

NORTH AND SOUTH DAKOTA HORTICULTURE

JULY, 1940

NEW BURPEE FLOWER MAKES ITS BOW



Miss Jean Burpee, niece of David Burpee, famous hybridist of Philadelphia, helped usher in at the Waldorf-Astoria Hotel in New York recently, the new "Tetra" Marigold, first flower ever created by use of a chemical for reproduction from seeds. It was developed by doubling the chromosomes of the Guinea Gold marigold, a feat accomplished by treating the marigold with colchicine, a chemical extracted from the bulb of the common autumn crocus. Miss Burpee is a student at the Sarah Lawrence School in Bronxville, N. Y.

The annual meeting of the North Dakota State Horticultural Society will be held at Fargo, N. D., August 21 and 22. Plan to attend.

634.05
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THE AVOCET

by
O. A. Stevens



O. A. Stevens

This is another of the large shore birds, one of striking appearance but not a well known one. It is almost as large as the marbled godwit, but marked chiefly with black and white. The body is mostly white, the head and neck somewhat brown (in breeding plumage only), the wings black but with their middle portions white. Like the godwit, they inhabit the interior of the country, from southern Alberta and Manitoba to southern California and Texas. They spend the winter along the coasts of the southern United States and Mexico. Now they are rarely seen east of the Mississippi River; but Audubon's observations upon them were made near Vincennes, Indiana, and Wilson found them nesting at Cape May, New Jersey.

The avocets and black-necked stilt are the only representatives of a family which contains only half a dozen species. The avocet of Europe is much like ours. A third species occurs in Australia and a fourth in South America. These birds have very long, slender legs and long, slender, sharp bills which curve upwards toward the tip.

I have seen the avocets a number of times about the prairie lakes, especially in Kidder County, North Dakota. They have often been considered to be partial to the shallow, alkaline lakes, though Major Coues stated that they were to be found equally abundant about fresh water lakes and rivers. His first experience with them was in June, 1864, near the Arkansas River. They were reported to have been found in western Minnesota in the early days, but were evidently rare there and have not been seen there in recent years. A. A. Saunders recorded them in Montana chiefly across the northern part of the state as nesting birds.

The avocets seem to have little concern for their safety. Bent writes: "Wherever this large, showy bird is found, it is always much in evidence. Its large size and conspicuous colors could hardly be overlooked, even if it were shy and retiring; but its bold, aggressive manners force it upon our attention as soon as we approach its haunts".

The nests are mere hollows on the dried mud of nearly bare pond edges. The eggs are three or four in number, about two inches long, and

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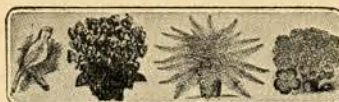
TABLE OF CONTENTS

	Page
The Avocet, O. A. Stevens	74
Newsletters, H. A. Graves	75
Manitoba News Letter, W. R. Leslie	76
President's Corner, H. E. Beebe	77
Questions and Answers, L. L. Davis	78
Spring in New Hampshire, Dr. A. F. Yeager	79
July, W. E. H. Porter	80
Dr. G. F. Will	81
Book Reviews, Mrs. F. Briley	81
Secretary's Corner, W. A. Simmons	82
Fruit & Vegetable Notes, F. X. Wallner	83
South Dakota Trees, E. H. Everson	84

hardly an inch and one-half wide at the larger end. They are greenish in color, rather evenly covered with irregular spots of brown or black.

In feeding, the birds use their curved bills to sweep over the mud at the bottom of the water. While doing this their heads may be under water. Dr. F. M. Chapman, watching them in Texas, wrote: "They move forward at a half run and with every step the bill is swung from side to side in an arc of about 50 degrees." They feed upon various aquatic insects and other small animals, as well as plant seeds. Audubon

(Continued on page 77)



NEWSLANTS

by
Harry A. Graves



H. A. Graves

much lost before so very long.

There has been quite a bit of confusion in my mind as to whether *Lonicera villosa* and *Lonicera caerulea edulis* are one and the same, or whether they are slightly different. I had been under the impression for some time that *Lonicera villosa* had been discovered in northern Manitoba, while *Lonicera caerulea edulis* was imported from northern Asia. I have received a letter from Thos. Hodgson, secretary of the Hardy Plant Nursery at Dropmore, who says that these two dwarf honeysuckles are quite closely related but are not identical. It is his opinion that *villosa* will not stand as much drought as the other species. Neither is it as ornamental.

Mr. A. Griffin of Strathmore, Alberta, who many of us know for his selection of the Brooks sandcherry, writes a few comments regarding his success with Russell Lupines. Seed that he planted in the spring of '38 produced flowering plants in late summer. Most of the plants survived the winter with him at Strathmore and gave a fine show of bloom in 1939. He said that the bloom is decidedly more striking than the ordinary perennial lupines. His most striking specimen of the Russell group was one with fragrant, cream colored blossoms. Mr. Griffin also believes that he had a Cistena sandcherry that bore a few large red-fleshed fruits and that he raised one seedling from it—a green-leaved plant.

Most of our ornamental plant material this year made a wonderful growth; especially outstanding were the many fine blooms on all lilacs. I have never noticed before the wide variation in color in the Persians. Many of them this year had blossoms of quite a rich pink in contrast to the very pale blooms so commonly found. I believe it was Mr. Skinner who one time remarked that while Ludwig Spaeth was a fine lilac in its

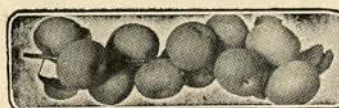
day, we now have many better things. I think anyone seeing some of the specimens of Ludwig Spaeth this spring would have to admit that they still are very fine. Vulcan, with its delicate silver edging on deep lavender florets is also very beautiful. A year or so ago, I made some mention of a lilac that bloomed the second year from seed for Dr. Nelson. This lilac was a mass of blooms again this year and does not show any inclination to grow taller than two feet. A lilac that would stay at this height and still bloom profusely, especially a lilac as beautiful as this one, would have a very definite place in a landscape plan.

It is too bad that the flowers of the double flowering plum or almond *Prunus triloba* do not last longer. However, they come at a time when we do not have many other shrubs in bloom and excite much comment while they last. They are followed by the ornamental crabs, such as Hopa and flame, and as I write these notes on June 6, I have just come from seeing a beautiful specimen of Bechtel's double flowering crab in bloom. This latter crab is a beautiful thing to behold when in full bloom. It has a well-rounded head and blooms very profusely. There seems to be some question as to its hardiness this far north but this particular specimen has shown no sign of injury so far. If a person had a double flowering plum, a Hopa crab, and a Bechtel's flowering crab, he would be able to have a highly ornamental tree in bloom for several weeks each spring.

A new raspberry has been named by the New Jersey Experiment Station. This variety, which has been named Sunrise, is the result of a cross between Latham and Ranere. It is reported to be resistant to low temperatures in mid-winter and is more resistant than Latham to a number of diseases. Here, again, we have Latham used as a parent in the production of a new variety. You will recall, perhaps, that Ruddy is the result of Latham x Plum Farmer. In spite of the mild winter we have had considerable winter killing in some parts of the state. This was especially noticeable of the raspberries, regardless of varieties. It has been suggested that perhaps part of this was due to root injury brought about by the lack of snow protection until the latter part of February.

I have just finished reading the recent book, *I MARRIED ADVENTURE*, by Mrs. Osa Johnson, wife of the late Martin Johnson. This book is very interesting reading and I was particularly interested in her report of gardening on Lake Paradise in central Africa. She raised this fine garden of many different crops from seed she

(Continued on page 77)



MANITOBA NEWS LETTER

by
W. R. Leslie



W. R. Leslie

Some fallacies die slowly and tend to revive into life again and again. An example found year after year in prairie fruit circles relates to fruit seedlings. Many people plant seed or seedlings of named tree fruits expecting the resulting fruit to be like the mother varieties.

Cultivated fruits are mostly hybrids. They do **not** breed true. Their hybrid origin assures variation and mixture in the seedling population. Another contributing factor towards a tree's seedling family

being dissimilar is that fruit trees bear colourful and fragrant blossoms, indicating that they are pollinated by insects. The busy bee and kindred insects flit from tree to tree and tend to effect cross pollination.

A large proportion of hardy tree fruits are self-sterile, others are self-unfruitful, bearing but few fruits to their own pollen, and nearly all varieties appear distinctly benefited from cross pollination.

Consider the case of hardy plums. All or practically all plum varieties hardy in prairie fruit gardens are self-sterile, being barren unless pollinated with pollen from a different variety. An Assiniboine plum, for example, bears no fruit unless pollinated by pollen of McRobert, Cheney, Mina, or some other variety. Pollen of another Assiniboine tree is inefficient to fertilize its pistils. Thus, it will be observed that seedlings of Assiniboine are only partially Assiniboine blood. The male parent of the seedling is a different variety.

Even native plums in the wildwood exhibit considerable variation. They do not breed true. However, their seedlings show a narrower range of variability than is found in seedlings of garden hybrid varieties.

Some garden plums are complex hybrids. Sapa is considered to be a quarter-breed, carrying four species. Seedlings of such a variety logically enough display wide diversity in bush, leaf, bloom and size, shape, colour, season and flavour of fruit.

Gardeners planting fruits for home consumption or for sale do best to plant known quantities. That means using vegetatively propagated stock. Such is mostly secured by graftage or budding. A few are developed by layering.

On the other hand, new varieties are derived

by growing seedling. Seedlings from hybrids are a wide speculation. However, their growing is a fascinating, if uncertain, hobby. It has been reckoned that the anticipated average is one apple seedling out of 800 that is the equal or superior in fruit characters to its esteemed mother parent. Inferior seedlings may be thinned out to make more room for their superior sisters, or topworked over to desired varieties.

Shrubs, in general, are to be pruned in such manner that they retain their natural outline. Shearing off one-half of the tail of a young draft horse improves the animal's appearance. On the contrary, with shrubs Nature's lines are best. To give a shrub a brakeman's hair-cut, shearing off the branches to a flat or rounded plain, is to sacrifice the subject's individuality and lose most of its charm. The pruning of ornamental shrubs and trees involves guiding growth in natural form. Surplus shoots and thin, poorly nourished crowded branches are eliminated to concentrate all energy on vigorous wood.

The lilac is a popular shrub. Prudent is the gardener who purchases only varieties on their own roots. If grafted on common lilac, the sucker nuisance is big. The tendency is for some of these suckers to escape pruning and to thrive at the expense of the choice grafted top. Soon the bush may be a dense clump of common lilacs. A general pruning is done as the flower clusters fade in May or June. All flowers are clipped out before seeds form. Old leggy plants are renewed by cutting out two or three of the oldest stems while permitting two or three sturdy young new shoots to develop in their place. Young shoots have the most luxuriant blooms. A lilac clump well trained will have about 4 to 7 stems and the whole plant would be renewed in three years. This major pruning may be done as flowers fade or before growth starts in April.

Large honeysuckles showing age are gradually made over similarly to the lilac.

Cotoneasters need little or no regular pruning. Sometimes rampant growth should be shortened in early spring. Elders require little attention unless dead wood occurs. Viburnums are usually best left untrimmed. Cutting out some of the old growth in early spring may benefit plants that have been established a long time.

Spireas are of several habits of growth. Varieties that bloom on last year's wood in early spring, such as *arguta*, *Vanhoutte*, *flexuosa*, and *media* have old wood cut back heavily, usually to about one-half their length after flowering.

(Continued on page 80)



PRESIDENT'S CORNER

by
H. E. Beebe



H. E. Beebe

Nature set us an example in cleaning up, the old weeds lop over, fall, and the green coats appear above the winter wreckage of last year's growth, and new blossoms appear. The trees encourage the birds to set up housekeeping and if State Game Director Cluett's advice is followed, the fence rows will be burned early in April in 1941 or not at all, to furnish cover for the pheasants and ground nesting birds. During the last few years my ideas have changed about having everything smooth and groomed out doors. The accumulation of weeds in the fence corners help our feathered friends and would it be heresy to suggest that a field grown up to tall weeds be left until farming operations start in the spring, than to burn it off in the fall? A rough tilled field will catch the snow and hold water better than a smooth one worked down "like a garden."

I thot we would miss the Zinnia gardens, as our friend "Joe" Parmley has been sick all winter and is now eating strawberries, I hope, in the Vermillion gardens of his daughter Irene Trotzig. Joe was always the mainspring and the "works" of the famous Ipswich Zinnia gardens on main street.

However a group of public spirited Ipswich women rowed and seeded the entire garden west to Main Street and by the time this is read, I trust that one more rain has put the "Zinnia City" again on the map. The city mayor, Mr. Witz and Marshall Baldy Taylor attended to the ploughing and preparation of the seed bed and City Engineer Caborn wishes this to be good looking at the library lawn across the street.

Flowers From Palestine for Members

Our secretary, Mr. Simmons, has a special premium for anyone sending in a new membership before August 1st. Dakotans were grieved to hear of the death of Judge McCarter of Ipswich in December. "Mac", as he was so well known, spent much time in his yard and took great pride in his home. Last week, after the sale of his furniture and the temporary departure of the family, I found on my desk a package of souvenirs of the Holy Land; a folder, with two poems, some bars of music and ornamented with actual natural flowers, picked from the fields around Jerusalem. Mac had bought these, evi-

dently intending to give them to friends and I know he will approve of their being used to aid Horticulture in the state he so well loved. The supply is limited, so send in the memberships early and the folder will be sent direct to you. Get a stand in with your minister so you can miss church once.

July In Dakota

Calm evenings, the past week made me think of Dorothy Canfield's description in "Her Sons Wife."

"She stepped from the box-like walls of her house into infinity. Over her head the sky rose, boundless and black. From the far end of the street where it ran off into the country came the shrill quaver of frog song, rhythmic like an inner pulse. Immensity brooded over the earth." That was the prairie as Carruth knew it when printing the newspaper at Estelline and as those that calmly wait can find it now.

John Fletcher perhaps wrote this part of his "White Symphony" in July:

Like spraying rockets
My peonies shower
Their glories on the night.
Wavering perfumes
Drift about the garden;
Shadows of the moonlight,
Drift and ripple over the dew-gemmed
leaves.

THE AVOCET

(Continued from page 74)

observed them catching both swimming and flying insects.

Bent concludes, "There is no excuse for treating it as a game bird. It is so tame and foolishly inquisitive that it would offer poor sport and would soon be exterminated. Furthermore, its flesh is said to be worthless for the table. But above all, it is such a showy, handsome and interesting birds, that it ought to be preserved for future generations to enjoy".

NEWSLANTS

(Continued from page 75)

took with her from the United States. She did not mention any specific variety other than Country Gentleman sweet corn, but before the summer is over I hope to have a list of the varieties planted in this garden and I shall be glad to pass it along.

My interest in selections of the pure yellow native plum has been increased by the receipt of four suckers from such a plum recently from a fellow-member of our Society. It shall be difficult to wait for them to come into fruit.



QUESTIONS AND ANSWERS

by
L. L. Davis



L. L. Davis

I would like to know if you should have the runners or the blossoms cut off new or old strawberry plants?

If the plants are newly set out, do not permit them to bloom or set fruit until the middle or latter part of July, thus encouraging the growth of new runners. These runners should be placed so that they are at least 6 to 7 inches apart.

Runner plants that grow at a closer distance than this should be eliminated.

I planted some Chinese elm trees and the rabbits are barking and biting them off. What is the cheapest and most practical method of stopping this damage?

Much has been written about materials painted or sprayed on the trunks of trees to prevent rabbits from chewing them.

I believe one of the best methods is to put a rabbit tight fence around the shelterbelt or use a small mesh wire tube around each tree. The Iowa men have found that a veneer band fastened around the base of the trees will also prevent rabbits from injuring the trees.

What plants of the melon family may safely be planted in the same patch with no danger of them mixing

Much confusion exists in the public mind as to what is a pumpkin and what is a squash. For example, Table Queen squashes are botanically pumpkins. Of course, when Table Queen squashes are then planted with varieties of the pumpkins, inter crossing will take place.

Botanically, there are two species of pumpkins. One of these species will hybridize with the squash and the other species will not hybridize with the squash, although it will cross with the other species of pumpkins. It is extremely difficult for the amateur to always identify pumpkins and squash. For that reason we recommend that the different varieties of pumpkin and the different varieties of squash not be planted near one another.

Pumpkins and squash will not inter cross with cucumbers or muskmelons, and contrary to popular belief, cucumbers and muskmelons will not cross. However, the different varieties within each group must be kept separate to prevent hybridization. Watermelons will not cross with cucumbers or muskmelons but will cross with

citron which often results in an unusual shaped or peculiar flavored watermelon.

I have often heard say that tomato plants should be pruned, something I don't know anything about. I would like to have you give me the information on this. If one should prune the plants, when should they be pruned, and where or how? Also would like to know whether one should have a trellis and tie the plants up, and if so, how high should one let them grow?

I would not advise pruning tomato plants in this state because the fruits burn more readily when the vines are tied up to a stake than when allowed to grow unpruned on the ground. Pruning tomato plants and tying the pruned vines to the stake is often resorted to in small gardens in the more southern states to increase the size of the fruits. Pruning the vines always results in a decreased total yield.

In pruning, all lateral shoots developed from the main stem are pruned off while very small. The main stem is supported on a trellis. If a non-determinate such as Red River or Penn State is used, the main stem is pinched out when about 6 feet high. If the determinate type of vine such as Bison is used, the leader is not pinched out as the vine quits growing when 5 or 6 feet in length.

I often see the word herb in print. What does one mean by the word herb?

Most of the plants in your flower borders are classified as herbs. Many of them were once used as food or medicines. Out of iris, rose, larkspur, calendula, peony, foxglove and many other plants came the crude drugs of commerce. Then there are the mints, thymes, lavenders, artemisias, basils and a multitude of other flowering plants that are used for culinary purposes. Herbs have been and are still being used, in many cases, in soap, perfume, lotions, extracts, chewing gum, etc. The tansy, dandelion, milkweed, anise, cumin, mustard, sesame, caraway, dill, and others are herbs that have been used extensively. The ancient herbs which we now call vegetables, such as carrots, onions, parsnips, spinach, beans, beets, etc., now constitute an important industry of the world. If you are really interested in herbs, their early history and the unusual stories connected with these herbs at an early date, may I suggest that you write to Mrs. Rosetta E. Clarkson, 412 Gulf street, Milford, Connecticut. She states, on the cover of her hobby magazine, that there is no subscription price. Anyone interested in herbs would be glad to pay a subscription price, I believe.



SPRING IN NEW HAMPSHIRE

by
Dr. A. F. Yeager



Dr. A. F. Yeager

Dear Dakota Friends:

One of the most important pieces of literature that comes to my desk is still North and South Dakota Horticulture where I read of the doings in North and South Dakota. In a recent letter from Mr. Graves I learned that Fargo has now been named the "Lilac City", Grand Forks the "Peony City", Carrington the "Iris City", etc. I think this is a most splendid idea.

Speaking of lilacs I had the pleasure of spending almost a full day in the Arnold Arboretum the early part of this week taking pictures with kodachrome of the lilac varieties there. This is my first visit to Arnold Arboretum even though it is but 60 miles from Durham. One can hardly visit a place of that kind without wanting to go again. I have plans made to be down at the Arboretum at least once a month throughout the growing season now and spend a full day there wandering about looking at the various species of trees. There must be two acres of various species and varieties of Crataegus, (Redhaw) for example, and just now the hillsides are a mass of color with the flame azaleas. Rhododendrons are mostly still to come. Going through the ornamental crab apple section I noticed the Dolgo Crab as one being given prominence. Despite the fact that Arnold Arboretum is within easy driving distance of millions of people there were very few people about looking over the marvelous display when we were there. My companion incidentally was a graduate student of the University of New Hampshire coming to us from Kansas this winter. Calahan, for that is his name, thinks this country the most beautiful he has ever seen and that includes everything from California east.

From what I can see of this section of New Hampshire our springs here are just about as late as they were at Fargo, North Dakota. The intention is to plant out tomato plants somewhere in the first week in June. Summers, however, are much cooler than in North Dakota, and the frost-free season in the fall runs much later. Last fall, for instance, it was nearly the first of November before we had any killing frosts. To a plant lover it is always interesting to watch the behavior of old familiar varieties in a new setting. I found particularly the behavior of the

raspberry varieties to be interesting. Latham and Chief raspberries were killed nearly to the ground last winter, as were practically all other raspberry varieties except Ruddy, the new variety from North Dakota, and the Taylor variety from the N. Y. Expt. Station. It would be interesting to see whether Taylor might be hardy in North Dakota. Evidently there is some similarity about the climate there and here, otherwise Ruddy would not behave the same in two localities. It is certainly true that raspberries do not kill here in the winter because of a lack of moisture. We have as frequent precipitation in the winter as in summer which means plenty to keep the air moist and the ground covered with snow during the winter months. Speaking of snow reminds me that I saw a car just yesterday, June 1, coming down from the northern part of N. H. with a goodly supply of skis on top of it, indicating that its occupants had been up on Mt. Washington taking a final turn on the snow still to be found there.

Here at Durham apple trees are in full bloom. They have received their second spray and most all of the trees are pretty well covered with leaves. Incidentally, we do not find the spread in time of blooming between such things as pears, plums and apples here at Durham that we had in North Dakota. Most of them bloom at about the same time, whereas out there plums might bloom several weeks before apples. Another thing, while apples are in full bloom, strawberries still are dormant. The way things are going now it looks like our strawberry crop would not be ripe until the early part of July. The strawberry patch at the University includes about two acres of plants.

Interesting things we are trying in an experimental way this year include the spraying of the ground underneath the trees before the trees open up their leaves in the spring to control apple scab, the spraying of some of the trees that are in full bloom with caustic sprays to remove a part of the crop so as to prevent alternate bearing, new lilac crosses, colchicine applications to produce new varieties, etc.

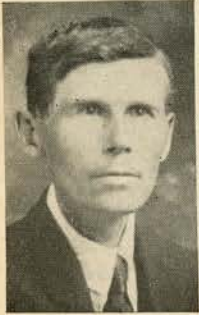
For recreation there is always the ocean within easy driving distance, and one evening this last week after supper the son and I stepped down to the brook only 100 yards from the house and caught nine brook trout for breakfast. Take it all in all we are pretty well satisfied with our lot.

Lawn burning causes damage to the roots; loss of humus; soot to be tracked into the house and the scorching of nearby trees and shrubs.—South Dakota Mail.

JULY

by

W. E. H. Porter



W. E. H. Porter

With the approach of summer my notes assume a more seasonable aspect. May 10th.—Altho snow seems to be out of date, precipitation continues in the form of more or less continuous rain, reminiscent of the west of Ireland, and the ground is now thoroly soaked. A few true hedge columnberry, (a dwarf upright variety of Jap barberry), just the neat hedge for a low garden, are covered with small rose-like pinkish flowers, a harbinger of foliage that appears later. The buds were in evidence when the shipment arrived, about 3 weeks ago. Also Phlox divaricata, from Dreer was blooming on arrival and has kept it up ever since, still going strong in early June, color pale violet, in sprays at end of trailing stems. Recently received seeds of Azalea tacoma, a native of high Andes at elevation of 9000 feet, germinated in 6 days, a broadleaved evergreen that might prove hardy. Our so-called prairie crocus, Anemone patens, now at its best. May 11th. 88 in shade, everywhere perennials are breaking their winter bondage; newest arrival is a sunflower (Helianthus orgyalis), known popularly as column flower and attaining a height of 4 feet last year. Under favorable conditions said to reach to 10 ft. and is a native of Missouri southward—appearance like a green pillar; this had no winter protection whatever, for I did not expect survival. May 12th. Crocus and daffodil spears pushing thru, the former flowered on the 23rd. May 13th. A white world again with temp. until noon of 36. Some of my winter sowings are showing, including 3 species of Claude Barr's choicest Phlox. May 17th. Daphne cneorum, our first flowering bush, continuing its gift of beauty and fragrance that ceased last November and by evening the lovely, fragrant pink violet Jooi. May 18th. A drizzle from west develops into a downpour; Lilliputian Alberta spruce putting out green shots. Erodium chrysanthum is up, other erodiums also sown in early May, not up. May 20th. First moss Phlox in bloom, color as by R. H. Soc. color chart a fuschia purple with dark eye. May 23rd. Besides yellow crocuses, are many pink Jooi violet, also the new viola saxatile and yellow Alyssum montanum, in addition to one of Borsch's special yarrows Campbells sulphur, a pale sulphur. Note that Mr. L.

Graetz, of Hansboro, a member of some years standing, has purchased a Daphne cneorum. Congratulations Mr. Graetz, on providing your home surroundings with permanent beauty. May 25th. Heard a brown thrasher, also noted return of our summer guests the barn swallows. Gentian acaulis is up—what a thrill one gets to find these lovely plants from all over the world adaptable to North Dakota conditions; however there appears no sign of Verbena bipinnatifida. Up to date my efforts to discover a hardy verbena have ended in failure. May 27th. While dandelions star the grass and we must admit that they are cheerful, the garden takes up the challenge Thlaspi (penny cress) whose clustered white flowers a few inches high brighten our May flora, blue of muscari, for first time since its arrival 3 years ago, M. sovetianum is doing its bit, flowers of pale blue with steel blue foliage, also lovely cream pendant bells of Fritillary (guinea hen lily), bulbs set in November 1938, violet blue of dwarf Iris pumila and very fragrant yellow currant bush. May 30th. With landscape and trees garbed in brightest green and in the garden a vari colored carpet of pink, white, purple, violet and intermediate suffusions—yes and also the sombre brown of H. tristis lilacs common and French hybrids in white, pink, lilac and blue, pink crab apple bloom opening to purest white, creamy tassels of choke cherry and white of June berries like fresh snow and the melodious whistle of Baltimore oriole, heard in grove, with glimpse of its ruddy plumage darting here and there, what further reminder is needed that summer is actually here?

MANITOBA NEWS LETTER

(Continued from page 76)

This encourages vigorous new growth and seems to increase their winter hardiness. These plants quickly regain their shapeliness. The late flowering varieties bloom on wood of this season's growth and are mostly cut back to near the ground in April. In this class is Anthony Waterer, Large-spike, Willowleaf, Froebel, and Aitchison.

Tamarix is most showy when cut back to within a few inches of the old wood each April.

Berrying shrubs are sometimes a problem. In general, pruning is directly towards removal of crowding branches, weak shoots and all surplus suckers.

Wm. H. Rowell of Rutland, Vt., has been awarded Patent No. 2,197,594 for a tape in the center of which seeds are imbedded, while the edges are rolled over to contain fertilizer.—National Seedsman.



DR. GEO. F. WILL, BISMARCK, N. D.



Dr. Geo. F. Will

On June 10th as one of the features of the schools observation of its 50th anniversary, honorary doctors degrees were conferred on five of the nations great, not the least of whom is our old friend Geo. F. Will. Mr. Will's degree was Doctor of Science and the citation was as follows:

"George Francis Will. George Francis Will is the son of the pioneer North Dakota seedsman, Oscar H. Will, who established the first seed and nursery business in North

Dakota at Bismarck in 1882. The younger Will was graduated from Harvard University with a major in anthropology and ethnology, a subject he has systematically pursued as an avocation. He is the joint author of several publications on the culture of the Mandan Indians issued by the Peabody Museum of Harvard University and is the sole author of a publication on the pottery of the Mandans. Will's interest in corn and corn breeding led him to write with Spinden, "Corn Among the Indians of the Missouri Slope". More recently he has translated from the French De Trobiand's diary of his winter at Fort Clarke, and also Pierre Des Lac's expedition up the Missouri in 1801-02. The Bismarck man has been active as a plant breeder, particularly in the improvement of corn, squash and beans. He has actively championed the use of native shrubs and plants for landscape purposes in the Northern Plains. He is a past President of the North Dakota State Horticultural Society and has been active in the Society for many years.

Editor's note: Mr. Graves says to add: "We are proud of Dr. Geo. F. Will". Of course we are and always have been.

Still another use for corn is in soap. New York State Dept. of health found that the sand soaps used by factory workers often damage the skin, and recommends a soap formula with a large addition of white granulated corn meal.—National Seedsman.

BOOK REVIEW

by
Mrs. F. Briley



Mrs. F. Briley

Just Weeds, by E. R. Spencer, with 102 drawings by Emma Bergdolt, published by Chas. Scribner's Sons, 597 Fifth Avenue, New York. Price, \$2.75. The book was published on June 10th, 1940.

As the author says, the principal purpose of this book is to teach. It is an attempt to make interesting to all readers a few of the most common forms of nature. It most certainly should be read by all who are especially fond of wild flowers. It should be easily accessible as a constant guide to one who has a yen for wild flower gardens. We of that class have done much harm to our own and our neighbors yard by bringing in beautiful, bad weeds. Each weed is described in a chatty fashion, and then there follows a technical discription. The drawings furnish at least half the appeal. The book tells how some of the better known weeds found their way to us, the value of those that have value and, also the meaning of and reasons for their interesting Latin names. One definition for a weed is "a plant out of place", and the life habits are no less interesting than those of trees and flowers. They are described in JUST WEEDS authoritatively and in full.

How Wilt Works: "Many kinds of bacteria are responsible for serious plant diseases. As a rule, like the spores of fungi, they enter the plant by wounds or stomata, but sometimes they penetrate the stigma of flowers. Once inside the tissues their multiplication leads to a rapid spread of the disease. Often they develop in the water-conducting channels of the woody strands to such an extent as to block them completely and thus cause the plant to wilt and die, as in the 'wilt' diseases of the cucumber, pumpkin, squash and musk melon, whole fields of which may suddenly collapse from this cause. It seems likely that beetles and woodlice unwittingly carry the causal organism from infected to healthy plants."—Sydney Mangham, in Earth's Green Mantle.

Hardship will reduce sappiness in a tree and increase the manhood in a "sap".—N. J. State Horticultural Society News.



SECRETARY'S CORNER

by
W. A. Simmons



Here is a hint for tulip growers, taken from the pages of *THE EARTHWORM*, and refers to plantings at Elmhurst, Ill. "These bulbs have all been planted 8 to 10 inches deep and will not be dug up. Flowers will be planted over them this season for a floral display and to shade the soil above the bulbs. The hot summer sun on shallow-planted tulip bulbs does a great deal of damage to the bulbs. The bed of the variety "Kaiserkroon" tulips in front of the Park Board Office, north of the conservatory, was planted more than 10 years ago and the bulbs have never been renewed. The flower bed was raised during the centennial in 1936 and the soil is now well over two feet—four feet in places, above the bulbs. Look them over before they are out of bloom." We are assured by *BETTER FRUITS* that the shortage of potash, experienced in World War I, will not be repeated in this war. Large plants in California and New Mexico will take care of our needs, they tell us. They also tell of the new early summer apple, the Close, named for C. P. Close, recently retired from the Department of Agriculture. It is a fairly large red apple developed at the experimental farm at Arlington, Va. and is said to ripen at about the same time as Yellow Transparent and is said to be of fairly good quality for either dessert or cooking. It was introduced by the Bureau of Plant Industry, U. S. Dept. of Agriculture and is now being propagated by commercial nurseries. *HORTICULTURE*, in an article entitled "No Tulips Unless We Grow Them", warns that we probably will get no tulips from Holland this fall and gives the following advice as to treatment of those we have. For those who have satisfactory tulip plantings which were made last autumn, the best advice seems to be to leave them where they are for another season. Older plantings which show division can be lifted and divided. This is done as soon as the foliage is gone. The big bulbs of even size are planted back for display purposes. The small offsets are lined out at the usual four-inch planting depth. Some of the small bulbs will require one year in the nursery, some two." Here is an opportunity for some of our budding authors: The Macmillan Company, 60 Fifth Ave. New York has offered \$1000 for the best garden

book manuscript by an author who has not published a garden book previously. The competition will close No. 30th, 1940, and the winner announced Jan. 2nd, 1941. On another page our readers will be glad to see the appreciation of Dr. Geo. F. Will, a man of whom we have always been enormously fond. Recognizing his great attainments, we have frequently printed "Dr." before his name, but to this be objected, saying it was undeserved; that he had never killed anybody. While we hope this condition still obtains, he can hardly object to being called Doctor as the N. D. A. C. has officially conferred the title.

Director A. L. Ford, of the Plains Shelterbelt Project, has announced that 660 miles have been added to the shelterbelts of the state, by this years plantings making a total of 2,305 miles on 4200 South Dakota farms. Thus is our tree wealth being increased, by this most valuable service.

The typical successful American businessman, said the late Don Marquis, was born in the country, where he worked like hell so he could live in the city, where he worked like hell so he could live in the country.—J. P. McEvoy in *The Saturday Evening Post*.

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FRUIT & VEGETABLE NOTES

by

F. X. Wallner



F. X. Wallner

Creeping Jenny patches, treated four years ago, are all free from weeds but this fourth year, still shows that a crop of cabbage will not mature altho they made some growth and will not be killed entirely. Three years ago we treated patches twice the size, with the same tankfull and we did not kill all the weeds but the ground is not so bad but that it has grown a crop even the second year. Professor C. L. Fitch, the live wire Secretary of the Iowa Vegetable Grower's, has a very interesting story in the MARKET GROWER'S JOURNAL about windbreaks and trees. He refers to the pussy willow, for a snow trap in front of other trees and thinks it is not hardy.

Surely if this is the true native Diamond willow, it should be hardy in southern Minnesota and northern Iowa, where the test is being made, in the peat beds of that region. He tells of the weeping Golden willow cuttings averaging ten feet at the end of the second year. He also tells of trying the Bolleana poplar, as perhaps making the quickest height in the least time. This may be the reason why there are so many rows of these trees in Idaho, and he closes his article with the warning that a poor windbreak may be worse than none at all. While on this topic of wind erosion, I have in mind a tract in Minnehaha county, north of the penitentiary, on state land, where a new planting of mixed young trees now are large enough to stop soil blowing at this dangerous place, on Highway U. S. 77 where the sandy soil was always moving with the strong northwest wind sweeping down the Sioux Valley. Dr. Alan Dafoe says one of nature's first remedies is the good warm earth, where just putting your hands deep into it seems to re-charge your batteries, like nothing else in the world can restore them. Everybody should have a garden and work in it with his own hands; out there, the sun seems to have more medicine in it and there is some curative magic in the very fragrance of the flowers. It is ten times more potent than the soothing power of music. When the babies were young and every day was a battle for life, I often busied myself in my garden, to mull over decisions I had to make and often the answers sort of popped right out of a flower. You can be sure that the girls

are going to know about flower and vegetable gardens and take care of them too. Dr. B. S. Pickett, head of the Horticultural Department, says there is prospect of a tremendous apple crop in the college orchards at Ames, Ia., and Lawrence Elsinger, of Dell Rapids, S. D., says the same thing about his young orchard of plums and small fruits. The first tomatoes to bloom are Bison, Golden Bison, Fargo Yellow Pear, Ruby, Allred, the new N. D. No. 40 and the new S. D. No. 25. All other so-called earlies are much later. Prospects for a good strawberry and rasperry crop at the Dybvig gardens at Baltic, are very promising, a hail storm, extreme heat wave or insects are about the only things that might affect the yield. The members of the Sioux Falls Garden club have a hard time explaining why they held no flower show when the smaller clubs in other towns put on the best flower shows they have ever held. But the Garden Discussion club of Sioux Falls is making plans to hold a flower show during August and will feature Glads, roses, lilies, delphiniums, zinnias and all other flowers that are available at that time. Sec. Fitch, of the Iowa Vegetable Grower's warns to bring hunting boots, or at least wear the old type ankle high shoes and rubber galoshes on the tour thru the peat gardens on June 27th. He warns that without such protection, if it is a warm, sweaty day, the dust and loose peat soil will become unbearably itchy and fiery before the day is over and, possibly worse, if the day is rainy, he states there is no keener stimulus for frequent and prompt balling. He issues a special warning to the ladies. I am wondering if the Horticultural Society is not slipping back a little in not holding its annual tour. Surely we could spare a Saturday and Sunday for this annual summer get-together tour that has been so popular in the past several years. I am in favor of a summer meeting. The five leading head lettuce growing states have increased their acreage to 28,500, a 4% increase over last year, which will mean disking up more than one third, as in the last three years.

By processing in a new scientific way, not affecting its taste, milk can be kept from spoiling in warm weather or in hot climates without being iced or cooled. To accomplish this, all gasses are first removed from the milk and replaced with oxygen. Next, to sterilize the milk and kill all organisms, it is heated with oxygen under heavy pressure. After the milk is cooled, if it is constantly saturated with oxygen, it will keep for several weeks at room temperature without turning sour.—Gib Swanson in Capper's Farmer.

July
1940

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE SELLS TREES

by

E. H. Everson, Secretary of Agriculture



The South Dakota Department of Agriculture sells baby trees at low prices, packed and delivered. Each year our tree customers of the prior year are sent a stamped envelope and a request to report their experience. From the about 60% of replies, we learn and are reminded of much, also we discover some mighty fine and interesting persons.

Today about half of the expected replies on 1939 plantings are in. The "kicks" are very few, perhaps partly because we reminded our customers that the success of tree planting depends

largely on conditions entirely beyond our control. I hasten to say we learn from the kicks, too, from these we are informed of our mistakes and oversights, and we struggle to correct our errors.

Now let us see what some of our customers have to say. We shall avoid editing and do very little selecting.

One west of state correspondent, describing cultivation, says it "means to take a soil well infested with about every variety of annual, biennial and perennial weed common to that section, then cultivate the ground so thoroughly that none of these weeds are able to mature seed or live through the season. After that, we can plant trees." This Meade County correspondent stated that 1939 was extremely dry with them, all grain crops a failure, three inches of rain spread out over several light showers, so that his tree ground never got wetted down once. He planted a few fruit trees, with partial success. He complains that shipped in trees receive poor handling before arrival but believes there is no remedy for the condition. His cottonwoods which he captures locally do better for him than any

shipped in seedling. The 200 Chinese Elm, the only trees bought from us, had 180 surviving.

At the alphabetical top is an Aurora County customer, reporting on 300 Red Cedars and 100 Spruce (in 1939 we put out a few experimental Spruce orders, hope to have more in 1941.) I quote this farmer in full: "The Red Cedars nearly all grew, as dry as it was, although last year when we put them out the wind blew nearly day and night. Then it rained. I put a pail of water in each hole, let it settle down, then put trees, 100 at a time, in a pail of water, not too cold, rather a little warm not to chill the roots, avoided wind, air and sun from roots when planting, and I also cut off the roots 3 or 4 inches when planting. The Spruce did quite well, saved 75 out of 100, but didn't expect to. These are fine little trees. I must give credit to the ones that dug them and mailed them, they came in fine shape, fresh and wet when I opened them, that's one of the main things. I did not water the Cedars, the Spruce I did. All so far are beautiful." I have no advice to offer such an energetic tree grower, but I wonder what good root pruning does in the case of these baby Spruce and Cedars.

A Cedar friend, living in northern Yankton County, used them for hillside planting, could not cultivate or water, but did do much to prevent runoff and relied on hand hoeing to fight weeds. He says all farmers should be advised to plant more Cedars, the only kind, in his opinion, that can stand the worst of the dry weather. In spite of "a very sandy location and a long dry spell" their friend reports a 75% survival. Another Cedar friend in the eastern part of the state reminds me of the advice to use a shingle or other partial shade for these baby trees.

A Minnehaha County Pine customer reports 74% living. The loss she believes was due more to a lack of shelter than to insufficient watering. "Later in the summer," she writes, "we found those that were in the sunniest place were dying, and accordingly let a row of weeds grow up a little south of them. This helped considerably."

Evergreens are not the only trees to gain friends. One tree lover says of the Cottonwood, "They are hard to beat for a quick growth, they do require more moisture, but if you have a natural place for them they do well. I plant other slower trees in with them, expecting them to take the place when the Cottonwoods die."

From a strictly plains region of the east half of the state comes a friend of American Elm, which he places at the top of his favored list. "We have tried a good many different trees and still are trying," he writes. "Moisture is about the only trouble and accounts for most of our failure."