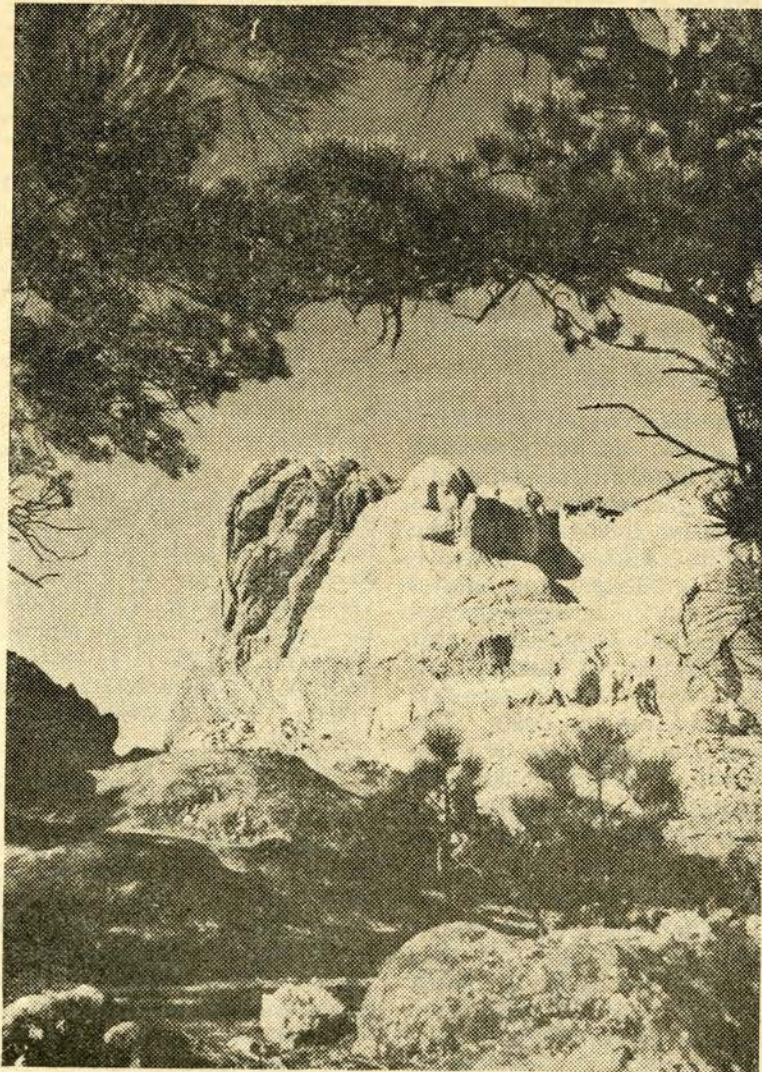


# NORTH AND SOUTH DAKOTA HORTICULTURE

JANUARY 1936



RUSHMORE MEMORIAL.  
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## THE CROSSBILLS

O. A. Stevens

The crossbills are among the rarer birds in our region and are among the less familiar ones in most parts of the country. They are, however, of ancient and honorable lineage. The name *Loxia*, by which the genus is known, was used at least as long ago as 1551 by Conrad Gesner in his *Historia Animalium*. They are widely distributed over the northern hemisphere, in Europe, much of Asia, and Northern Africa. Recent authors have described a number of geographical races occupying the outer portions of the distribution on both continents.

The most striking feature of the bird is indicated in the name. The bill is stout, but has slender crossed tips. This feature is found only in this group and develops as the young birds grow in the nest. It is considered an adaptation to feeding upon the seeds of cone-bearing trees. The birds find it useful also in extracting insects from plant galls. Crossbills are about the size of a Baltimore oriole, rather stout bodied and with short forked tails. Like a number of other species which cling in various positions to trees, their legs are short and feet small. The adult males are largely red in color, the females greenish gray or yellowish and the young birds variously splashed in intermediate fashions.

The nesting range of the most widely distributed American form, now known as Red Crossbill, is from Central Alaska to Central Quebec, south into Michigan and in the mountains as far as Georgia. A slightly different form nests in the mountains of western United States as far south as Colorado, and another in Mexico and Guatemala. They are common in the evergreen forests in Northern Minnesota and supposed to nest there but no nests have so far been found. Nesting occurs during the late winter which accounts to some extent for failure to find the nests. The latter are placed among the branches of evergreen trees and composed of twigs, bark, rootlets, moss or other material. The eggs are pale bluish or greenish white, spotted with brown at least on the larger end.

My first acquaintance with these birds was in 1931 when several birds appeared at Fargo on July 31st. From then until October 7th they were in the vicinity and were seen by many different people. They fed especially upon sunflower seeds and, as we had a trap close to sunflowers, we succeeded in banding 22 of the birds. They appeared at other localities in North Dakota and in other states. A total of 1293 were banded in North America that year. In 1932 only 21 were banded at all stations, in 1933 only 1, and in 1934 none at all. In 1935 they appeared

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again but only four or five individuals in our vicinity.

The crossbills are not shy, in fact I made attempts to catch them in my hands while they were feeding upon the sunflower heads, but never quite succeeded. Their flight, however, is rapid and undulating, with sudden twists and turns. This together with a sharp "chirk" enables one to identify them in flight.

There is a second species, the White-winged Crossbill, which differs in having two quite distinct bars of white across the wing. These birds are very similar to the others in habits, and still less frequent in their wanderings away from the northern forests, so that they are but rarely seen in our region.





## NORTH DAKOTA STATE HORTICULTURAL SOCIETY NEWS LETTER



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

Mr. G. E. Millen, Sheyenne, N. Dak., offers the following as a special premium for any North Dakota Society member who sends in the names of 10 North Dakota residents who are prospective Horticultural Society members, or the dues of one new member, 10 Picardy gladiolus bulbs of assorted sizes. This variety is ranked as perhaps the finest gladiolus variety at the present time.

As usual, all members who pay up their dues for 1936, or who are "life members" may select a premium from those listed this year. You will find the 1936 premium list elsewhere in this magazine. We believe we have the finest group of material this year from which to select that we have ever offered. Be sure to send your own dollar in while you think of it, and don't forget to take advantage of the special offer for new or prospective new members.

The MARKET GROWERS JOURNAL says that there are reports of winter radishes weighing as much as 8¼ pounds.

Tree rings are now being used to date prehistoric Indian ruins in Southwestern United States. It is possible by this means to trace back to the exact year happenings of more than a thousand years ago.

Here is a new way to use cantaloupe, at least, it is new to me: **Cantaloupe Jam.** 6 cups cantaloupe pulp (mushy), 4 cups sugar, juice and rind of 3 lemons, juice and rind of 1 orange. Boil slowly for one hour, stirring enough to keep from burning.

Letters are often received asking for advice as to whether to take up the study of some particular line as a life work for a young person. Forestry and conservation are two things which have seemed rather attractive to young people of late. To all such inquirers the same suggestion is made: That the life work be picked for which the individual thinks himself fitted, which he will enjoy, and in which he can make the greatest contribution. Taking up some particular line merely because there seems to be great opportunities may be a bad mistake. Frequently, by the time one becomes fitted for the place, the thousands of others who have begun training with the same thing in mind will have finished their preparation also. Quite likely, the peak of demand for competent persons in the field of forestry and conservation has passed, and it will be only those who are naturally inclined toward these fields who will make much

of a success at them. Even during the past few years, when unemployment was so prevalent, trained individuals especially fitted for places they were adapted to fill were in demand, though at the time they started their training there may have appeared to be few openings.

A correspondent asks how to propagate apple trees from cuttings. That is a very difficult job. In fact, next to impossible, and is the reason why apple trees are grafted. While they cannot be easily rooted in the soil, they can be grafted onto young seedling apples, the seedling providing the root stock and the graft the top.

In connection with grafting, people know so much about it that is not so. For example, in one of the recent popular daily newspaper features purporting to give the public unusual facts, the statement was made that Grimes Golden apple grafted onto a Jonathan would produce Grimes Golden apples, but if the seed from these were planted they might produce Jonathans. The fact of the matter is that the seed would be no more affected by the stock on which it grew than was the fruit.

The most likely method of saving a tree limb which has been split down is to bring it up into place, bore a hole through it and the tree, put a bolt through, and screw it up tightly. The heart of the tree is the least vital spot in it, it being merely dead tissue acting as support and nothing more.

Patches of perfectly good strawberry varieties sometimes fail to blossom. Several things may cause this. First, there may be so many plants crowded close together that no blossom buds are formed. Incidentally, these blossom buds are formed the preceding summer. Very unfavorable growing conditions during this previous summer might also have the same effect, or failure to cover the plants during the winter time might expose them to enough cold to destroy the blossom buds which overwinter inside the plant.

A correspondent asks whether straw would be a good mulch material for tomatoes in place of cultivation. A straw mulch would tend to keep the ground colder which would not be desirable with a warm season crop such as tomatoes.

W. E. H. Porter of Hansboro, the donor of some of our premiums this year, would like to know whether any of our members have tried out the Poppy or St. Brigid Anemone.

Occasionally someone sends in a new potato variety for us to look over and judge of its merits. Usually these are not especially promising in appearance. If one does look extra good, it is necessary to try it out in comparison with other older varieties to see how it behaves. Of



course, the chances of it being extra good are rather remote, because our varieties we now have are the best from thousands of seedlings. Great pains should be taken with any promising new variety to see that it does not become affected with running out disease.

The old idea that it is necessary to change potato seed does not die easily. Changing seed from one place to another does not improve it. That does not mean, however, that most potato growers, especially if they do not take special pains with their seed stock, should not get new seed occasionally; because if no special pains are taken the chances are that running out disease will be serious. If new seed is procured, one should certainly get the best to be had, that is, first class certified seed. And, don't forget, that our North Dakota certified potatoes are the finest to be had. One of our certified growers was recently considering changing his potato seed by getting some from another state. His own potatoes ran only about 2 per cent diseased. He sent a sample of the other potatoes he proposed buying for test to the State Seed Department, and the best showed that they were more than 25 per cent diseased. Changing seed for this man would have been disastrous.

A letter from Kentucky asks about Burbank's white blackberries and their origin. It seems that almost all of our fruits occasionally produce sports lacking in the characteristic color of the fruit. The white blackberry is such a sport. Other examples of the same thing are yellow black raspberries, yellow red raspberries, yellow chokecherries, yellow sand cherries, white Juneberries, yellow black currants, and even white strawberries. Popular taste does not approve of such colors, hence they are rarely of much commercial value.

**THE ART OF FLORAL DESIGNING** is the title of a book published by A. T. DeLaMare Co., Inc., 448 W. 37th St., New York, N. Y. The price is \$2.65.

Have you tried any of the following pea varieties? Giant Stride, Mid-Season Giant, Asgrow No. 40, Sawco 40, Wyoming Wonder, Pacific Market, Fordhook, or Stridah? If you have, then you have tried them all, for they are merely different names for the same new variety. It does seem there should be some way of preventing a variety being given a different name by every seed company that introduces it.

### THE STORY OF IRON BULL

J. H. Berry

One cold morning in 1888, after digging snow 2 hours and doing the chores, I came in to breakfast and found my little boy riding on a strange Indians knee. I noticed my wife was a

little bit rattled and scared, but the Indian held out his hand and said "How Cola," Indian for "How are you, Friend" and I liked his looks, especially his eye. After visiting a while, he went over to the Indian camp ground, at the south edge of Armour.

Then the wife unburdened her soul: "Jim, I am so afraid that Indian will steal Harry." I tried to assure her that he had as honest and manly a face as I had ever looked into; "well," said she, "you didn't see how wishful he looked, when he was trying to trade me 35 horses, for Harry." "He began with two horses, then kept on bidding up to 35, then he seemed to look at Harry with one eye and at me, with both and made me understand that 35, was all the horses he possessed," so it ended in no sale for which I was grateful for had he owned equines enough to purchase a first-born, at a mother's valuation, there would have been more horses around my place than I would have cared to feed, you that have been blessed with children, can judge, how many would have been required. In those days an Indian reckoned his wealth by the number of horses or ponies he owned.

A few days later I met an educated half-breed and as soon as I began describing this Indian, he said "Oh that's Iron Bull, one of the best Indians on the Reservation." I said, "if I have his number right, you can take in the whole world, instead of this Reservation." Then the half-breed told me this story and I believe it is true:

"One time when the Indians were at war with the Whites, a white man had stolen a bunch of Indian horses. The Indians gave chase and eventually caught a white man with two of the horses. This happened in what is now Charles Mix County, S. D., along the bluffs of the Missouri River. Iron Bull did not believe that the man they had caught was the horse thief, so he put his foot down on killing him for a horse thief. He told his comrades they could turn him loose, give him a little start, then catch him and kill him as an enemy, but not as a horse thief. Iron Bull asked the life of the man for 10 days, then if Iron Bull did not produce evidence that the prisoner was innocent, they could kill him in any way they liked, 'But brothers,' he said, 'while I live, you won't kill him as a horse thief.' They granted him his 10 days and before the time was up, Iron Bull showed them they had blundered on the trail and tracked the wrong man. He had bought the two horses and the thieves had turned the switch on the trail. The band was so ashamed they turned the man loose and gave him one of the horses to ride home on."

My best guess is that Iron Bull is living yet and will camp on my trail for telling this.





## NATIVE BIRDS

Mrs. R. B. Colby, Aberdeen

As members of a garden club, we cannot, it seems to me, stress too highly the importance of birds; for most birds are insect eaters, and we as gardeners are most certainly interested in any insect destroyer. The hosts of insects that birds destroy in migration are beyond all computation,—indeed, beyond our imagining. Whole families of insect eaters as they pass northward appear in each locality just before or at blossom time,—the fly catchers, warblers, vireos, kinglets, swallows, and swifts. They come just as most insects are emerging from the pupa state, and just as others are hatching from the egg. Everywhere the trees are alive with hurrying, hungry, feeding birds. Their quick eyes search every leaf and examine every bud and blossom. And even the seed-eating birds—sparrows, etc.—feed their young upon insects. All birds are hot blooded creatures and require an enormous amount of food; they seem to be feeding from morning until night. In the winter the insects are in a very condensed form, usually in the pupa stage, so that every bird that searches our tree trunks in winter destroys what would be a vast multiplication of insects during the following summer.

To entice the birds about our homes and into our gardens by means of bird baths, bird houses, and food boxes, and nesting material, is not only to make them our friends but our servants. In the summer the bird bath seems to be the magnet but in winter food is very welcome. Last winter I wired suet to a tree outside our living room windows, and I cannot tell you the pleasure we derived from watching the birds come for food. It was visited by four winter residents: the nuthatch, brown creeper, downy wood pecker, and his larger cousin, the hairy woodpecker. I replaced the suet four times. The neighbor's cat nibbled at it occasionally, but I am sure most of it was eaten by the birds. I hope you will all put out suet for the birds. If you did not last winter, I hope you will next year. I usually ask for the suet from a beef kidney. The tough skin holds well when two wires are run through it and around the tree branch. You will be well rewarded for your work by the presence of these feathered friends who brave our cold winters. And while they feast on suet part of the time, they also search the tree trunks for insects. The downys are quite tame and will sit on an upper branch while I put up another piece of suet. And how they do make the chips fly when they locate a borer under the bark! The nuthatch always carried away great chunks of suet in his bill. These birds run down the trunks of trees head first when looking for insects.

Their name, nuthatch, was given them because they have the habit in winter, when insect food is scarce, of gathering soft shelled nuts and acorns and wedging them in crevices while they pick them open with their sharp bills. The brown creeper is about the size of a wren and nature has protected him well in his coloring. He works up the tree in a spiral course, and when he has gone up quite a distance, he will fly down and start again, looking into every crevice and crack for eggs, cocoons, and adults of tree destroying insects. The hairy wood pecker is more shy than the downy, but his food habits are similar and he is also, therefore, a valuable bird. These winter residents should be given special attention. They are here when most people think there are no birds. They are particularly interesting and worthy of study, and we should devise ways to aid them in their efforts to remain with us and work for us when the less hardy birds are sojourning in the tropics.

The larger birds that remain with us during the summer may be encouraged by setting up bird baths, and cultivating shrubs and trees in which they may nest. Houses for wrens and bluebirds are always acceptable, as are martin houses. These summer birds, such as orioles, thrushes, thrashers, catbirds, and scores of others, live largely on caterpillars. The favorite food of the yellow-billed cuckoo, which is found in our locality, is the tent caterpillar, so destructive to orchards. A pair of grosbeaks in a potato patch will keep it free from potato bugs. The little wrens will creep under every vegetable and flower in the garden looking for worms. Kingbirds, so rightly called the policemen of the air, may use the nearby telephone wire as a lookout perch and gobble up passing flies which carry diseases from filthy places to infect our food. They also destroy robber flies, which kill and eat honey bees. Every place in nature has its birds; and few are the birds which do not give good account of themselves in rendering services for the benefit of man. Even the hawks and owls which we see perched on hay stacks and fence posts do not do the harm that is credited to them. They destroy gophers, rabbits, field mice, and other pests of the farmers.

While we are most benefited by the insect eating birds, the seed eaters render valuable service in destroying weed seeds. The family Fringillidae, which comprises our largest bird family, are seed-eating birds having strong thick bills for crushing their food. It includes the finches, sparrows, grosbeaks, and a few others. I do not believe the grosbeaks are plentiful in our city. At least, it has not been my pleasure to see them here. We are all familiar with the goldfinch, which is often called a wild canary.



Canaries come from Europe and are not found wild in America. This bird, with its black cap, wings, and tail can be easily distinguished from the yellow warbler, which is entirely yellow. The farmer owes a great debt to these beautiful little birds, as they feed upon weed seeds and provide their young with crushed weed seeds and insects. They catch great numbers of plant lice, grasshoppers, and canker worms, and in the wheat states they destroy millions of Hessian flies.

The chestnut collared longspur is a common bird on our prairies. Its dark cap, chestnut brown collar, white throat, and dark breast distinguish it from the sparrows. In summer it feeds upon insects and in autumn supplements its diet with seeds. Its song is a sweet and pleasant warble and is uttered during flight after the manner of the lark bunting. The snowflake or snow buntings are seen in large flocks on our prairies in the winter time. The junco is another member of the sparrow family that winters with us. Another common sight on our prairie is the Towhee, a jet black bird with white wing patches. He is often mistaken for the bobolink. The male is a beautiful singer, who utters his song mainly on the wing. As he rises from the ground, he begins his song and continues as he descends to earth. His song has all the artistic qualities of the European skylark made famous in song and verse. Other members of this family which nest with us are western vesper sparrows, chipping sparrows, song sparrows, western grasshopper sparrows, and Nelson sparrows. We should not ignore the sparrows who visit us only during migration. Have you looked out of your window some early May morning and seen your lawn fairly covered with industrious little birds? They pick and scratch and hop around for a few days and then quite suddenly are gone. These hard working fellows are no doubt the Harris sparrows, white crowned sparrows, white throated sparrows, and fox sparrows. They mingle together in the spring on their way to the north woods where they build their nests and rear their young. Of the swallow family we are most interested in the purple martin. We have a great number of them in Aberdeen, but we could do with more. The martins are great insect eaters and are very skillful on the wing when in pursuit of flies, mosquitoes, and other insects. Their feet are very weak and they alight on the ground at nesting time only, when they pick up sticks for their nests.

The vireos or greenlets are modest and inconspicuous, and they deserve more attention than they receive. They are strictly insectivorous and are especially valuable to the gardener and fruit grower.

The warbler family is seen mostly in the spring and fall, as most of them come here only as migrants. The small yellow warbler nests with us and she is very often the victim of the sly cowbird, which lays its egg among the little eggs of the warbler. When she returns and finds this egg, she very carefully weaves a new bottom over the eggs and builds up the sides and then lays more eggs. But the cowbird will probably lay another egg; and when it hatches, the greedy young cowbird will take all the food and soon crowd the young warblers out of the nest. The warblers do not multiply very rapidly on this account. The black and white warbler is a familiar sight on our tree trunks in the spring. He is usually so busy searching trees for insects that one can get very close to him.

The woodpeckers are a distinct, interesting, and useful family of birds. Their toes are differently arranged. The northern flicker is particularly useful in that he is especially fond of ants. Ants, you know, carry plant lice and place them on roots of grain and corn. This causes the plant to turn sickly and yellow and to produce no grain. The flickers assist greatly in holding the ants in check. Nearly all birds eat ants but the flicker is the most useful because of its unusual appetite for them. It is the only member of the woodpecker family which alights on the ground. It is a beautiful bird and frequently visits our bird bath. We have, in the wood lot across our alley, three red-headed woodpeckers this year. This is unusual, for they do not ordinarily nest around dwellings. Perhaps they are not taking up residence but have come just to annoy some other birds, which seems to be their favorite pastime. The red-heads are found of fruit and are therefore not popular with gardeners and fruit growers. They do eat some insects, however, but on the whole are rather lazy.

The fly-catchers have broad bills which are bristled near the base and are armed with sharp downward curved hooks at the point of the upper beak. They are very noisy birds, as you may well know if they nest near your home. About four o'clock in the morning they start their monotonous twitter. But they are very brave and courageous fighters, especially the kingbird. He will drive hawks or crows away from the nests of smaller and weaker birds. Two familiar members are the kingbird, which is distinctly gray, black, and white, and the Arkansas kingbird, which is gray with yellow breast and belly. Both birds are quick on the wing to destroy insects, and are a valuable aid to the gardener.

The prairie horned lark is a common bird and

(Continued on page 8)





## PRESIDENTS CORNER

Last month, at the meeting of the Illinois State Horticultural Society, the President of the Western Fruit Jobbers, in the main address, closed with the remark, "Are you helping your net income by selling those poor apples, for whatever you can get for them and have them scattered around in your trade territory, thereby putting the price down on your better grades, or would you be money ahead by not disposing of these poor apples, thereby making it possible for your better grades to go out into the territory with the possibility of obtaining better prices for them." The same is true of vegetables or any other crop, but what is the grower to do? This past season, many crops were of poor quality, but the producer has put in about as much expense as though they were prime, so must realize something. More than 1500 cars of picked apples and 500 cars still unpicked were frozen, at Yakima, Wash., early in October. The total onion crop for 1935 is over 14,371,000 sacks, not counting our few bags, but we did send out, on Nov. 30th, 6000 lbs. of as fine Sweet Spanish as we have ever grown. Of course there is a big shrinkage in this big estimate on account of rot, small size, freezing and other causes. From all eastern storage points, word has come that onions put away for the heavy winter trade, are showing much sprouting, and as one dealer expressed it—"It will soon be necessary to go into the storage houses with lawnmower and sickle".

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



The Iowa Fruit Growers Association, at their November meeting, adopted the following resolution: "Recognizing that a prosperous Agriculture is essential to general recovery and the restored buying power, that is necessary to increased demands of horticultural products at fair prices, the Iowa Fruit Growers Ass'n. supports the A.A.A., as it works to increase farm income and toward the conservation of our nation's greatest natural reserve, the soil." On the

Canadianians are pleased with the new trade treaty, for instance, a car of oranges goes in free from January to April, where before there was a duty of \$323.40; a cut of \$600. a car on tomatoes, at certain seasons of the year, and a 15 per cent cut on most vegetables. But the Cuban grower will get a cut of about 20 cents a lug box on tomatoes, during the winter months. Further discussion of the trade pact will be aired at the 44th annual meeting of the National Fruit and Vegetable Distributors.

Some farmers are fearful that the rye and wheat, sown this fall, that failed to come up is lost. I have sown rye, every one of the past 20 years and have often sown it late in November, when of course, there was no growth that fall, but it would come up nicely, the following spring and make a good crop. But it might be that some of the seed found moisture enough to sprout, then during the long dry spell in the fall it might wither and die. I sowed some late in October that hardly came through the ground, but the late moisture in early December, has given it considerable growth. Some sown in May, and plowed under, will put the soil in good condition for a late crop of potatoes, sweet corn, root crops or to set out plants.

December 16th. The waste carrots, parsnips, beets and cabbage, fed to milk cows and an occasional day on the rye, will keep the milk flow up to more than twice what it would be, without this green food.

The Pleasant Valley, Iowa, Cooperative Union Growers Ass'n., have contracted their entire crop to a Chicago distributor. The crop from sets begins to move in early July, and on late, in October. The first tomatoes from Cuba are arriving: the estimated shipment will be 1,400,000 28-lb. lugs, besides a big increase from Mexico. In

Eleven principal crops grown in southern states for winter market, show a 40 per cent acreage increase over 1935 and over 51 per cent over the 1929-1933 five year average. If this heavy increase in plantings produce normal crops, unless Canada absorbs the surplus. Our cotton growers have lost the world cotton market to central and South American growers, so must resort to growing potatoes and other vegetable crops.

Anyone that has good specimens of fruit, vegetables or potatoes, is asked to bring or send them to the meeting, as exhibits are very helpful to the program.

other hand the Michigan Horticultural Society voted 6 to 1 against the triple A. In a state east of us, they have appropriated \$50,000 to cut down the red Cedars, within 3 miles of commercial apple orchards. Excessive damage done by cedar rust to the apple crop the past year, is the reason. The Horticultural Society and the Department of Agriculture have demanded immediate action. Canadians won the two highest awards in wheat, and it is surprising that they also won the highest three awards in the Northern zone in white corn, at the Chicago Grain Show. Two South Dakota boys also won corn prizes.



## BEEKEEPERS' NEWS NOTES



J. A. Munro

Remember the date of the North Dakota Beekeepers' Association convention. It is scheduled for January 15 and will be held at Fargo during Farmers' and Homemakers' Week. A well-rounded program, which will consider various phases of beekeeping management, marketing, etc., is planned. It is a meeting that anyone interested in beekeeping cannot afford to miss.

Judging by the numerous inquiries being received from beginners in beekeeping and those who plan to make a start with bees next spring, there is quite a renewed interest in beekeeping. Possibly this is due largely to the better honey prices and improved crop prospects now prevailing. The price of honey has been slowly but gradually advancing. A letter just received from Gordon Bell of Grand Forks, North Dakota, written from Mazon, Illinois, where he is spending the winter, states that eastern dealers have advised him that a much better honey market is shaping up for the new year. This is encouraging news.

Reports indicate that sweet clover, which is the honey plant of major importance, is recovering from the previous years' drouth and is again becoming abundant and widespread in practically every part of this area.

In the letters received from beginners or prospective beginners, one of the questions most frequently asked is, "Does beekeeping pay?" Our answer is yes, provided the beekeeper has a natural liking for bees and the other requirements for successful beekeeping are met. We usually advise the beginner to start in with not more than two or three hives. In this way he will gain the necessary experience without the expenditure of much money. After a season's experience with one or two hives, coupled with the information he can glean from books, bee journals, and his neighbor beekeepers, he will be in a position to decide whether or not he should continue in the business. Without question, beekeeping when properly understood and managed is a profitable branch of farming. We have yet to learn of any beekeeper, having a natural aptitude for beekeeping and a fair knowledge of the business, who has not been successful. Even during the past few years of drouth most beekeepers secured satisfactory yields.

When starting into the beekeeping business, whether as a sideline occupation or on a bigger scale, it is well to decide ahead of time the type of hive and other equipment you'll want to use.

There are only two or three types of hives now on the market and the beginner will do well to adopt any one of them and stay by his choice. There is probably nothing to be gained by changing from one type of hive to another. Don't try to construct your own hives unless you are well equipped to make them according to proper dimension. Beekeepers usually find it cheaper and more satisfactory to buy factory made hives and other beekeeping equipment. Any manufacturer will be glad to send you his catalog of beekeeping supplies upon written request.

Another point to consider is your location for an apiary site. It should be fairly well protected from the north and west by trees, with sufficient nectar producing plants or bee pasture in the vicinity. Where sweet clover is the main nectar yielder we usually consider that one acre of it will furnish enough nectar for one hive of bees. However, more than one acre of sweet clover bloom per hive of bees is desirable.

Finally, we would caution the beginner against buying bargains in used beekeeping equipment (especially hives of bees and used combs) unless he is certain that it is in satisfactory condition and provided with a certificate showing that it has been examined by the state inspection service and found disease-free. All too often, the beekeeper who takes chances on buying uncertified used equipment because of its bargain price will sooner or later have to pay dearly for his experience because of having carelessly introduced American foulbrood into his outfit.

## NATIVE BIRDS

(Continued from page 6)

the only true lark we have. It remains here all winter and is sometimes called snowbird.

The crow and jay family comprises the rogues gallery of the bird world. It contains a number of very intelligent and strikingly colored birds, all of which are natural-born thieves, and many of them have been convicted of murder in open court. None of them sing pleasing songs. All of them will rob the nests of other birds and for this reason they do not enjoy legal protection as the rest of our birds do. The magpies are abundant in the western part of our state. Everyone knows the crow but no one knows much that is good about him. The blue jay is hated by all birds. I have seen all hands united in our neighborhood to drive him out.

The black bird family includes the true black birds, the orioles, and the meadow larks. As nest builders they are called weavers. The largest member is the bronzed grackle. The redwings and bobolinks rival all other birds in the power and beauty of their songs. The meadowlark with his song announces the coming of

(Continued on page 10)





## HOMeward BOUND

The Cactus garden we visited twice and here captured in bloom many of the Cacti we missed seeing bloom, in Arizona. Here they are grown, as far as possible under their native conditions, and the results are marvelous. We were held spell-bound here by the endless beauty and variety of these strange plants with their gorgeous blossoms.

Al L. Truax



Everywhere in California we had failed, so far to see the famous Matija, or tree poppy in bloom, "Queen of all our flowers", so they call it, in California. We were told that it grew only in certain canyons and favored spots along the coast. It is a truly regal plant, growing sometimes to six feet high, with white flowers 5 to 6 inches in diameter, with crepe-like petals. We saw our first one in a yard at Santa Barbara and afterward we saw hundreds of them in the Blasleys Botanical Gardens near that City. These gardens are wonderful. Here are grown, in their natural conditions practically all the plants and flowers native to southern California.

The great features, at the time of our visit were, outside of the Tree Poppies, the Humboldt lilacs and the so-called Prickly Phlox, which is not a phlox at all, but a Gilia, G. Californica, gorgeous with masses of crimson blossoms. Going through the Marcos Pass 5 miles north of Santa Barbara, the mountain sides were a solid mass of varying color: mountain lilacs, Buckhorn, Coreopsis, Lupinus, Fremontia, Scarlet Bugler and Mimulus or Monkey Flowers in red and yellow. This is one of the most scenic points in southern California. A visit to California would not be complete without seeing her wonderful National Parks.

On May 30th, we drove from Visalia to General Grant and Sequoia National Parks, the home of the "Big Trees" of California. Going from Visalia up into the mountains, the foothills were covered with the California Buckeye, Aesculus californica, in bloom with great clusters six inches to a foot long, mostly white but occasionally with yellow and rose tints. Farther up the mountains among the evergreens, the Snow Plant, Sarcodes sanguinea, began to appear. It is called Snow Plant because it will often bloom alongside a snow bank, or even push up its blossoms through the snow. It is a saprophyte, living on decaying vegetation. Its intense red spikes are six inches to a foot in height, and in place of leaves the stalk is clothed with pointed scales. Words fail to describe the majesty and

impressiveness of the "Big Trees" in the Sequoia and General Grant National Parks. Many of them have base diameters of from 25 to 37 feet. It is difficult to grasp the immense size of these Giants, even when looking at them. For instance it is estimated that in the General Sherman Tree, which is 37.3 feet in diameter at the base, 17.7 feet in diameter 100 feet from the ground, and 273.9 feet high, there is more than half a million board feet of lumber in the trunk, enough material to build 500 five room houses. On the "Big Stump" of the Mark Twain tree, which was cut down years ago, and was 30 feet in diameter and 300 feet high, dances have been held. In the Mariposa Grove the automobile highway passes through an opening in the trunk of the Wawona tree and passenger coaches used to drive through it in former days, as autos do now. We walked upright from one end of a fallen tree to the other, through a hollow in the trunk. They are the largest and oldest living things in the world, many of them being undoubtedly from 3000 to 4000 years old. Some of them were vigorous youngsters before the Pyramids were built in Egypt and before Babylon was at its zenith. These "Big Trees" should not be confused with the big redwood trees which grow in northwestern California. Many people seeing the Redwood Highway and think they are seeing the real "Big Trees" but they are not. The "Big Tree" proper is Sequoia gigantea and grows only in the Sierra Nevada region, while the coast redwood is Sequoia sempervirens. The latter sometimes reaches 20 feet in diameter and grows 300 feet, making a wonderful tree, but yet not the "Big Tree".

We visited Yosemite Park but I must omit any description of that tremendous chasm. We drove from Oakland up Mount Diablo to the home of Joaquin Miller, where his daughter Juanita gave us sprigs of Lavender and sprays of Jasmine from her "Memory Garden". We went up the Valley of the Moon from Sonoma to Santa Rosa and visited Jack London's old home at Glen Ellen.

In a wonderful garden at Sonoma we saw Regal lilies five feet tall with 15 to 25 blossoms to the stalk. The best I have ever raised in North Dakota were 2 1/2 feet tall with from 3 to 5 blossoms to the stalk. In California they have nothing to do the year round but grow, while in North Dakota they are working only about a quarter of the time. Passing up through Oregon the roses were still with us in wonderful profusion, as were the beautiful Madonna lilies which grew in nearly every yard. We drove up the spectacular Columbia River Highway, with its towering rocks, and waterfalls which seemed tumbling from the sky and



then across Idaho, stopping at the Craters of the Moon National Monument, a weird and wonderful place. Here, growing in the crevices of black lava rock, were masses of a beautiful wild Mock Orange or Philadelphus, which I failed to identify but think it was *Philadelphus lewisii*. Other rare and delicately tinted wild flowers that I did not know, grew also in this desolate place on dry crumbling cinders of the lava rock.

While crossing Idaho I could not fail to notice the blessings of water. We would drive for hours over a desolate sage-brush plain and then suddenly drop into an irrigated valley of fruit, flowers and vegetables, honey bees, alfalfa and dairy cows. Times may be hard in those places but at least they have no crop failures.

We entered Yellowstone Park from the south coming up through Jackson's Hole and past the stupendous Teton mountains. On the mountain passes here and throughout the Park, the prevailing wild flowers on July 11th were the wild Geranium, *G. richardsonii*, with flowers of pale rosy lavender; Penstemons of various kinds, both blue and red; Yellow Compositae of many species and in many places, a dwarf white Phlox which looked like a sort of glorified Phlox hoodii of our prairies and which might be *Phlox longiflora*. I have spoken many times of the Penstemons, but seldom by any specific name, there being 30 or 40 varieties that are native to the west and southwest. A few of these might be mentioned, viz: *Penstemon centranthifolius*, red or scarlet, usually called the Scarlet Bugler; *P. cyananthus*, dwarf with brilliant blue flowers; *P. barbatus*, red; *P. cobaea*, white, and many others through all shades of blue, lavender and purple. It is a wonderful family, not the least of which is our own *P. grandiflora* of the prairies.

We left Yellowstone Park by the east entrance, passed the great Shoshone dam, crossed over the Bighorn mountains from Ten Sleep to Buffalo, Wyo., thence to the Devils Tower and then across South Dakota and Minnesota to Minneapolis, whence we arrived home on July 20th, after covering over 18,000 miles of auto travel and an absence of nine and a half months. It surely looked good to see the prairies green again with abundant rains after nearly five years of drouth. True, the wheat was rusting, but better rust than drouth. Yet, though the fields are green once more, still throughout North and South Dakota and far into Minnesota we saw, standing bare and naked groves, ghastly reminders of the holocaust of heat and drouth that descended upon this region during the years 1930 to 1934. What will be done about them? Will they ever be restored? They can and should be, but little seems to be being done. Many of them can be restored by cutting out the dead wood and cultivating the ground. Some of the groves were too thickly

planted anyway and needed thinning. Dead trees should be cut up into fire wood and this can be done during the winter season when there is little else than can be done. It is good exercise and it will save on coal bills. In most of the groves the Cottonwoods, Willows and Boxelders were the first to go, because they were the least drouth resistant. We should profit by this experience in planting new groves. The green Ash, the white Elm, the Bull Pine and the Black Hills Spruce have proven themselves to be the most hardy and drouth resistant and these should be used for the foundation plantings in the new groves, supplemented by equally drouth resistant Caragana, and Russian Olive, for windbreak plantings on the outside. Our Agricultural Colleges and Experimental Stations are willing and ready to help with advice and suggestions and even to furnish material for new plantings. It is up to us in North and South Dakota to restore these groves.

(Note—this is the fourth and last of Mr. Truax's travel articles.)

#### NATIVE BIRDS

(Continued from page 8)

spring. The home life of the cowbirds differs from other American birds in that they do not nest and they do not seem to mate as other birds do. A flash of orange and black as he darts from tree to tree announces the presence of the showy Baltimore oriole. The beauty of the yellow-headed blackbird is surely worthy of mention.

In another family we have the thrashers and catbirds. To listen to a brown thrasher's song on a still evening is a musical treat that few of us city dwellers enjoy unless we have a thickly wooded lot, for this is a bird of the underbrush and plum thicket.

We are all familiar with the busy little chattering wren, and probably more houses are put up for wrens than for any other birds.

The thrush family is well represented in South Dakota. It is pre-eminently the singing family among birds. All the thrushes have modest coloring. The most familiar member of this family is the robin. Few people think of him as a thrush. He is just the robin to us, one of the common birds, a dependable friend, and a thoroughly substantial bird citizen. He is, however, the typical thrush, the most highly developed of them all. The blue birds are not as common as we would like to have them.

The western mourning dove is our only member of the pigeon family. Wild fruit and weed seeds comprise the food of this gracefully proportioned bird.

Franklin's gulls should be well known to all

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SECRETARY'S CORNER

W. A. Simmons

In a recent letter, Dr. Geo. L. Slate of Geneva, N. Y., the author of the very fine lily article that appeared in the December issue says: "I tried out the deep planting of the Regal lily bulbs this fall. I have run across a few statements about lilies that were unusually deep, growing to great height, so I set half a dozen bulbs 30 inches deep and beside them, I set some bulbs only 10 inches deep." We shall hope to get the outcome of this interesting experiment next summer. It is doubtful if, in the wild, natural state, the bulb could ever work down to anywhere near that depth, but we must remember that in a natural state, a plant must take what it can get in the way of soil and general conditions; must fight its own battles and survive if it can, so we cannot affirm that the conditions it was found in, are necessarily ideal. In many, if not most cases, we can do better by it and get better results from it, in our gardens. Dr. Wilson, the discoverer of this lily wrote that it produced from one to several blossoms in the situation in which he found it. In our gardens, we get from 6 to 16 or more. Anyway, if we never experimented, we would learn few new facts. In his book, "The Lilies Of Eastern Asia," the discoverer of this lily, the late Dr. E. H. Wilson, emphasizes that the food of most lilies, is humus, derived from decayed leaves and other vegetable matter and that fertilizer of most kinds is, to them, poison. In a final plea, which now seems coming from the tomb, and as such should receive our most careful consideration, he says: "Some critics object to the coloured flowers, some to the narrow leaves, but in adding it to western gardens the discoverer would proudly rest his reputation with the Regal Lily; he pleads with all who possess or will possess this treasure not to ruin its constitution with rich food."

An interesting letter, under date of Dec. 9th, came from Mr. Wm. N. Craig, internationally known lily specialist, of Weymouth, Mass., in which he says: "Thank you for your letter and I appreciate very greatly your sending the magazine with my friend Geo. L. Slates' article on lilies. I have not found time to do more than skim it over yet, but can see that it is thoughtful and interesting. George L. Slate, as you no doubt know, is the son-in-law of the late E. H. Wilson to whom we are indebted for L. regale and so many other good hardy plants. He took the lilies from Mr. Wilson's garden here and has been studying the family quite a lot. I am much interested in your glorified tenuifolium, strange that it did not set seeds which leads one to sur-

mise there must be other blood in it. Tenuifolium does finely here but much better up in Maine where readings go 30-40 below zero. There we planted bulbs which ran up 5 feet high and carried 35-40 flowers per stalk but every flower set seed. Here it rarely goes over 30 inches high and the Golden Gleam variety does not grow quite as tall. I suppose Formosanum will not winter with you although here it proves harder than regale. The early flowering form would surely winter in South Dakota. It grows 24 inches high here and comes along soon after regale, many spikes carry 6-10 flowers and some of the little bulbs have 2 to 4 spikes each. We had a cold spell last week with readings down to 7 above but the ground is all thawed out now and we were planting beds of lilies all day."

"The time has come said the Walrus, to talk of many things," particularly of new members for our society. Nearly all of our members, I am sure, know people that are interested in some phase of horticulture and whose membership they can secure, with a little urging. We want to make a determined effort to increase our membership, this year and we hope that each member will make it a personal matter to secure us at least one new member. Our premium list appeared in the December issue and few places are so thoroughly planted that room cannot be found thereon for some of our offerings. In our check up of life members, 331 proved themselves to have life enough to reply. Nearly all of these, was started and so no promise was ever made them of receiving this free. For a time we required the old life members to pay 25 cents per year, for the magazine. As we became more prosperous, this was found to be no longer necessary, we are glad to furnish the magazine free to life members, even though it is a bit expensive in the case of our Canadian members, where the postage costs us 18 cents per year. But we expect these old life members to make some return for this favor and shall expect them to send in some new members very soon—or else. If we find the old life members totally unresponsive to our requests for new members, the Executive Board is likely to cut off the free magazine service and restore the subscription charge.

Fifty-second annual meeting at Aberdeen, S. Dak., January 15th and 16th.

If pot-grown plants are placed out-of-doors for the summer, the pots should be sunk completely in the ground. This will help to prevent their drying out.





**PRESIDENT'S CORNER**

(Continued from page 7)

two days, 45 cars were shipped and Texas and Florida growers, also greenhouse men, would rather keep them out.

The China Clipper plane, will get a good scrubbing or bath, both at Hawaii and again at arrival in California. A new insect or disease on a fruit or leaf, in some one's grip or pocket, might be the cause of millions of dollars of damage, a few years later.

**NATIVE BIRDS**

(Continued from page 10)

of us. We see them following the plow searching for grubs and insects.

Among the bird enemies I have mentioned are the cowbird and the jay. The English sparrow is surely a nuisance to other birds, and they also destroy nests and eggs. Wind and storm take countless toll of bird life every year. Boys with air guns are not always sure of what they are shooting. There is no greater enemy of birds than the housecat. Cats are natural hunters and easily climb trees to get at the nests.

As you have been urged to become familiar with wild flowers, so I urge you to know the birds. The study of either birds or flowers is an open door to nature's secrets. It leads us into companionship with every living thing. We weary of work and we tire of people, but whoever is intelligently sympathetic with Dame Nature never tires of her companionship.

### NORTH DAKOTA STATE HORTICULTURAL SOCIETY PREMIUM LIST FOR 1936

Paid up members of the North Dakota State Horticultural Society for 1936 may choose free one premium from Group I or two from Group II. (The name of the person or firm supplying the premium is given in each case.) No premium requests accepted after May 1.

**Group I**

- 1—Two Plants *Aubretia deltoidea*. A low growing, creeping, herbaceous plant, blooms in May. Very hardy, flowers scented, purple or white. W. E. H. Porter, Hansboro, N. D.
- 2—Two Plants *Lychnis coronaria*. A most beautiful hardy perennial, silvery felt-like foliage, flowers dark crimson, can stand heat, drouth, cold, anything. W. E. H. Porter, Hansboro, N. Dak.
- 3—Two Perennial *Gaillardia* Plants. A very showy, hardy perennial. Orange and maroon flowers. N. D. A. C.

- 4—Two Wrexham *Delphinium* Plants. A hardy, tall, blue flowered perennial. N. D. A. C.
- 5—One Kendall Apple Tree. Grafted on *Malus baccata* roots. A new variety of promise which is worth testing in North Dakota. R. L. Wodarz, Wyndmere, N. Dak.
- 6—One Sugar Crabapple. A hardy, productive sweet yellow crab. Oscar H. Will & Co., Bismarck, N. Dak.
- 7—Two Plants N. D. P-117 Raspberry. A new N. D. A. C. variety which seems resistant to heat and red spider. N. D. A. C.
- 8—Two Highbush Cranberry Plants. A valuable ornamental shrub and jelly fruit producer. N. D. A. C.
- 9—One President Grevy Lilac. A fine light blue French hybrid variety. The Northwest Nursery Co., Valley City, N. Dak.
- 10—One *Caragana frutex*. A hardy shrub, smaller in size than *arborescens*, with much more showy yellow flowers. Oscar H. Will & Co., Bismarck, N. Dak.
- 11—One Vitas Vine. A vining house plant resembling English Ivy, but heavier and thicker leaves. Shotwell Floral Co., Fargo, N. D.
- 12—One Potted English Ivy. A new branching variety of this fine house plant. Fargo Floral Co., Fargo, N. Dak.
- 13—One Tuber Each of Four Best Potato Varieties, selected from first 11,000 seedlings raised at N. D. A. C.

**Group II**

- 14—One Packet "Fish Eye" (F.P.I. 81037). A table variety of soy-bean. Early, productive. N. D. A. C.
- 15—One Packet Pinkie Popcorn. A new early variety with high popping quality, the pink kernels pop white. N. D. A. C.
- 16—One Packet N. D. No. 215 Tomato. A new large, early, pink variety, determinate vine like Bison; free from the green stem spot found in all commercial varieties. N. D. A. C.
- 17—One Packet N. D. No. 216 Tomato. A new large red variety, similar to No. 215 except in color. Seems to be able to set fruit in hot, dry weather. N. D. A. C.
- 18—One Packet Buttercup Squash Seed. From the latest purified stock of this variety. N. D. A. C.
- 19—One Packet White Bean N. D. (A 1-2). Probably the earliest of all white dry beans. Small bushy plants. New. N. D. A. C.
- 20—One Packet Chieftain *Gaillardia*. A very showy annual flower. N. D. A. C.
- 21—One Packet *Anchusa capensis*. The Cape Forget-me-not, dark blue, blooms all summer. A biennial, apparently hardy. W. E. H. Porter, Hansboro, N. Dak.