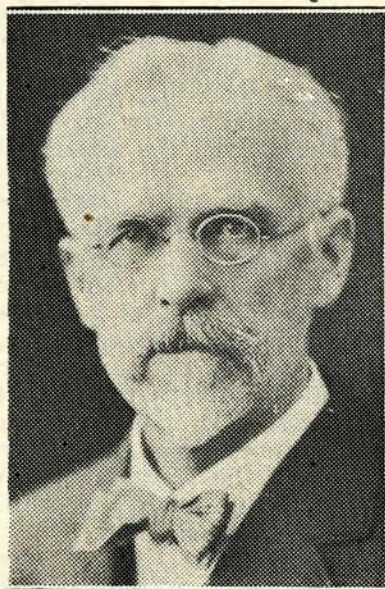
The Formosa lily, *Lilium philippinense formosum*, has given me much pleasure when grown both in the garden and in pots. I can conscientiously recommend it to all gardeners because it is easier to grow than most other kinds and it will produce its large fragrant white flowers the first year from seed. This variety is unlike other lilies in that after the main stalk has flowered, new stalks grow up bearing many blooms also, and as there is often a succession of stalks it makes the plant seem remarkably free-blooming. Thus with each year the bulbs increase, to provide a truly beautiful display of blooms early in September, continuing as long as new stalks come up.

Seeds sown early in May often make autumn-blooming plants by late autumn, seven months being an average length of time for maturity. Seeds may be sown where they are to bloom in the flowering border. While these lilies

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PROSPECTS FOR HARDY APRICOTS AND OTHER FRUITS



N. E. Hansen

We are all thankful for the good fruit year of the past season. People generally are ready to plant again, and are ready to plant even more the coming spring.

The following is a brief review of the prospects in new fruits:

1. Hardy Apricots.

The apricots which I collected in 1924 in the Harbin region of North Manchuria (now called Manchukuo) have been bearing several years. The past season they bore a very heavy crop. The Harbin region extends like a huge wedge up into eastern Siberia, and the winter cold ranges from 47 to 50 degrees below zero, Fahrenheit. The 32 seedlings have all fruited. The trees are a beautiful sight in bloom. The large flowers, white with distinct pink tinge, appear early before the leaves. The fruit is yellow, somewhat smaller than the apricots of commerce, and makes delicious preserves.

In 1934, 23 of our 32 seedlings were sent out as Manchu No's. 1 to 23 inclusive. Due to the excessively dry year of 1934, few of these survived. The original trees are strong and vigorous. In August, 1935, a lot of the best numbers were budded. I decided not to send out any more under number but will name five or six of the best ones. The fruit varies in size and also in quality.

The Dakotas, Minnesota, Montana, Manitoba and Saskatchewan may now look forward with confidence to having apricots in abundance as quickly as these can be propagated. The names

will be given in the spring list, "Northern Plant Novelties" to be issued this month.

In my 1934 tour to East Siberia at the invitation of the Soviet Government, my son, Carl A. Hansen was my Technical Assistant. We found another species of apricot in Siberia on the north fork of the Siberian Railway in latitude of 52, near Shilka, a few miles west of Nertchinsk. However, these trees are more dwarfed in habit and the fruit needs to be improved. In its native home the kernels are roasted as an almond.

Last spring, both the Manchu apricots and the Siberian apricots were hybridized extensively with some of the choice cultivated apricots of California in the Fruit-breeding Greenhouse of South Dakota State College at Brookings. Much seed was obtained. We may look forward to still larger and better apricots from these hybrids.

The advantages of these hardy apricots is that they ripen much earlier than any of the plums and hence have the season all to themselves. They come at just the right time to be highly prized on the farm and in the home garden in town.

Hardy Pears Resistant to Fireblight

The great need now is a hardy pear stock. Every effort should be made to obtain this. Some of my earlier seedlings of *Pyrus oboidea* were sent out in 1919. These are noted in my bulletin 224. These were sent out before fruiting and many of them are not hybrids, but they are all valuable for pear stocks as shown by the experience of John Robertson in his orchard at Hot Springs.

In the spring of 1933 I introduced four new pears. The dry seasons have prevented the further propagation of these pears.

Sadko pear.—A fine large red pear of good quality. Pedigree: Russian sand pear x Vermont pear. Strong tree with good forks. Sadko is the hero of a Russian legend.

Krylov pear.—A fine large early pear of good quality. Pedigree: Saponsky pear of eastern Siberia x Lincoln pear. Named in honor of a Russian poet.

Sladky pear.—A large pear, 2½ inches in diameter; yellow, sweet, good flavor. Sladky is the Russian word for "sweet". Pedigree: Russian sand pear x Lincoln pear. Keeps well; season probably autumn.

Finland pear.—A yellow pear, 2 inches in diameter, of excellent quality. Stem extra long. An open-pollinated seedling of the Yellow Early Finland pear planted next to a row of Russian sand pear. This Finnish pear was imported by the writer from Russia in 1904. Judging by its superior hardness and blight-resistance, the Finland must be a hybrid of the Yellow Early Finland and the Russian sand pear.



Redfleshed Apples

The story of apples with red flesh and red flowers is a long story. I have been working at the problem ever since I met, in the fall of 1897, Mr. Niedzwetzky himself who first found **Pyrus Malus Niedzwetzkyana** in the Thian Shan Mountains at Verny, now Alie Ata, northern Turkistan, near the Chinese border. My Redflesh apple introduced 1928 is now widely popular and is under propagation by many nurserymen. The value of such a tree is of course that the landscape architect will favor it as an ornamental lawn tree, while the fruit man will plant it as a fruit tree. It is a good combination.

In the spring of 1933 I offered the Zelma, Zita and Zaza. They are worth a trial. I am sure that when they are tested under orchard conditions they will prove to be larger. John Robertson has demonstrated this with several of my crabs in his orchard at Hot Springs.

Zelma crabapple. Fruit medium size, juicy, subacid, cooks into a good red sauce. Both ornamental and useful. Pedigree: *Pyrus Malus Niedzwetzkyana* x Yellow Siberian crab.

Zita crabapple. Pedigree: *Pyrus Malus Niedzwetzkyana* x Yellow Siberian crab. Flowers red, fruit red, regular, juicy, sweet, good quality, fully 1½ inches in diameter. Flesh red, especially inside core outline.

Zaza crabapple. Another crab with bright red flesh. Flowers red. Fruit red, exceeding 1½ inches in diameter. A complex hybrid of Duchess apple x *Pyrus Malus Niedzwetzkyana* with Siberian crab, *Pyrus baccata*.

New Apples and Crabapples

In the list for 1933 I offered several new hybrid apples and crabapples.

The Maga crabapple first introduced in 1922 as a crabapple, a seedling of McIntosh apple top-grafted on Virginia crabapple, must now be called an apple. Under orchard conditions in cultivated soil, the fruit attains full commercial apple size and combines the high quality of the McIntosh apple with Siberian hardiness, the Virginia being part Siberian crab. The Maga has borne a heavy crop in the State Orchard at Sioux Falls.

Alexis Crabapple

The original tree of the Dolgo crab and the original tree of the Alexis crab grow near each other on the grounds of this department, but it is very difficult if not impossible to distinguish the two by the fruit. The Dolgo is now famous in many states west and east and up into Canada. Both Alexis and Dolgo make the finest red jelly, sauce and preserves. Both are highly profitable to plant for market. The fruit is a brilliant dark solid red with a trace of blue bloom. Both trees are highly attractive in bloom as well as in

fruit. It would be well to have both Alexis and Dolgo in the same plantation to insure pollination of both varieties.

Tolmo apple. Introduced 1932. Seedling of Tolman Sweet top-grafted on Duchess of Oldenburg apple. Fruit good size, 2¾ inches in diameter; Duchess coloring, with white flesh, pleasant subacid; quality very good. The name Tolmo is condensed from the names of the parent varieties.

Izo crab, introduced 1919, is found by John Robertson, Hot Springs, South Dakota, to be of special value as a stock for top-grafting standard apples. The fruit is a good winter keeper. The fruit is yellow, blushed, of good size.

International apples. At this time I am studying over 600 native wild crab and other hybrids. My International Series appear of the most promise: the American wild apple contributes long winter-keeping; the Siberian apple, extreme winter hardiness; and the European cultivated apple, large size and high quality of fruit.

Tecumseh Plum

This one of my plums has not received the attention it deserves. It was introduced in 1918 as a seedling of Shiro, a Japanese hybrid plum, crossed with pollen of Surprise. John Robertson finds the Tecumseh is a regular annual bearer of large early plums of good quality. It may be called a sensible bearer in that it does not overbear but bears a good crop every year when many other plums rest. Secretary W. A. Simmons discussed the Tecumseh in North and South Dakota Horticulture magazine for December, 1935.

Ezaptan Sandcherry Hybrid

I was the first to hybridize the sandcherry, *Prunus besseyi*, with the Japanese plum. Of this series, the Sapa and Opata, introduced in 1908, are perhaps the most widely grown. They are now grown in all the western states from Texas north into Canada. The Sapa is popular because of the rich dark purple-black of the flesh and juice. The fruit cooks into a rich red sauce of high quality. At that time a number of seedlings were introduced of this same pedigree in the hope that general experience would soon determine which was best. The Ezaptan, introduced in 1911, I believe now has been overlooked. It is much like Sapa in every way, but of milder quality, really an excellent substitute for the black sweet cherries which are shipped in from milder climates.

This list of fruits could be made much longer, but it is enough to show that we have new varieties of fruits in sight that will make fruit culture a still greater success upon the prairies of South Dakota.

The great need is more land upon which to fruit the thousands of new seedlings. This will give them a chance to show their relative value.

PRESIDENT'S CORNER

The last plot of ground within the limits of Sioux Falls that has never been broken up, where the native grasses grew and the Pasque and other wild flowers grew, has had to give way to a basement. This patch of ground in the southwest corner of the city, has been a favorite gathering place for children and older people, in the spring of the year when the state flower was in bloom. This is also the only place in the county where the old Yankton trail is still visible, though there is a marker on the grounds of Sioux Falls College, about a mile nearer to town. Here, however, the ruts cut deeply by the old stage coaches and other wayfarers, were plainly to be seen. We will try again in the spring to move some of the clumps of Pasque flowers, before they are all destroyed and wish some of the natural beauty spots and places of historical interest could be preserved.



F. X. Wallner
Sioux Falls, S. D.

Now that the seed catalogs are arriving, it might be interesting to find thirteen fruits and vegetables of northern origin and the horticultural wizard whose name heads them all. The Golden Bison is The Golden Gem of The Farthest North, that Pixwell in Abundance, and The Buttercup at Fargo on the Red River in The Golden Sunshine where The Jumbo, Pinkheart Bison roamed.

An inquiry comes to the MARKET GROWERS JOURNAL, wanting to know the gastronomic, dietetic, food and commercial value of garlic. The claim is made that it will keep most diseases away. An apple a day will keep the Doctors away, but garlic will keep everyone away. The wife used to say that she knew when a person of a certain nationality got on the elevator in a department store, as the aroma of the garlic reached the 4th floor, before the elevator and its passengers. A report comes from Arkansas, that Warba potatoes matured there in 61 days. Bliss Triumph were the size of marbles, when the Warba's were harvested. Professor C. L. Fitch of Ames, Iowa, says that potatoes that "cut red" are O.K. for seed, he would rather plant them than the other lot and one would save a dime or more as such potatoes are difficult to merchandise. The discoloration is harmless, the trouble is in educating the consumers to the beauty of these dainty curved pink lines. "Cutting red" comes in tubers that have been long in the cold ground, while the plant is still alive and would be growing, if the weather was warmer. Perhaps the only ones affected are those of the Early Rose family, which includes the Early

FORMOSA LILY EASILY GROWN

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love the open sunshine on their heads they prefer the ground shaded about them. This is easily accomplished by planting low-growing flowers in front, or mulching the ground with a light non-acid-forming material. Bulbs are good, rather light loam. After the ground freezes, cover them for the winter as other lilies are protected.

Pot-grown plants are given much the same treatment. That the bulbs may have a dormant rest period, the stems are cut off after blooming and the pots placed out in the ground and covered with oak leaves, or something similarly coarse, so that the soil does not freeze hard. In late February lift the potted bulbs and place them in a cool room. If re-potting is necessary it should be done then, well before new growth starts. By starting this lily to growing in March in a climate where Spring comes late and fall frosts early, it has the advantage of growing to perfection out in the open sunshine, and by the time it is ready to bloom it can be brought indoors and enjoyed just when pot-blooming plants are the least plentiful.

Jan. 19th.—In my annual message to the State Convention at Aberdeen, January 15th, I stated that the year 1936 promised great things, provided we used common sense and every one co-operated whole-heartedly and improved conditions in their own business. The 52nd annual convention at Aberdeen convinced us all that it was the most enthusiastic meeting in the history of the Society. It has convinced the Directors that it is important to have a live Garden Club, or a group of good Horticulturists, act as hosts to the State Convention. The next meeting will be the summer meeting at Fargo, probably in August. This will be a joint meeting with the North Dakota Society, with delegations from Minnesota, Iowa and Canada, and will be a meeting well worth going a long way to attend. The next winter meeting will be held in Clark, S. D., some time in November, which will make three meetings in 1936. Clark has an enthusiastic County Garden Club of over 200 members, so a successful meeting there is insured. Altogether I feel sure that 1936 will be the banner year in the history of the society.

Ohio. But severe chilling of seed potatoes is very harmful, most of them will never show sprouts, while others will be weak and rot before the sprout gets a start. Using such seed you would have a poor stand and a disappointing crop.



BEEKEEPERS MEET AT FARGO

Despite the subzero weather

and snow blocked highways the annual meeting of the North Dakota Beekeepers Association held at Fargo January 15 was most satisfactory. Upwards of 40 members of the Association were present—several of whom had come distances of two hundred miles or more. Wallace Manikowske of Moorhead, N. D. president of the association presided throughout the session. In his opening remarks he pointed out that the past few years of drought and low prices had made things difficult for beekeeping but that this experience had put the business on a firmer footing than ever. It has forced beekeepers to cut down on production costs and adopt short cut methods. Prospects are encouraging, he added, with the sweet clover acreage returning to normal and the prices of apary products steadily advancing.



J. A. Munro

That the honey production per hive in North Dakota is the highest in this country but the amount of money spent towards protecting the bee industry is the lowest of twenty-three states so far studied was an important point advanced by Hon. Theodore Martell, commissioner of agriculture and labor. Based on the number of colonies in the State the funds for apary inspection work in North Dakota average less than ten dollars per colony per year.

Discussing the bacteriology of brood diseases, Dr. C. I. Nelson, bacteriologist of the N. D. A. C., expressed the belief that *Bacillus larvæ* (causative organism of American foulbrood) may vary in degree of virulence according to the strain of the organism represented. He suggested also that there may be variation in susceptibility among different strains of bees. Further research is needed to make these points clear, he added. Dr. Nelson has extended valuable cooperation to the apary inspection service by culturing and microscopically diagnosing material sent in for examination.

Following a talk on outdoor vs. cellar wintering of bees by Mr. F. J. McGlynn of Fargo, a round-table discussion of the two methods was entered into by Charles Engle, John Wieland, O. F. Miller, J. H. Beatty and a number of the other bee men present. In general, the opinions on wintering that the method adopted by the individual beekeeper would depend largely on the circumstances involved. Both outdoor and cellar wintering were reported as satisfactory when requirements for proper wintering are observed. Perry V. Hemphill, extension agent in marketing, N. D. A. C., in a well illustrated talk outlined the subzero weather

lined the principles of marketing. He pointed out that the same fundamental rules apply to the marketing of any commodity and must be observed if orderly distribution and sale of the product is attained. Robert M. Ray, Minneapolis expressed the opinion that the producer is responsible for setting the ultimate price on honey. Beekeepers have done very little advertising of honey but when they do get around to it, he said they'll find a greater market for honey than they now realize.

Mr. Fred D. Butcher, extension entomologist, N. D. A. C., discussed the possibilities of 4-H club work in beekeeping. It was the general feeling of the group, that any boy or girl, sufficiently interested in beekeeping to choose it as a project, should have the necessary instruction. The members present endorsed this type of help being given as the need arose.

Dr. E. A. Helgeson, botany department, N. D. A. C., explained the role of nectar secretion in plants and how the rate of nectar flow is affected by sunlight, temperatures, moisture, soil, etc. It is a problem of great significance to beekeeping.

Mr. Victor Lundeen, horticulture department, N. D. A. C., in discussing the relation of bees to horticulture, pointed out that bees are the only insects which can be relied upon to do a satisfactory job of cross-pollination of various kinds of fruit bloom. He said that cross-pollination is necessary to bring about fertilization and proper setting of the fruits; and that honeybees are the only insects regulated at the proper time to do the work.

Mr. M. W. Cousineau, Moorhead, discussed the importance of bee and honey exhibits and their value in stimulating sale of honey. He called attention to the excellent work of the American Honey Institute in acquainting the public with the value of honey in the diet.

Resolutions were adopted expressing appreciation to the North Dakota Agricultural College for facilities afforded the convention; to the speakers on the program for their cooperation, and to the Mount St. Benedict Academy for their contribution to the success of the midsummer meeting of the Association held at Crookston in July.

Whenever man or nature makes a scar, the vigorous, coarse fibered weeds find out the spot and straightway mend the injury. Hated and much obfuscated, the weed, of whatever breed, is one of the most useful forces in nature. The farmer regards it as a foe, the gardener as a nuisance. In truth, it is a friend that persists, regardless of ill treatment and attempts at extirpation. Soil, to preserve its strength, must be protected with some sort of natural covering, otherwise the rains leach it.—The Outlook.





MY FAVORITE PERENNIALS

I think that I owe my love for flowers most of all, to the circumstance of having spent my childhood in a farmhouse which stood near the edge of a tract of woodland in the state of Michigan. That forest was my playground. In it, in the spring of the year grew Hepatica, Spring Beauties, Dutchman's Breeches, Phlox, Trillium and I know not how many others; and of these I would gather bouquets to bring home to my mother. She loved the wild flowers but did not know their names. To her, a Spring Beauty was a "Mayflower"; the Trillium, a "lilly"; the Canad Phlox a "Crowfoot," and so on. As I grew older, my first glimpse into a seed catalog fascinated me. Here were flowers that were not confined to my little tract of woodland, but were gathered from the four corners of the globe, and yet could be grown in one's dooryard. What few pennies I got hold of each spring I spent for flower seed, and thus I often came home from school, at night and saw, with a sore heart that the cat had tipped over the seed box or the hens scratched up my flower beds, or the pigs rooted up and ate my bulbs, yet the flowers that I managed to have were to me a source of unfailing delight and wonder. In my day dreams, I pictured a home in some warm and sunny clime where I could grow flowers to my heart's content. My dreams were shattered, however, and my first home was destined to be on the windswept prairies of northwestern North Dakota, and about as far north as it is possible to get in the United States. But my early love for flowers still persisted and I set out to grow them just the same. I found perennials the most satisfactory for my purposes, because I had not the time to give to annuals and tender bulbs the care they needed, and late spring and early fall frosts made the seasons in this region rather short for them at the best. The backbone of my garden therefore, has always been perennials, for once started, about all the care they need is being kept free from weeds and divided and transplanted when necessary. Then by interspersing with annuals and tender bulbs, one can have a constant succession of bloom, even in this climate, from spring until fall. I urge all North Dakota flower lovers to obtain bulletin No. 170 of the State Agricultural College, "Perennial Flowers for North Dakota Homes." You will find it a comprehensive and reliable guide, as well as a surprise to those of you that have had the idea that but few flowers grow in North Dakota. From



Al L. Truax

1. Tulips.
 2. Sweet Rocket.
 3. Dianthus of various kinds. Or substitute Columbine, for shady places.
 4. Iris. (Mostly dwarf, or German.)
 5. Peony.
 6. Oriental Poppy.
 7. Delphinium.
 8. Perennial Phlox.
 9. Monkshood.
 10. Autumn Asters.
- Tulips are the gayest and most brilliant of our early spring flowers. They are, moreover as hardy as a rock, their only enemy being a soggy, wet condition of soil in summer, which causes them to rot. Their colors are indescribable and I never see them gleaming in the sunlight but I think of Rosamund Marriot Watson's lovely lines:

"Along the lawn the tulips lamps are lit,
Amber, and amaranth and ivory,
Porphyry, silver and chalcidony—
Filled with the sunlight and the joy of it."

First of all come the single Early Tulips, blooming in this latitude, in April or early May. They excel all other Tulips in gay and flashing colors, which lighten up the yet leafless landscape with touches of gayety and brilliance. Closely following them, usually in early May, come the Double Early Tulips in the same brilliant colors, but like miniature double peonies or roses. They are more lasting than the single Early Tulips, as well as a little more stately and formal, in growth. Following these will come the Darwin Tulips in late May or June. The Darwin Tulips are taller than the preceding kinds and their blossoms are larger, usually cup shaped, and carry an overtone which give their colors a pastel effect, but in an amazing variety of shades, including all the rainbow hues. A few days after the Darwin Tulips, come the Cottage Garden varieties. These are tall-growing, like the Darwins but the blossoms vary in shape from star shaped to lily, often with pointed or re-curved petals. They supply a clear, bright quality of color which the Darwins lack. Many sweet scented varieties are included in this class, mostly among the yellows, such as Gesneria Lutea, and Mrs. Moon. The Cottage Garden Tulips will usually carry the Tulip season on into June, when the herbaceous perennials are ready

SECRETARY'S CORNER

W. A. Simmons

A letter from a schoolmate and a life member at Kennewick, Wash., Mr. W. F. Sonderman, says: "On the night of October 29th, the thermometer began falling fast and by morning, it registered 10 above zero. Then for a full week it ranged between 12 and 16 above. The results were terrific and caused many growers to lose everything. Tomatoes, potatoes 60 to 80%, head lettuce by the carload and many other growing crops. The loss in Washington, Oregon, Idaho and other states, ran into millions of dollars. I have lived in this state over 45 years and in all those long years, never have I witnessed such a devastating freeze." Evidently South Dakota is not the only state where the weather bureau man, appears to get slightly "batty," at times.

We have a little surprise for our members this year, one that we hope will make it easier for you to secure new members. By a special arrangement with the publishers of *THE AMERICAN FRUIT GROWER*, and in return for a short monthly article from the Secretary, they will put each of our members on their mailing list for a year. To some of our members that may have thought our magazine was publishing too much about flowers and too little about fruit, this will give a magazine devoted exclusively to fruit and the difficult problems of marketing, that goes with successful fruit production. Your subscription will start with the February number, which should reach you about Feb. 20th.

Another most successful annual meeting has now gone into history and many of the good papers that were read there will eventually appear in our magazine. Here, I will try to confine myself to things that cannot be published, as papers not having been reduced to writing. Professor Yeager found the roads in his vicinity blocked and wired us that he would be unable to come. This created consternation among our members, some of whom had come long distances, especially to meet and hear him. We sent such a pitiful wire, in reply that he wired us he would come by train and he submitted himself to the discomforts of an all night ride on a badly mixed train and was with us the second day. We are sorry for all that were not present to hear his wonderful lectures, but after all he had done for us, we could hardly ask him to reduce his words to writing, much as we would like to have them, for leisurely study. Dr. Yeager not only possesses vast information, but has the ability and the willingness to translate it into easily understandable and most interesting form.

The trip to the enormous greenhouse of Mr. Siebrecht, was most interesting. He told us that on Christmas eve, the mercury dropped with a "dull, sickening thud" and registered several feet below zero, by morning. During the hours between 3 p. m. and 7 a. m., it required 50 tons of coal to keep up the required temperature in his large farm, under glass. He showed us a large section, filled with Easter lilies, in 4 inch pots, whose numbers I estimated at more than 10,000, and explained his method of starting them. When the bulbs are received, they are put in storage at a temperature of 38 and are kept there for 60 days. They are then "raring to go" and are potted up in 4 inch pots and put in a temperature of 60, in light. Those we saw had been in pots but 3 weeks, but were well rooted and most of them were showing top growth. When the height of 6 inches is attained, they are transferred to 5 inch pots and later, they will be treated to a fertilizer consisting of tankage.

Into the discard has gone the old idea that lilies must be potted early, then kept in the dark till root growth has taken place. A very pleasant visit to the home of our old friend, the DAKOTA FARMER, was enjoyed on the trip back to town. The Editor of this magazine was responsible for the organization of our society, long years ago and they have always remained our good and ever helpful friends. Our members were divided into squads of ten, for the interesting trip thru the plant, each squad having one of the employees, as a guide. That the squad I was in, had one of their Golden girls as a guide, greatly increased our enjoyment of the trip. When on my return home, I found my copy of the magazine awaiting me, I looked on it with especial interest, as I had seen it in the making. Into a wonderful and huge press, was fed paper on wide rolls, and out of the other side, came the completed magazine. I figured that it would take this press about 10 minutes to print our little magazine. Many people have been thrown out of employment, by this wonderful press, but so far, we writer folks, still have our place. Looking at the press, I wondered how soon some genius would go a step farther and teach the machine to catch ideas telepathically, so that the writers too, would be unnecessary.

The files of this magazine contain all the records that exist, about the early history of our society and this is very interesting. Our President has had these old records copied off and they will be bound into an interesting addition to our library. Our next meeting will be at Fargo, some time in August; a joint meeting with the N. D. Society and the winter meeting will be at Clark, in November.



NORTH DAKOTA STATE HORTICULTURAL

SOCIETY NOTES

January, 1936

Victor Lundeen

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If you are looking for something different in

the line of house plants, try sweet potato. Take a sound root (ordinary sweet potato as found on the market), place it in a glass bowl, and add enough water to cover the root. Place in a sunny window and in a short time the root will sprout and make a very attractive vine.

Experiments conducted at the Massachusetts Experiment Station show that non-porous flower pots are more satisfactory for use in the home than are porous pots. Porous pots tend to lose water through the sides with the result that root growth is all located near the inside wall of the pot. In non porous pots the roots penetrate through all parts of the soil because of the even moisture which is maintained.

It has been estimated that New York City eats 15 carloads of celery per day.

The Idaho Potato Dealers Association is going to try the experiment of canning potatoes. They will be cooked ready for serving, packed in a mild brine and used in any way which ordinary potatoes are prepared. If the plan succeeds market growers there will have another outlet for their product.

At the Maryland Experiment Station it was found that the cracking of tomatoes was largely due to irregular water supply. Heavy rains following drouth periods was found to cause severe cracking. Staked and pruned plants were found to bear more cracked tomatoes than did those plants which grew naturally.

Naturalists tell us that one-half of our flowers would disappear if all the bees should perish. So many are completely dependent upon insect pollen bearers that were they to perish a large number of our most beautiful flowering plants would also disappear.

Plan to construct a hotbed for starting plants this year. Early crops of late maturing vegetables may be secured through the use of a hotbed. Farmers' Bulletin 1743 is an excellent publication on building hotbeds and cold frames. It may be secured by writing the Publications Department of the North Dakota Agricultural College, Fargo.

If you have garden seeds left over from last year it is a good plan to test their germination. It doesn't pay to plant poor seeds. A satisfac-

tory germinator can be made by placing a piece of blotting paper on a dinner plate, saturate the blotter with water, count out 100 seeds and cover with another blotter. Then, cover the seeds with an inverted dinner plate and set in a warm place for a few days.

Horticultural Society members should be interested in starting garden clubs in their communities. It is suggested that they get in touch with their county agent and ask for his assistance in getting such an organization started.

Every city, town and community in North Dakota would do well to sponsor a yard and garden contest this coming summer. No greater satisfaction could be secured through any project than through the beautifying of our homes and communities by planting trees, shrubs and flowers.

A correspondent suggests that shrubbery and perennial plants killed by drouth might be replaced through an exchange of plants between friends and neighbors.

A plant specimen sent in from Raleigh, N. Dak., was identified as Bearberry, an evergreen shrub which grows on hill tops in scattered portions of the State. This correspondent desires to know if it can be transplanted successfully. If any of our readers who are acquainted with this shrub have tried transplanting it, what success have you had?

A question regarding lack of fruitfulness in cucumbers has again been asked. The usual reason for cucumber vines failing to bear fruit is a lack of proper pollination. Cucumbers bear male and female parts in different flowers, and it is therefore necessary that pollen be borne from one flower to another if pollination is to take place. A hive of bees near the melon patch would probably eliminate this lack of fruitfulness.

It is not too early to start putting your garden plans on paper. Your plans should show arrangement, planting distances and the amount of each crop to be planted. Such a plan will do much to eliminate waste of time next spring when the planting season is at hand.

THE PRICKLY POPPY

Claude A. Barr

I have very much enjoyed Mr. Truax's series of plant travels and have found fascination in comparing the kinds he has come across with those I know here at home.

Referring particularly to his mention, in the November number, of the Prickly Poppy, and the Editor's questioning its perennial character, I would offer some observations.

Prof. Over's Flora of South Dakota lists only *Argemone intermedia*. Rydberg's manual agrees with this, giving the range of *Argemone hispida*



as similar but a little restricted and more southern. There is little difference in the two, *A. intermedia* having fewer and stronger prickles, and perhaps the ability to grow a little taller, commonly 12 to 24 inches. Another that is sometimes seen listed in seed catalogues is the yellow Prickly Poppy, *A. mexicana*, native of Texas and similar climes. This I saw the past summer in a park in Nebraska. The flower is hardly half the size of the white kinds and the color, a pale, straw yellow.

The native Poppy is a fine thing, with great white, crinkly blossoms, four inches or more across, and borne freely. Locally it is known as Sand Poppy from its preference for sandy soils. It seems well content in my gumbo garden, however, and the past very dry August it was almost the only flower that could hold its freshness through the heat of the day. The plant is of easiest growth and flowers the first year from very early sown seed, but where conditions are agreeable it is a true perennial. Plants in my garden at this writing, December, have, at the base of the old brown stems, close upon the ground, a tuft of green leaves in preparation for another season.

THE PURPLE FINCH

(Continued from Page 14)

where the birds naturally cross through the Great Lakes region that he has banded in fifteen years over 16,000 individuals. Of these, a dozen or more have been found in the states from Kentucky to Texas and Georgia, and one each in Virginia, Massachusetts and Nova Scotia. Many of the birds winter well northward, but evidently quite a few make considerable journeys. Mr. Magee has more than 1000 records of the birds which he banded returning to his station. In his summary of them last year eleven birds were at least six years old, three each were seven and eight years old, and one at least ten years

MY FAVORITE PERENNIALS

(Continued from Page 21)

to begin. Blooming with the Darwins and Cottage Gardens, are also the Breeder Tulips. Tho usually not quite as tall as the Darwins, they produce as a rule, even larger blossoms. The colors include many, rare among flowers—browns, bronzes, purples, blue-blacks, deep mauves, dull gold and dark lilac, all exquisitely blended. Then there are many species of wild Tulips from many lands, the collecting and growing of which would be a fascinating task; but they are quite expensive and might not all prove hardy, so I have forgone them, so far.

Culture

The tulip grows from a bulb, which must be

planted in the fall—no other time will do. In North Dakota, the earlier in the fall they can be planted, the better. Early September or even late August, is best because it gives them time to get rooted before the ground freezes. Late planting is one cause of tulip failure in this climate, as then the bulbs freeze up before root growth begins, and this causes them to rot. Another cause of failure in this climate is too deep planting. Three or four inches of soil on top of the bulb is enough. If planted five or six inches deep our spring moisture often fails to reach the bulbs and they do not get thru to the surface or wither and weaken for lack of moisture. Soaking the soil beneath the bulbs, if it is dry when planting, will induce root growth in the fall and will also make a little reserve moisture for the following spring. On the other hand, if the soil is wet and soggy or poorly drained, an inch of sand, underneath the bulbs will help drainage and prevent rotting. Another cause of failure is keeping the ground continually soaked, during the summer. Tulips need a dry resting period after blooming. Shallow rooting annuals like Portulacas or phlox, that do not require too much watering, may be planted over them to cover the ground, but with continuous soaking, the bulbs will rot and disappear. Single Earl and Double Early Tulips should be planted in beds of 100 or more to produce the best effect. The Darwins, Cottage Gardens and Breeders are best planted in clumps amongst perennials. The early varieties are good when planted among shrubbery. Here they will bloom before the shrubs leave out and they are protected also from the blazing sun. Moreover, the melting snows held by the shrubbery furnish them with ample spring moisture. I have had early double tulips grown among Spireas reach such a size as to be mistaken for peonies or water lilies. Like every other blooming thing, the tulip likes an abundance of water during the blooming period. Divide the bulbs about every three years and re-plant. If properly cared for they will quadruple in number every three years. Some bone meal, mixed with the soil beneath the bulbs will add to their vigor and to the size and brilliancy of the blossoms. Animal manures should not be used as they will cause the bulbs to rot, but a teaspoonful of nitrate of soda and a tablespoonful of superphosphate, together in two gallons of water is an excellent fertilizer. The first season, especially if planted late, it is well to cover the tulip beds with 5 or 6 inches of straw or hay. This will help to protect them if not thoroly rooted when winter sets in. After the first season I do not bother to cover mine, as they then take care of themselves by rooting before cold weather sets in.