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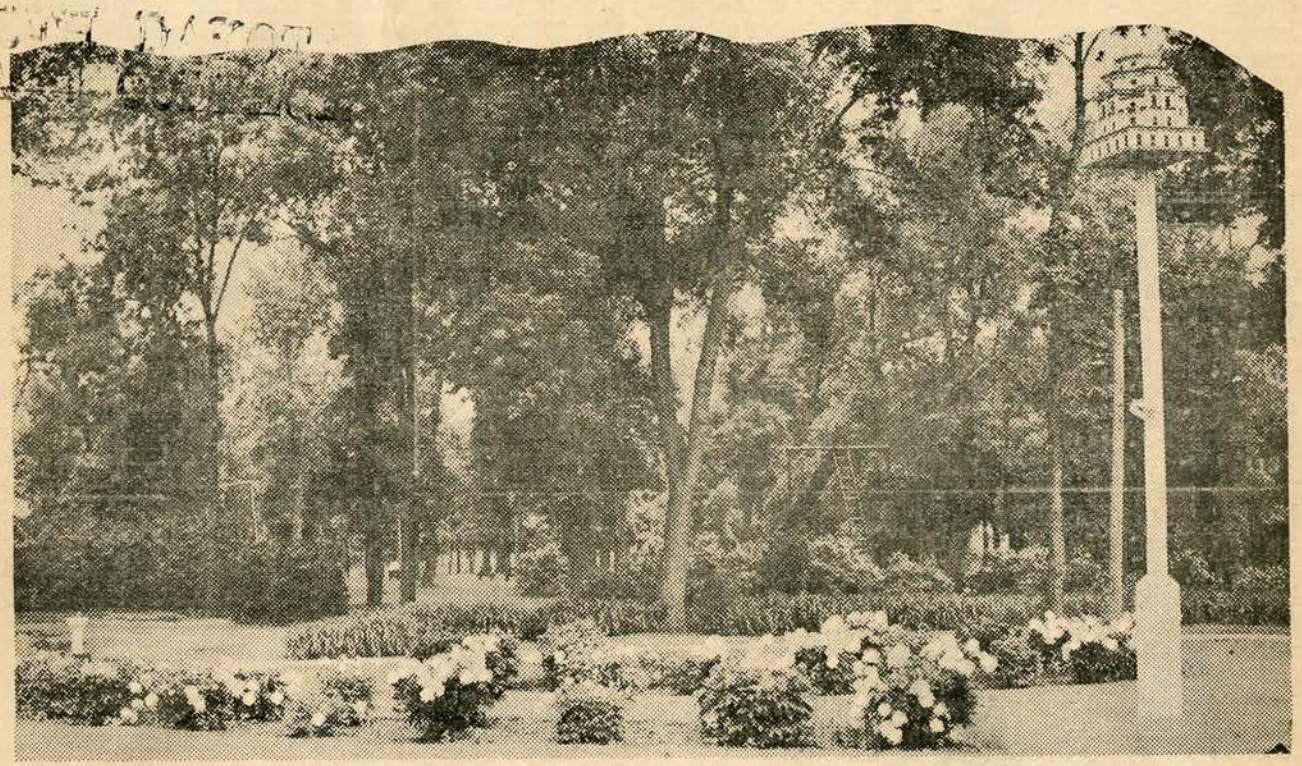
# NORTH AND SOUTH DAKOTA HORTICULTURE

OCTOBER, 1937





View in McKennan Park, Sioux Falls, showing the five-story Marten apartment house. We are told it has never been necessary to reduce the rent of these apartments, even in the depth of the depression, in order to fill this house with contented tenants. (Courtesy Argus-Leader)

## THE ROUGHLEGGED HAWKS

by

O. A. STEVENS

O. A. Stevens

Along with the red-tails in late September and through October come numbers of these other large hawks which have spent the summer farther north. The American Rough-leg is so called because it is only slightly different from the Rough-legged Buzzard of northern Europe. They are called rough-legs because of their heavily feathered legs. In America the name buzzard is commonly applied to the vultures, but in Europe the Common Buzzard is a large hawk closely related to our red-tail and roughleg. The American Rough-leg nests in the northern half of Canada and appears through the greater part of the United States during winter.

The Ferruginous Rough-leg is perhaps the more common form in our region. It is regarded as a distinct species and differs from the American in having the plumage usually distinctly reddish, the legs especially so and heavily barred with dark brown. The beak is usually large and broad. This bird nests through most of the western United States, northward only slightly into Canada and moves southward somewhat in winter.

The American Rough-leg ranges over a wide and varied area of country. On the rocky, treeless coasts their nests are built on the cliffs, but where trees are present the top of a tall tree is usually selected. The Ferruginous Rough-leg inhabits the prairie region but nests chiefly in trees along the streams. Mr. A. C. Bent describes four nests found in 1901 near Stump Lake, North Dakota. These were in oak and elm trees from 20 to 50 feet above the ground. A typical nest, which he found in Saskatchewan was three feet in diameter and two feet high. Mr. E. S. Rolfe in 1896 recorded a nest found in the Devils Lake, North Dakota region built on the straw-covered roof of an abandoned stable and another upon a haystack. He stated that a more usual location in that area was the rocky summit of a hill often overlooking a deep valley. J. H. Bowles found nests in eastern Washington built on cliff ledges and on low spreading juniper trees. He observed that dry cattle or horse dung was nearly always used in the lining of the nest. He also noted that magpie nests were frequently located in the lower part of the hawk's nest. Three or four eggs are laid. They are about two and one-half inches long, white or nearly so with large spots of brown.

The rough-legs have suffered especially at the hands of ignorant, prejudiced and careless hunters. The birds are slow in flight, relatively un-

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# *North Dakota State Horticultural Society News Letter*

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

The Horticultural Society meeting at Grand Forks was a successful one, and well managed by the local people. Our attendance, while not large, was satisfactory, and the papers were unusually good. The following officers were elected for the following year: J. H. Gerbracht, Hettinger, president; E. J. Taintor, Park River, vice president; Mrs. E. C. Stucke, Bismarck, vice president; A. F. Yeager, Fargo, secretary; Elwyn Meader, Fargo, assistant secretary; E. L. Shaw, Fargo, treasurer.

It was voted to instruct the executive committee to arrange for a meeting next year somewhere in the western part of the state if this seemed possible. The treasurer's report showed a balance in the treasury of something over $530.00.

The Dominion Experimental Farms at Morden, Manitoba, says that garden and home ground shelterbelts and windbreaks may be strengthened by planting a new Caragana hedge on the west and north at a distance of from 60 to 100 feet from the outer row of the main shelterbelt planting. We heartily agree with this. Such a hedge will add greatly to the moisture supply for the trees of the windbreak and at the same time improve its effectiveness as a shelterbelt.

A letter asks about a deficiency of boron as a possible cause of unproductive soils. It is rare that a soil will be deficient in this element. If it is deficient, boron is cheaply available.

In an extensive experiment with snap beans, Cummings and Sharp report that fertilizer placed in bands 2 or 4 inches to one or both sides of the seed row and 1½ inch below the level of the seed, or in 1¾ or 3½ inch bands 3 inches under the seed gave the earliest germination, best stands, most rapid growth of plants earliest maturity and highest yield of green beans.

John E. Bosher in English GARDENING ILLUSTRATED reports success in grafting Melba apple on a species of cotoneaster. That might be a good thing to try for someone particularly interested in propagation using our Cotoneaster acutifolia as a stock.

W. E. H. Porter of Hansboro says: "We are indeed fortunate that the New England Sweet Briar is hardy in North Dakota. The fragrance of the Sweet Briar rose bush all summer is something you never forget.

SASH GREENHOUSES is the title of Leaflet No. 124 of the U. S. Dept. of Agriculture. It tells how to construct a small greenhouse using ordinary hotbed sash as the principal material.

The Michigan Experiment Station is developing a wedge type of pruning fruit trees, which, as I understand it, consists of leaving a wedge shaped opening in the side of the tree so that the person spraying the tree may walk in and spray the inside of it as well as spraying the outside as is usual.

Because tomatoes very rarely cross in the field, it is entirely practical for home gardeners to save their own seed. If you have a good Bison tomato plant, for example, you may squeeze out some of the seed on paper and let it dry, or if you wish more, squeeze a quantity into a glass jar, permit it to ferment several days in a warm place, then stir up and wash. The seed will settle to the bottom and the pulp may be poured off. Incidentally, the seed saved from the last tomato on a plant will produce just as early tomatoes next year as though you had saved the first tomato on the same plant.

A correspondent asks about the plant known by the name of Sauramfer, resembling rhubarb, but finer. The leaves are eaten and they make a delicious soup. I find that the scientific name for this is Rumex acetosa. It is sometimes known by the common name of Dock or Sorrel.

Rheubarb may be transplanted in the fall in much the same way as peonies.

Mr. Lars S. Reiten of Kathryn speaks very highly of the Gem everbearing strawberry. Others also seem to think this a superior sort for our conditions. One reason why it is supposed to be better in North Dakota lies in the fact that it does quite well on alkaline soils, while some strawberries do not.

The question is asked whether it is well to mulch a tomato patch the middle of July to keep down weeds. We have never run experiments on this, but I doubt whether it could be recommended. There might be some tendency for it to keep the soil cooler and thus perhaps retard maturity.

A package of apples was sent in this summer when they were about one-quarter grown. The accompanying letter stated that they were dropping for no apparent reason. When examined, it was found that none of them contained seeds, thus indicating that a pollenizer of some other variety was needed.

We in North Dakota are often inclined to think that we have all the troubles, and that it is only our trees that have suffered in the past two years. However, a trip as far south as Kansas this summer showed in some places whole orchards of many acres with every tree dead. The reason lay

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## PRESIDENT'S CORNER

by

F. X. WALLNER

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

Virginia E. Jenks, member of Congress from Indiana, writes me that she voted for the reciprocal trade treaty, thinking it would benefit American agriculture, but now she has learned that it is about to put the greenhouse industry of America out of business. She tells me that combined, hothouse vegetable growers of America have an investment of 120 million dollars and give year round employment to thousands of people and she is doing her best to save the hothouse vegetable growers from bankruptcy.

Our Beta grapes were stripped of leaves by grasshoppers in the early part of summer, the grapes exposed to the sun and I feared there would be no crop, but they recovered and we are picking the best we have ever had, four bunches make a pound and they sell better than in former years.

Secretary Fitch, of the Iowa Vegetable Growers' Society, says that many growers strive to be as big growers as the 700 acre potato and vegetable grower at Clear Lake, Ia., that grows no weeds on the 700 acres. He tells of 13 things that this grower does well. 1st, fertilize heavy; 2nd, use high pressure bordo spray 6 to 8 times; 3rd, grows onions enough so he plants potatoes only on onion ground; 4th, never plants anything but certified or first year potatoes; 5th, never grows any weeds even on 700 acres; 6th, uses cleaning machines; 7th, puts up a reliable pack, rather understates his goods, holds his trade easily and gets a dime more per bushel; 8th, gives a lot of time and money to public service; 9th, looks his debts so squarely in the eye that he puts the finest improvements on the mortgaged land; 10th, takes pain and losses without a whimper; 11th, he is able to do more and better work than others; 12th, gets full value from labor; 13th, he is one of the best mechanics in the vegetable business in the United States. One that will do all of these things should be a successful fruit and vegetable grower but I am wondering how all the potato growers would have onion ground enough to plant potatoes on, and what we would do with the onions? How many potato growers would want to gamble on a hundred acres of onions each year?

August 25th. This afternoon Sec'y Simmons and I sat in with the entomologists of 11 states, to hear how we are to control the grasshoppers next year. This afternoon they were to criticise the work of the past year, but there was no criticism by anyone so the poison sawdust that has failed in the past, will again be used. I asked one of them "why not dust or spray the green vegetation where the young hoppers first begin to feed?" He said it was not practical and would not last long enough. I told him that the sawdust was moist only one or two hours while dust or spray would be effective several days. I have read carefully the two columns of resolutions they adopted and find a few lines that give me hope they may yet do away with the thousands of car loads of sawdust: "The committee recommends that cultural practices and mechanical spreading of bait are important phases of grasshopper control, and that bait spreading machines be demonstrated." In other words, I would say "just use a potato sprayer or duster where the young hoppers are feeding," not put it on the ground.

Moorehead, Minn., has about 450 acres in onions this year and harvesting began September 1st, with yellow and red globe and the yellow sweet Spanish will be harvested about the 15th. The yield will be between 300 and 350 car loads.

The later picking of Beta grapes shows what damage the robins can do in a few days. No other birds stay in the vines all day, just eating grapes. They would not touch a grasshopper, being all strict vegetarians, as long as the grapes lasted.

The artificial glacier in the highlands of Oregon, to irrigate strawberries, lettuce and other truck crops, is proving successful and attracting the attention of U. S. Department of Agriculture and other interested agencies.

The past two weeks I have been trying to figure out what caused the poor stand and blank places in the patches of new rye just coming up. Today another five-acre patch away from home was reported a poor stand so I investigated and found no rye on three sides, in twenty or thirty yards. The grasshoppers had destroyed it and not a blade of green was left; they had worked out of the corn field, alfalfa and weed patch.

Labor day and two days after, the treasurer, secretary and I attended the County Fair and did our best to make it a success. None of us were present to see the fun and excitement when the cow's husband broke loose and chased the red-headed caretaker up Main avenue for several blocks.

NORTH DAKOTA HORTICULTURE SOUTH DAKOTA



## BEAUTIFYING THE HOME GROUNDS

by

MRS. A. H. CHRISTIANSEN, Clark

We so often hear home owners declare their desires to improve and beautify their property but they say they are bewildered and confused at the task; that they just can not afford professional services, or that their property is too small or again that the building is not worth the effort. Let me assure you there was never a plot of ground so small that it might not be made one of importance if properly planted or landscaped, never a house so humble that it could not be made one of charm and that too at the expense of little personal effort and little cost.

We have only to recall that notwithstanding Ann Hathaway's humble cottage, her lovely garden gained great renown; that it is not the imposing house or mansion of George Washington that first attracts you but rather the beautifully kept greensward, the sweeping drives and most of all the stately grand trees whose outstretched arms extend a hearty greeting, much as old friends would, at Mt. Vernon. Then you wonder if it were not one of these that Kilmer had in mind when he wrote his splendid tribute to The Tree, and again you wonder, and this time just why he was not a bit more emphatic and have said "I **know** that I shall never see a thing so lovely as a tree."

It is said we must love and see beauty in every brick and every stone that goes into the construction of our house, then live in it, before it is a dwelling. Let us never forget, however, that this stark naked house, however pretentious, is never a home till it is planted. Does it not follow then that we must love, care for and live among the things we plant before we have a garden? There is no other single unit of our home where our personality and character is so reflected, no other part of which we may so completely claim the authorship.

From seed we have produced the sturdy and dominantly decorate hollyhock, planted in clusters at our back door and repeated in patches against a white stone wall or tall hedge at the rear of our garden. We have taken the trouble to study their need and have found them at an advantage against a sturdy background. One of our outstanding achievements is our delphinium patch. (I say patch for, of course, you will colonize these garden aristocrats as one should most all plants of the garden). with their tall stately stalks of multi-shades of blue and purple, so gracefully blended, we find we have produced something of a regal grace and charm, likened to that of a cultured people. We have produced a multitude of daisies, whose upturned happy faces are second only to those of laughing healthy little children.

It is not at all unlikely that we may have grown our lillies from seed, and if we have, it has added zest to these symbols of profound sincerity and purity that prove so conclusively that the "soul of nature, the soul of God and soul of man are blended."

But these are but a minor part of our handiwork. With a little seed and a magic wand we have produced a lovely, velvety green carpet, which if well kept, I believe is the keynote to a home beautiful. We have drafted our own garden plan, suitable to our property; have studied the characteristics of our plants and placed them to their advantage so as to become healthy specimens. We have planted our trees so as to afford us shade and shelter where it is most needed.

Does this not prove our ownership?

But we must on with our planting plans. Let us start with that part labeled Public Area, which is that unit between the front of the house and street. All our pet ideas should be thrust aside here and this must be an unbroken plot of well kept lawn with no interruption, except for a few well placed trees, so placed that they may form a natural frame for our building, without obstructing it. The walk leading to the house should never be flanked on either side by a planting. In fact, the planting of this area should be frank, open and direct. Mistakes here are not too easily corrected as we are dealing with substantial and permanent materials, such as trees, sidewalks and lawn. Perhaps the most unpardonable mistakes in our whole landscaping plan is that so often seen in the foundation planting. We are so apt to crowd in some cherished idea or be overgenerous. The first step is to study and know well our type of architecture. We must know that a tall colonial home will tolerate and allow an entirely different one than a bungalow or cottage. The general rule, however, is to plant all wall recesses, corners and our house entrance with tall growing and controlable plants. We generally plant these in groups of three, using (as on a corner) one on either side of the point and one off from it. This relieves all harsh angles and establishes a naturalness. Groups of three's are also advisable at our house entrance if space alows, but do not crowd, always realize your plants are intended to live and will expand. These groups as just outlined should be connected with lower growing or dwarf types. Those of a somewhat willowy character preferred. Evergreen, both dwarf and tall, make a most desirable all year planting and I doubt much if it is not the cheaper in the long run. Certain it is that they do give us cheer and beauty when we most need it.

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## SECRETARY'S CORNER

by

W. A. Simmons

Occasionally a long time life member, appreciative of the magazine, makes a donation to the Society and these are always very welcome. The latest to be received is from a very valued friend of the Secretary since early school days, Mr. W. F. Sonderman of Kennewick, Wash., who sent in two dollars and asked that it be considered a donation. He writes: "My asparagus crop—third year cutting—yielded 6,300 pounds per acre and $291.89 in money. I have increased my planting to nearly five acres which is all I care to work. The spud crop was good but the price not satisfactory to the grower, on account of over-production throughout the producing sections of the U. S." How quickly the dealers run the price down, once they find out the growers have something to sell, and how nice of the government to collect this information for the dealers. Without this service some grower might receive more than he was entitled to for his crop and become an "economic royalist."

Writing from his home in Berwick, Nova Scotia, Mr. John Buchanan, one of our Canadian friends and members, says: "We have no blight on pears here and very little on apples. We grow mostly Bartlett and Clapps Favorite pears; Clapps can well here and nowhere else." How fortunate to be out of the blight belt. This disease keeps me constantly in kindling wood, from the many dead limbs I have to saw off, each summer. Mr. Buchanan raises a crop of about 4,000 barrels of apples annually, mostly Wagener, Spy and McIntosh and says the latter is his best bet still. But he also raises about 500 barrels of Gravenstein and 50 of early McIntosh and has a start also in Macoun, Turley, Redjon (the red Jonathon), Edgewood and Linda and thinks very highly of the latter. He is trying all of the new apples from the New York station and many other stations, seeking the elusive perfect winter apple.

The week preceding Thanksgiving seems to be the popular time for holding State Horticultural meetings, being selected by the Wisconsin Society for their meeting at Waukesha, the Iowa Society for their meeting at Ames, as well as our own Society for the meeting at Clark.

According to Dr. D. R. Dodd, agronomist at Ohio State U., an Ohio cow requires 200 lbs. of grass to produce 25-35 lbs. of milk per day. To get this the cow must harvest one-sixth of an acre daily and take 180 bites a minute for 12 hours. The C. I. O. did not have much luck in Ohio or probably they would have reduced these hours. In what the president calls the "horse and buggy days" it was considered to be something of a vacation for an animal to be turned out to grass, but in the case of an Ohio cow, it seems to be merely introducing her to a job of work.

Mr. J. J. Ostrowsky, who discovered the bed of rampantly healthy speciosum lilies in a local garden, discovered when he dug them that the bulbs were only from two to four inches beneath the surface and the owner told him he never gave them any winter protection. Whether this shallow planting was the cause of their good health, or whether they endured this shallow planting because of their good health, I must leave to my readers to judge. In thinning out a crowded clump of Regals last fall, I was surprised to find the bulbs so near the surface, only about 3 inches underground. In former years it was considered necessary for the female of our species to wear many more clothes than we can prevail on them to wear now, and yet they seem to enjoy much better health now. Is this lighter covering responsible for their improved health or are we growing them tougher now? Perhaps we have been growing our lilies too far underground and it might be well to try shallower planting with a portion of our bulbs.

## FALL CARE OF BEES

by

J. A. MUNRO

J. A. MUNRO

Probably no other creature under the sun deserves better care than the honeybee. It is one of our most useful insects in that it produces useful commodities, including honey and beeswax. Indirectly, it confers a great benefit on general agriculture in that it is an important agent of cross-pollination of fruit bloom, clovers, and other plants. This activity results in proper setting of the seeds and fruits and, in this respect alone, it confers a greater benefit on general agriculture than to its owner, the beekeeper.

As it is, the honeybee is a creature which works for nothing and boards itself. The amount of honey which it gathers and stores, over and above its needs for the winter, is removed and used as human food. At this time of the season, beekeepers should be particularly careful that they leave enough honey with their colonies to provide for them during the winter season. Here in the North, the winter season really extends from October until the following April. During that period, no honey is available to the bees except that which is stored in the hives. The bees are confined during the winter and must have upwards of 50 pounds of honey on hand to insure them against starvation.

In addition to honey being necessary, a good supply of pollen or "bee bread" must also be on hand for the welfare of the colony. It has been found that the development of the colony is dependent largely on pollen because it is an essential food for the brood. Beekeepers will find that practically every colony has a supply of pollen stored in the brood combs. This pollen will be covered over to a large extent with honey and sealed over. Since the pollen adds a considerable amount of weight to the combs and may be hidden by the layer of honey, it is liable to mislead the beekeeper as to the actual amount of honey in the combs. The amount of honey stored cannot be determined by simply weighing the hives. Allowing the colonies to winter over in the large type of hive, or the so-called double hive bodies, will allow ample space for all the stores they will need. It is better to leave more stores than they actually need because anything in excess for their winter use will be recovered in the following season's harvest of honey.

Another most important factor in wintering of bees is proper protection from the cold. Colonies of bees may be wintered, as the bee-keeper may prefer, in ordinary cellars underneath houses or packed with insulation materials out-of-doors. In general, colonies wintered in good cellars consume less stores and come through the winter in better condition than those wintered out-of-doors in protected hives. Where colonies are to be wintered in the cellar they should be moved indoors at the approach of severe weather in the falls, which is usually about the middle of November. If they are to remain out-of-doors, they should be given the necessary protection at least by the middle of October. A shelterbelt of trees aids greatly in the protecting of a beeyard.

It is important that the colonies themselves be in a satisfactory condition before attempting to winter them. Ordinarily, most colonies will be composed of a large proportion of young bees and headed by a good queen; however, usually there will be a small percentage of colonies that are weak or too small in size to justify their being wintered over. It is useless to try to winter over weak colonies because they will seldom survive the winter season. If the weak colonies are disease-free, they may be united safely with other colonies. Ordinarily, however, there is little to be gained by uniting colonies.

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## BEAUTIFYING THE HOME GROUNDS

(Continued from page 113)

We have taken care of the public, naturalized our house, now let us away to our joy of joys, our out-of-doors living room, which must be as fine, peaceful and livable as any part of our home. It must be designed for complete relaxation and set apart for absolute privacy for the family and its friends. Naturally privacy suggests enclosure, and I consider there is but one way to obtain a perfect garden enclosure, and that is by using a hedge. Yet, we do not wish to be conscious of this enclosure so we outline and plant our border bed running just inside the hedge and it is here we anticipate all our desires in way of flowering shrubs and plants. We insert a little white gate, and although it is never used, it does so invite. We place our trees to give advantageous placement of our furniture and put in a few bird houses, for no garden is complete without the birds. Not the least of the requirements is a bird fount or bath, so placed as to be enjoyed by us all and assure protection to our timid friends. As a last precaution may I repeat, do not plant without a plan; do not crowd, and above all things be careful of your colors as to placement, etc., and do not, I pray, plant shy columbine beside tall sturdy hollyhocks.

## SOME LOCAL HORTICULTURAL EXPERIENCES

by

H. L. HOPKINS

(Continued from last month)

We were off at the peep of day the following morning and our enthusiasm almost made us boys again, at least in spirit. Among the fine old farmsteads were many large stately hard maples. Their wonderful symmetry excited our keenest admiration.

When a few miles out I glanced up a little latteral ravine and discovered the distinctive foliage of a tree of the nut family. We stopped and climbed the steep bluff to investigate. It proved to be a fair sized hickory and was already dropping its rather generous crop of nuts. With boyish eagerness we began to gather them. After a bit a fine, friendly farm dog appeared and then we discovered its master, a nice looking chap but rather grim. His head and shoulders showed above a small hazelnut thicket. We greeted him with a cordial "Good morning." He responded: "What the hell do you fellows think you're doing here?" Dan came back with a flashing smile "Gathering nuts." The chap replied: "That is quite apparent, but whose nuts do you think they are?" We told him frankly that we had never once thought of that, and it was true. Then we started to explain and our enthusiasm almost immediately appealed to him. He, too, was a nature lover and he very soon most cordially approved of our plans and volunteered very valuable information and, in fact, spent the entire day with us assisting in gathering seed stuff largely from his own fine premises. His name is William Schwartz and he is one of nature's noblemen.

The following year he again spent the entire time with us giving enthusiastic assistance. In addition to the fruit and nut seeds enumerated in a previous paragraph, on our second trip we gathered many acorns and about a bushel of white pond lily roots and seed pods. These latter we divided with Dr. Nils E. Hansen, the world famous plant wizard of Brookings college.

These germinated nicely and gave great promise for a couple of seasons in our local lakes but subsequently were killed by the drouth.

The third year we visited the vicinity of Litchfield, Minn., for more seed stuff.

The fourth year we made a trip through the north central lake districts of Minnesota, about Itasca Park and Detroit Lakes, and, in addition to the usual seeds we had been gathering we secured some wild rice seed and other water loving plant seeds for our local lakes.

We also gathered considerable quantities of wild grape, plum, black haws, choke cherries and buffalo berry seed from our local lake shores and gulches.

We planted these seeds in literally hundreds of places on almost every favorable spot within a radius of 25 to 40 miles of Clark, lapping over on to the edges somewhat of all adjoining counties.

We diligently studied and tried to follow nature's way in our plantings. We kept in mind and tried to provide for the sex principle knowing that it runs through the gamut of all living things.

During the first couple of years we were rewarded with a very satisfactory percentage of germination and happily watched the tender seedlings shoot up but, Mother Nature can both give and take away.

Today, owing to the drouth, the only living things resulting from our rather extensive and expensive efforts are a few stunted wild grape vines. There is no question in my mind but our experiment would have been quite satisfactory and successful under favorable moisture conditions. We at any rate made an earnest, hard try but, it was a case of "Love's Labor Lost." for it truly was a labor of love.

Much as I love them I could not conscientiously advise general tree and shrub planting again in this locality until our soils are well saturated. Our sub-soils are almost as dry as Death Valley. I trust that a brief digression may be appropos and of interest.

The present dry period is by far the most severe that has occurred in this part of the world within the memory of living humans of which there are any records. However, there has been a drouth here in the not remote past that, as I view the evidences, must have been far worse and much more prolonged. I will briefly review the evidence.

Enemy Swim lake, in Day county, has a depth of about 60 feet at a normal stage of water, over a considerable portion of its bed. Partially around its deeper part is a bench, at something more than half its depth, that is covered with a submerged forest. The trees apparently stand with roots in the earth where and as they grew.

In the deeper portions of the basins of Oakwood Lakes, in Brookings county, are fair sized stumps with roots penetrating the soil where they grew.

We all know that these trees did not grow under water. Following the growth of these trees the basin of Enemy Swim Lake must have filled very suddenly, otherwise these trees would have been broken and crushed down by floating ice following spring breakups.

That drouth period may have occurred hundreds of years ago and it doubtless terminated with a winter somewhat comparable to that of 1880 and 1881, when every basin in this general locality, large and small, was filled to overflowing following the late spring breakup.

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## SOUTH AFRICAN PLANTS FOR AMERICAN GARDENS

by

SARAH V. COOMBS

(Published by Frederick A. Stokes Company, New York City, price $4.50)

(Reviewed by Mrs. F. Briley)

If you are in the market for books on plants, the jacket alone will sell the book to you. It shows an enlarged print of the Pink Calla and we read that in South Africa these small flowers with charming color fill hundreds of moist valleys or "kloofs," grow in damp open woodlands and cluster along the roadsides by hundreds of thousands. Best of all, we are told that the Calla Lily can be used in the north in groups, by pools or in any damp spot.

The preface gives two clear cut intentions of the book. One is to give the people of the northern countries some idea of the beauty of the flowers which grow under the southern cross, and the other is to help us select thoe that may be added to our gardens and greenhouses.

Africa is anything but a "dark continent," for it has more sunlight than we have in America. Very few of the plant species need coddling or any unusual conditions. The author gives us some general rules to help us in growing the South African annuals, which are few and very simple. The flowers of that area are so varied that after reading "South African Plants" one appreciates that work of compilation done by the author. Some are full of surprising happenings. Again, some fill one with awe and admiration. One succulent has flowers like living baseballs, with seamed and checkered covers.

A gay group of Babianas, and one of the showiest, is deep blue with a red throat. The Peacock iris is well named for the flowers look like a peacock feather, with its three white lobes with blue black circular spots at the base of the blade. People who question the theory of protective coloration will find few persons in South Africa to agree with them, so perfectly do numerous of the plants seem to hide from browsing animals. Some of the "stone plants" growing in stone-like shapes, are almost indistinguishhable and can hardly be told from the stones among which they are found. Collectors have to look twice to tell which is plant and which is rock. Like us, they have learned to face drought with a stout heart and, usually, a tough skin. When they bloom they produce huge, daisy-like flowers, which almost cover the plant, but at that time there are many other plants in bloom and they are not so noticeable.

Some form a vast carpet of gold and silver, crimson, blue and orange, "woven out of earth and air and sunshine, no sultan ever had so fine a one." It is to be regretted that so many species that are so lovely and easy to grow should be so seldom seen by human eyes.

It is encouraging to know that the north, where they will, may grow a large share of the annuals, summer bulbs and greenhouse and sunroom flowers. Plans for a summer garden in the north using South African plant are given in the book with full descriptions and detailed directions for cultivation.

A list of dealers carrying South African seeds, bulbs and plants is found at the end of the book. There are sixteen illustrations and a frontspiece in full color, and seventy-three illustrations in black and white. It would be interesting to know your reaction when you first look at the plate opposite page 209.

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Mr. J. B. Moore of Geneva, N. Y., Station, has been working with aphis control on vegetable plants. He found that apparently aphis were attracted to the plants by light intensity as reflected by sprayed plants. These seemed to be more aphis on potato plants sprayed with Bordeaux mixture. By dyeing lead arsenate and lime mixture for use on cabbage worms, a black color, he reduced the worm infestation on the cabbage. This may mean in time we shall have colored spray materials for us in aphis control. —The Maryland Fruit Grower.

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### ROUGH-LEGGED HAWKS

(Continued from page 110)

suspicious and easily fall prey to the gunner. As a matter of fact they feed almost entirely upon ground-squirrels, rabbits and other rodents, rarely molesting poultry or other birds. A rancher in eastern Montana stated that for 16 years he had several nesting pairs which frequently flew around the buildings but never troubled the chickens. A New York taxidermist found only field mice in stomachs of the American Rough-legs which he received for mounting. One bird was shot by a game keeper who suspected it of eating game birds, but on opening it nothing but field mice remains were found. Nearly a century ago Audubon wrote of the American Rough-leg: "the number of meadow mice which this species destroys ought, one might think, to insure the protection of every husbandman; * * * but it is shot on all occasions simply because its presence frightens mallards and other ducks which would alight on the ponds on the shores of which the wily gunner is concealed.

Mr. P. A. Taverner of Canada states that the Ferruginous Rough-leg is "the largest but the least harmful and most beneficial of our hawks." Near a nest in Alberta he found over a bushel of dried bones and scraps of gophers. Mr. John B. May in his recent book on hawks says, "it should be given complete protection at all times."

## SPRAY RESIDUE REGULATIONS BREAK DOWN

(Dr. A. N. Pratt in Tennessee Horticulture)

Under this heading the "Pacific Rural Press" for July 3rd, 1937, carries an article by John E. Pickett which should be of interest to every fruit grower in the country. It recounts the fight that Dr. Ira D. Cardiff of Yakima, Wash., a former director of the Experiment Station at the University of Washington, carried on against the federal authorities to prove that the dried apples they seized did not contain sufficient arsenate of lead to be injurious to health. In suits at San Francisco and at St. Louis, although it was proved that the seized fruit exceeded the arsenic tolerance of .01 of a grain and lead tolerance of .018 grain per pound, that such food was not injurious to health and that no laws of France, the country to which it had been consigned, restricted the arsenical residue. The cases were appealed and the Appellate Courts upheld the decisions of the lower courts. Some of the evidence presented was very interesting. Canned baby foods taken from store shelves contained more than the Government tolerance and cod liver oil, universally recommended for its health-giving properties for babies was on the border line. A can of shrimp picked at random contained 6 times the tolerance allowed for fruit and lobster, 12 times. Apple butter put up with Government money by WPA workers exceeded Government tolerance by as much as 70 per cent.

Lead is not soluable in water, yet it was found in San Francisco tap water. It was found in the bodies of new-born babies and is normally eliminated through human intestines. Many physicians of the Northwest where arsenate spraying is extremely heavy were interviewed and none had found a case of lead or arsenic poisoning except where the arsenate had been inhaled and the poison entered the bloodstream through the lungs. Chemists testified that some pipe tobaccos contained 27 times the tolerance and some chewing tobaccos 9 times. It was pointed out that Great Britain allows the entry of unwashed fruit from all parts of the world, but that only the United States was fussy enough to restrict its shipments. Unfair and ill-considered newspaper publicity here and abroad has brought about the imposition of this stringent tolerance. Its unfairness has ruined many fruit growers by forcing them to costly sprays and washing operations. The codling moth "build up" has been in no small measure due to the ineffective spraying of growers who tried to keep within the tolerance without the necessity of washing their fruit. A David has knocked down the U. S. Goliath with a stone of evidence, but he has not been beheaded. The tolerance still stands on our statutes and unless some readjustment is made to relieve the situation, numerous and costly lawsuits, encouraged by Dr. Cardiff's victory and supported by new evidence, may result.

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## HONEY COOKERY

by

LORRAINE ENGLE

The rapid advancement made in the development of honey cookery is no doubt due to the superior quality of honey itself. Throughout history, honey has been a luxury for kings. Today we realize that honey is not a luxury but is so fine a food that all people should enjoy it daily. There are a large number of qualities and flavors, which of course offer the consumer any particular flavor he may desire. Honey is a healthful sweet, containing many chemical substances necessary to the human body.

The American Honey Institute, an organization supported by the beekeepers of America, is responsible for the rapid demand for honey in cookery. This growth has been evident in the circulation of college experiment bulletins, magazine articles, and recipe bulletins which are now before the public. The Institute impressed on the directors of experiment stations the cash value of the honey and beeswax crop and the importance to the horticultural interests of the cross pollination value of the honey bee. Through this step, Home Economics directors became interested in the product of the bee, HONEY. Through the consumer, educational work of the American Honey Institute, fifteen states have released honey recipe bulletins which are available to the homemakers in these states. The North Dakota Experiment Station has an excellent honey bulletin (Honey-Cookery, Bulletin 108). This publication was prepared by Miss Constance Leeby of the State College.

The next time you purchase a container of honey, don't use it only as a spread for breads and cereals, but prepare some food product with honey. Honey will add variety to meal planning, as well as making more healthful, economical and delightful foods.

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Many derogatory things have been said about onions and garlic, but now the scientists have discovered that they have powerful germ-killing properties. Onions contain allyl aldehyde and garlic contains crotonic aldehyde, both being enemies of certain infectious disease germs. Our grandmothers thought onions were good for the health, and now they are vindicated. Possibly one of these days the scientists will discover that potatoes really should be planted in the light of the moon, (or is it the dark?).—Better Homes and Gardens.

## NEWSLANTS

by

HARRY A. GRAVES

H. A. Graves

The Horse Chestnut or Buckeye **(Oesculus hippocastanum)** is a showy tree with its attractive foliage and large spiny fruits. Several of these trees bore good crops of nuts in Grand Forks this year. They appear perfectly hardy there and are probably worthy of trial elsewhere. According to Gray, in his new Manual of Botany, the seeds are mealy and bitter. After sampling one of the fruits, I agree with him.

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In the August issue we mentioned having received two samples of white Juneberries from the Stump Lake area in Nelson County. Passing through Lakota early in August we called on Cy Reddick and C. W. Wolla, Nelson County Extension Agent. These two men reported the white fruiting trees to this office. We received information as to the location of the trees from which the fruit was picked and found them growing in a compact clump, apparently all spreading by stolons from one original tree. We now have a number of these stolons showing signs of life on the plots here at the North Dakota Agricultural College.

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The Grand Forks Yard and Garden Contest in which final placing were made August 27th served as a reminder that Grand Forks is a city of many well cared for and beautiful homes. Many of the places visited showed excellent care, especially where owners have made neatness of their yard and garden a hobby and pastime. Other cities in North Dakota might well consider contests of a similar nanture and stimulate interest in better homes and gardens and to use the contest as a means of discovering attractive, well cared-for home grounds.

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Pioneers who came to North Dakota and planted a ten-acre tree claim in order to secure an additional 160 acres builded better than they knew. They were after more land, but they established groves of trees that were not only beneficial to themselves but to following generations.

4-H conservationists are one jump ahead of these pioneers. They are interested in plantings for the sake of improvement and also for the pure joy of watching plants grow. They will plant nurseries and from these nurseries farm shelterbelts and landscape plantings. We were greatly surprised at the amount of interest in plant material displayed by 4-H conservation camp delegates at their annual 4-H Conservation Camp held at Lake Metigoshe August 4-8.

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Several pieces of petrified wood and plant fossils received from F. W. Braun of Dickinson are on display in the Horticultural office at the North Dakota Agricultural College. Mr. Braun has much of this material in his rock garden at Dickinson. He also has a very satisfactory irrigation system, water being furnished from the Heart River by a two-stage electric pump.

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Plant material at the Dickinson Substation looks very thrifty this year in spite of the drouth. Many of the apple trees were bearing a nice crop of fruit when we called there in August, and a young planting of conifers showed little effect of the dry weather they have come through.

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## THE ROBERTSON MEMORIAL PARK

This Park, acquired in 1935, consists of 5 acres of almost level ground about 5 miles west of Hot Springs on U. S. No. 18 highway, at the corner where the road branches off to go to the Robertson fruit farm. In this Park the genius that created that farm is now at rest.

Little has been done to this Park, outside of the boulder monument with its name plate, but its natural layout is ideal for transformation into one of the state's choicest beauty spots. The ground is bounded on the east and the north by a low lying belt of loose rock that, starting at the southeast corner, runs in an artistic semicircle to the northwest corner. This belt of rock is about 30 feet wide and we visualize this natural background eventually being planted to Ponderosa pine and cedars.

But before any planting can be done the Park must be adequately fenced and it is to raise the necessary money for this purpose, as well as the landscaping, that this appeal for funds is being made, by this Society and our goods friends of the Dakota Farmer.

Here is a last chance to do something for John who did so much for us, and I am sure you will all want to help, with whatever sum you may be able to spare. Both this magazine and the Dakota Farmer will publish the names of all contributors and money can be sent either to the latter, or to the Secretary.

## NORTH DAKOTA STATE HORTICULTURAL SOCIETY NEWS LETTER

(Continued from page 111)

in a combination of grasshoppers and drouth.

According to the Morden Newsletter, the University of Manitoba recommends the following spray for the control of dendelions: Copper nitrate at the rate of 1½ pounds to 7½ gallons of water, this amount to cover one thousand square feet.

The Kansas Experiment State reports good results in the control of dandelions by spraying in the fall with white kerosene, applying it at the rate of about two quarts per 100 square feet when the air temperature ir around 45 degrees.

Dr. N. E. Hanson of the South Dakota Experiment Station, the originator of the greenhouse method of fruit breeding, this year adopted another system. He began making crosses in the Central States when the fruit was in bloom outdoors, and moved northward with spring until he finished his work in Canada. I have no reports on the amount of crosses and seed procured in this way, but it sounds like a most logical system.

Dr. E. A. Helgeson, Plant Physiologist at the North Dakota Agricultural College, gives the following formula as a good nutrient solution for the raising of plants in either liquid or sand culture: Super-phosphate (20%), 3.785 grams; NaNO3 (14%N), 2.310 grams; Ca (NO3)2 (14%N), 2.380 grams; KC1, 0.76 grams; MgSO4.7820, 1.96 grams. These materials are to be dissolved in one gallon of water. Here is a place to begin if any of our members want to try such a thing.

One of the interesting sidelines in connection with fruit breeding is that encountered with peaches. Investigators found that in breeding extra early peaches they had varieties which ripened up the flesh very early, but that the germ on the inside of the seed was still immature. The next thing necessary was to devise methods by means of which these immature germs could be grown. It was done.

This is the time of the year when the usual story about how someone raised a mammoth pumpkin by feeding it milk begins its annual circulation. The fact of the matter is that so far as I know, there has never been an authentic case of such feeding, and the botanists who are supposed to know about such things say that milk is not a good diet for a plant no matter how fine it might be for an animal.

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I think that I shall never see
A billboard lovely as a tree.
In fact, unless the billboards fall,
I'll never see a tree at all.

—Ogden Nash.

## SOME LOCAL HORTICULTURAL EXPERIENCES

(Continued from page 116)

Now in conclusion I am pleased to sound a more cheerful note. Along with the disappointments I have also had the great personal pleasure of originating, planning and initiating the movement for establishing one case of highly successful local tree planting. I refer to our beautiful city park. In casting about for a suitable location I gave careful consideration to two features: first, the site chosen is, for the convenience of our people, almost ideal and it was vacant ground and, second: judging by many local surface wells long in use, I believed its soil was sub-irrigated.

The latter theory has been conclusively proven by the fact that its trees have made substantial growth during each year of the present drouth period and that almost every twig is alive and vigorous to its very tip.

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## TAWNY BLACKBERRY LILY

Condensed by Garden Digest from New York Herald Tribune

The blackberry lily (Belamcanda chinensis) is a rather unusual perennial which is finding a place in many gardens. It is not a lily, as its common name would imply, but a member of the iris family, and has the long, sword shaped leaves characteristic of the members of that family. The flowers are about an inch and a half or two inches wide and are borne in clusters on branching stems two or more feet high. They are a tawny orange spotted with reddish brown, and are followed by fruits which resemble a blackberry. They are hard and shining and are interestingly used in winter bouquets. The blackberry lily may be easily grown in any garden in a sunny or lightly shaded place. During its period of bloom in summer it is attractive grouped in the flower border or in bays in the shrubbery planting. Plants may be easily raised from seed, and the tuberous roots may be divided in early fall or spring.