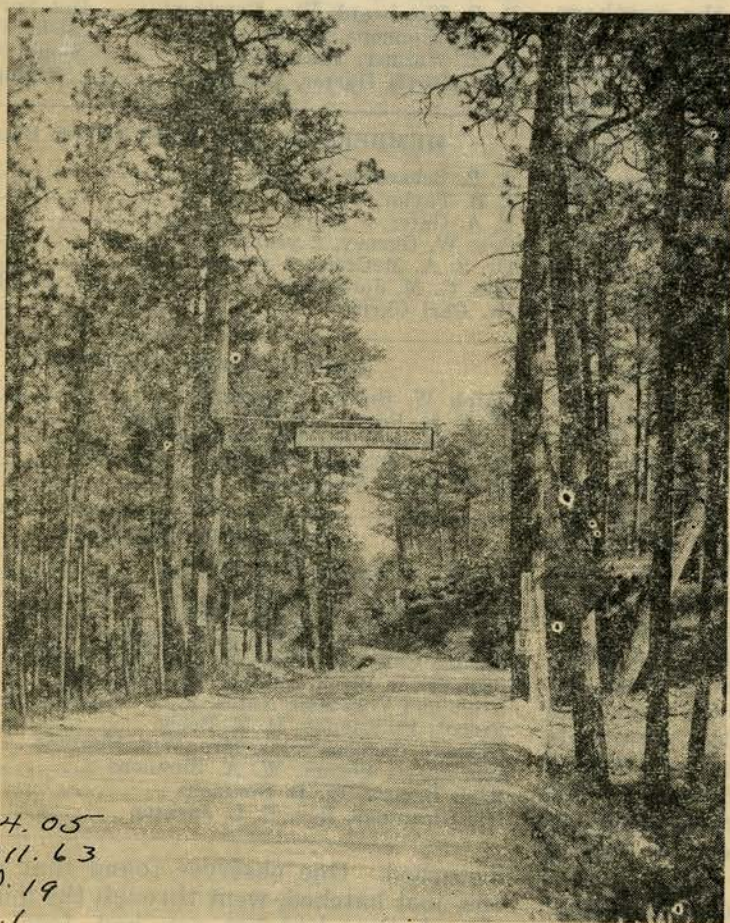


# NORTH AND SOUTH DAKOTA HORTICULTURE

JANUARY, 1946

South Dakota State  
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The Fred S. Rowe trees, saved  
by Mr. Rowe from being cut  
down to widen the Mt. Cool-  
idge Road, near the Pigtail  
bridge, Custer County.

—Photo by C. A. Barr.

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No. 1





## THE GREEN HERON

By  
O. A. Stevens

This species is one which I can remember as far back in childhood as I can recall any birds. They are regular summer residents along the river which runs through our farm in northeastern Kansas. Shikepokes, we used to call them, but that name is often applied to other members of the family. Here in the north a bittern is the bird usually called a shitepoke.

The green heron reaches North Dakota only as an occasional straggler. They nest in southern Minnesota but occur rarely if at all, in the northern part of that State. They nest from Quebec and Nova Scotia, south to Texas and Mexico, and winter from Florida and Texas to northern South America. They are reported from central Colorado southward but seem to be absent in Wyoming and Montana. One race occurs up the west coast to Oregon and others in the tropics.

The idea of calling it "green" seems to have originated with Linnaeus. He had it from Catesby who called it "the little heron." So it has continued to be green heron—except to those who are not bound, by conventions. In size it is about two-thirds that of the bittern. The neck and sides of the body are reddish-brown, the middle of the belly whitish with brown streaks. The upper parts are greenish, the head more black.

Green herons are more solitary in their habits than most herons. The fact that they are distributed rather evenly, inhabit almost any creek bank and are not very shy, explains why they have been well known. They feed chiefly early or late in the day, taking a long noon nap.

Nests are sometimes in colonies, but often single, usually in a bush near water and not far above the ground. The nests are even more frail than those of other herons. Mr. Bent comments that the birds must weave the sticks together for they would not stay in place if laid loosely. The pale greenish-blue eggs are unmarked, about an inch and one-half long, usually four or five in number.

The young birds are expert at climbing about in the bushes, clinging by bills, chin, neck, wings and feet. Herons feed largely on fish and regurgitate food for the young nestlings. Both adults and young are prone to cast up their food when

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disturbed. One observer found that green herons, just hatched, went through the motions even though they had not yet had food. Crayfish, grasshoppers, or other small animals are eaten extensively by the green heron, according to what is most available.



## NEWSLANTS

By  
Harry A. Graves



H. A. Graves

"Parks and Recreation," the official publication of the American Institutes of Park Executives, carries in its November-December issue a brief biographical sketch of Dave Hovey. Dave recently resigned as Superintendent of Parks at Minot to become Executive Secretary of A. I. P. E. Dave is a graduate of Minot High School and Dartmouth College and has been Superintendent of the Minot Park system since 1937. He has been

twice elected to the North Dakota Legislature. We have had correspondence with Mr. Hovey concerning Victory Garden activity in Minot and wish we could have read this fine article earlier. Even a paper acquaintance with someone on our mailing list makes correspondence much more interesting.

Lloyd Wilson, who until his recent resignation was County Extension Agent in Bowman County, North Dakota, writes a nice letter from Redfield, South Dakota, where he now is Spink County's Extension Agent. Lloyd did a fine job in Bowman County and we commend him to the South Dakota folks. He reads our magazine each month which, no doubt, accounts for part of his success.

We are sorry to report that as we write (December 15) Professor O. A. Stevens is confined to the hospital with an attack of pneumonia. Mrs. Stevens reports him as better today but still not well enough to come home.

Two books worth having: "Lilacs for America" available from the Arthur Hoyt Scott Horticultural Foundation, Swarthmore College, Swarthmore, Pa., at \$1.00. This book is practically a "must get" for anyone interested in lilacs. "Hortus II"—the new and up-to-date edition that recently sold for \$12.00 is now available for \$5.00 from the MacMillan Company, New York. Hortus II is really a compact edition of Bailey's Standard Cyclopedia of Horticulture.

Some few years ago the Gust Bratangs of Kindred, North Dakota, set out a dozen or so fruit trees in their spacious yard. Two of these trees were Haralsons and this fall these two trees bore a crop that I would conservatively estimate at 15 bushels. The apples were in fine shape and we have been enjoying sauce and pies made from a half bushel of them which I picked from the

trees myself on October 13. Haralson is excellent for the purposes mentioned above but not to my taste yet as a dessert apple. Some folks, however, eat them with great relish. I imagine they will be more desirable out of hand in January.

Quoting direct from the American Fruit Grower I would like to re-emphasize the following paragraphs from the article "Nursery Stock Still Scarce" by A. F. Meehan:

"For several years there has been a great shortage of fruit trees available for planting on the farm and in commercial orchards. This shortage has been caused by a number of factors, some of which may not have been considered by the orchardist; the others are so obvious that it scarcely seems necessary to mention them.

First: There has been a shortage of seed to produce the fruit tree stocks.

Second: Again a shortage of labor came to the fore by preventing the normal planting of fruit tree stocks. Budding of fruit trees is an art, and while many can learn how to bud, it takes an experienced man to "bud" a large number of trees in a day.

Third: During the past few years, many fruit tree growers have changed from using raffia to rubber budding strips to tie the buds. However, during the war, natural rubber was not available for this purpose and budding strips had to be developed quickly from synthetic rubber. There was little time to experiment with this synthetic rubber before it was put on the market. Synthetic rubber does not have the resiliency of natural rubber and when pulled too tight will break, often before the "bud" is caught. This has resulted in the loss of buds and has caused considerable shortage in production.

Fourth: During the past two years, weather conditions have been unusual in many parts of the country.

Fifth: During the war, the United States Government urged the planting of food crops. Fruit trees were considered essential, and this created a heavy demand from the home owner and the victory gardener.

Today, an extreme shortage of all kinds of fruit trees still exists, but as labor conditions improve, production will increase and eventually will catch up with the demand. But look for a shortage of nursery stock for the next few years!"

Dr. George Will is to be heard over KFYZ, Bismarck, Tuesdays and Thursdays at 8:45 a. m. C. S. T., 7:45 A. M. M. S. T. His talks have to

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## GARDEN NOTES

By  
W. E. H. Porter



W. E. H. Porter

To all members, new and old, greetings, and may our experiments planned and to be tested in 1946 be successful and thus the star of hope shines bright and carries us thru the despondency of mid-winter. Nov. 2nd. The last of season's planting arrive; some new pelargoniums for house culture, from Oklahoma and from Vermont hardy hybrid lilies, the latter arriving just in time for the ground is already frozen an inch deep and freezing is permanent day and night. Fortunately the soil is mellow and very workable, having been tilled all summer long, to eliminate the last vestiges of sow thistle and the equally vicious toadflax better known as "butter and eggs." With almost continuous snow squalls, whipped up by a norwester, planting was rather a painful process, but after all such "crucifixion of the flesh" was a mere detail when the floral display 7 or 8 months from now is contemplated. Alan and Esther McNeil, by the way, are writing a book on Garden Lilies to be published next spring which should prove a fascinating guide for those who contemplate growing these showy and beautiful flowers. I find their lily chart extremely helpful. To those who keep goldfish, here is a tip gleaned from Boston Horticulture, viz, that rolled oats is an ideal food; the writer discovered this accidentally when the fish food, consisting mainly of dried shrimps ran out. Up to then, the fish in spite of all precautions had been gradually dying. My own experience bears this out for on a fish food diet I also have recently lost one of my two goldfish, since when I have fed nothing, the one left evidently foraging for its diet at the bottom of the bowl. I at once got up from the breakfast table and scattered a few flakes on the surface: the response was instantaneous and they were eagerly snapped up, and so we learn of the perfect diet for this variety of carp, which is after all a vegetarian. Nov. 8th. With an estimated fall of 10 inches of snow and a low of -10, I understand at Calgary, Alta., there was more snow and a drop to -24, winter is decidedly "cock of the walk." While clearing out dead wood in grove I noticed that cotoneaster acutifolia still retains its olive green foliage. It is strange that this useful and ornamental hardy Chinese shrub is not

more generally grown. Also the small silvered gray foliage of Oscar Will's buffalo berry, a first cousin, so to speak of the two Eleagni Russian olive or oleaster and our own native silver berry, also known as wolf willow, whose small yellow flowers waft a sweet fragrance over the prairie in June, and later with small silver drupes, edible but tasteless. My foxhound pup "Brownie," half hound, half collie, thinks that kindness should be given as well as received. Twice he has deposited the front leg of a yearling colt on the doorstep for my personal use, thoughtfully removing most of the meat to forestall any over-eating on my part. Nov. 14th. 4 below, 15 crocus bulbs direct from Holland, received from Harmon Nursery, Prospect, O. Deep snow and present temperature rule out garden planting. However, located an old saucepan that my wife had discarded years ago which nicely held them all, placing in cold cellar for a few weeks and hopefully anticipating a rainbow display in Jan. or Feb. In spite of their terrible hardships the Dutch are a sensitive people and prefer to sell their products rather than to accept a dole for life's necessities. I understand that last winter many were living on tulip bulbs. With a strong demand among American gardeners for these best of all bulbs, nurserymen are importing millions. Also received a pink Morden Lythrum. Is this a product of Morden Experimental Farm in Canada? In current issue of Horticulture was interested in Mr. Graves' comment on my red honeysuckles; as he states, it is really red, an ornament to any garden with its rich, arching boughs, which tartarica certainly is not, having an exaggerated sense of its own importance with rough, stark boughs reaching in all directions, but this very characteristic makes it ideal for a windbreak. Mr. Beebe's remark on those lines I sent him as quite timely; they do need to be applied to our foreign affairs. Sending munitions to Indonesia and then hiding behind British skirts with a request that the labels be rubbed out smacks of cowardice. I read in Manchester Guardian that the last swallow seen in Cheshire was recorded on Oct. 7th. Procrastination brings its own punishment. My last vegetable pulling was a day of snow squalls and freezing high wind and so I postponed the gathering of most parsnips for pleasanter weather which never came, and now frost bound soil holds them in durance until next April. Nov. 26th. Our 3 day cold, rimy south wind brings relief from sub-zero to 28 above, to celebrate which a May hatched pullet lays her first eggs, a timely deed for my reserve was down to one egg. And

(Continued on Page 12)



## MANITOBA NEWS LETTER

By  
W. R. Leslie



W. R. Leslie

Recently there came to the Morden Experimental Station a very interesting report. It is that of the Ontario Horticultural Experiment Station, 1943 and 1944, Vineland Station, Ontario. The 61 printed pages carry 26 devoted to special research and 30 pages to fruit-breeding.

In fruit-breeding, during the period of 1913 to 1944, from 168,967 hybrid plants set in the field 1,232 selections were made and 17 have been sufficiently impressive to win introduction. These are made up of 3 sweet cherries, 8 peaches, 1 pear, 1 raspberry and 4 strawberries.

The Canadian prairies have been supplied a proving ground for the berry plants. Viking raspberry and Valentine strawberry are being planted rather widely. The former is somewhat tender but gives good results when the canes are bent over for the winter period. A review of these new Ontario berry varieties follows:

**Viking raspberry:** A cross of Cuthbert x Marlboro was made in 1914, the selection was named in 1923. The plant is a sturdy, upright grower. The canes are free of spines. It thrives best in a moderately heavy, well-drained loam. The fruit is large, firm, bright red, of good quality. It rates as first-class for the fresh market and for quick-freezing. Viking is early midseason.

**Valentine strawberry** is from a cross made 1927 between Premier and Vanguard. It was named in 1941. The plants are large, sturdy, and moderate in number. The roots grow deeply enabling the plants to withstand drought well. This character results in the large size of fruit being maintained. The fruit is round-conic, smooth, regular, medium to large in size, rather dark in color but bright, glossy and attractive. The flesh is a dark solid red, unusually firm, and fair to good in quality. Valentine is somewhat earlier than Premier and is preferred by many growers to that well-known early strawberry.

**Vandyke strawberry** originated as an open-pollinated seedling of a selection arising from a cross of Dunlap and Early Ozark. The variety was esteemed as an early, good quality fruit for a time. Unfortunately, it proved to be particularly susceptible to disease.

**Vanguard strawberry** in 1913 came from a cross of Pocomoke and Early Ozark. It was named nine years later in 1922 as an early season variety. The fruit is round-conic, medium bright red externally and internally, and sweeter than most early varieties. It seems less productive than Premier.

**Vanrouge strawberry** arose in 1930 from seedling 180115 (carrying the blood of Admiral, Dunlap and Early Ozark) and Bliss. It was introduced in 1939. It is of value for quick-freezing, being of pleasing color, flavor and appearance. It is only moderately productive, ripening in mid-season. The plants are vigorous and healthy.

The Ontario Horticultural Station is situated in what is considered a most favorable spot for growing tender fruits in Canada, near St. Catharines in the Niagara peninsula. Emphasis is placed on peaches, sweet cherries and late season dessert grapes. Such crops are nearly altogether out-of-bounds in prairie Canada. However, the research work with these tender fruits, as well as that with berry plants and other of the hardier fruits, are of general horticultural interest.

Extensive studies on organic matter in a fine sandy loam soil have run for eight years. Green manure treatments include buckwheat, rye combinations, soybeans and weeds. After three years cropping, eight alfalfa plots changed in average percentage of organic matter in the top six inches of soil from 2.19 to 2.73 and eight bluegrass plots changed from 1.99 to 2.49 per cent. Thus the increase was comparable.

The rootstocks Mahaleb and Mazzard were tested for sweet cherries. Results show Mazzard more tolerant to poor drainage conditions. There seemed no advantage, in contrast to what had been expected, in point of either earlier bearing or dwarfing effect to the trees worked on Mahaleb roots.

The effect of exposure to drying conditions on stand and growth of nursery fruit trees was observed. Trees were left drying flat on the bare soil for periods of 6 and 24 hours, and also for 2 and 7 days. Apple, pear, plum, cherry and peach trees were planted. All were dormant and in good condition. The exposure up to 24 hours did not reduce stand or subsequent growth. However, growth was reduced to a slight extent on the two days and to marked degree with the seven days' exposure. Moreover, with peach trees in this latter class death was heavy. It should be noted that these results may well be markedly different on the prairies under bright skies, dry-aired and breezy conditions). With nursery trees

(Continued on Page 14)





## GARDEN CLUB GLEANINGS

Mrs. G. M. Jorgensen, Editor

### Gardening As a Hobby

By Dr. Carl Christol,

President of the Garden Club Federation

Practically all garden clubbers are city folks who are interested in gardening as an avocation rather than a vocation. They are like the doctor who told his friends that he made five hundred dollars in his garden enterprise. When somewhat quizzically they hinted at a bill of particulars he replied that he figured he raised fifty dollars worth of vegetables and that he got four hundred and fifty dollars worth of recreation and satisfaction out of the undertaking. How true that may have been! Many thousands of us probably would testify to the same and with regard to our own gardening experiences. We like what we are doing and therefore are doing it. The physical objects of our endeavors probably may be regarded as by-products and the inner satisfaction and pleasure derived from our work as the more enjoyable, substantial and imperishable products.

The garden of the garden clubbers covers and includes a vast realm of individual as well as social interests. It may be visualized and contemplated as an exciting venture. It may be considered both recreational and creational. To be sure the vegetables, flowers, shrubs, trees, and lawns are the physical things with which and for which we seem to be immediately concerned. They perhaps may be regarded as constituting the yardstick of the successes, or failures, of our undertaking. We really are deeply interested in the natural physical outcome of our endeavors. But that is not all. It is not nearly all! We enjoy thinking and musing about the essence and the character of our enterprise. We are pleased to talk about the products of our labor to our neighbors and friends. We like to show the best of them and take them to achievement day. We favor flower shows in order to display our flowers. How delighted all of us, young and old, are in winning recognition and ribbons! How we enjoy chatting about our efforts and successes! How we glory in our exploits! Indeed the greatest satisfaction and pleasures in life are those which come from personal activities and personal achievements in any worth while projects.

The fine art of gardening lends itself to a first class hobby for nearly everybody. It is a splendid topic of study and conversation. By an average application of half an hour a day a gardener

can achieve imposing and superb results. As a matter of fact, gardening can be made a hobby that can be pursued and plied every month of the year. It is not short seasoned like so many other hobbies are. For example fruit trees may be sprayed now against next year's insect pests. In many parts of our state all perennial plants are in great need of moisture and should be supplied with a good soaking of water before the frosts of winter. Our garden club meetings continue during the winter months. A vast amount of all kinds of literature on plant and animal life exists which is entertaining, inspirational and instructive. We can make plans for next year.

Gardening is an inexpensive hobby. As a matter of fact, it can be made to more than pay for itself in actual dollars and cents. In fact, our victory gardens during the last few years were a valuable contribution to our national as well as international food supply. However, we are just now thinking rather of the avocational, or hobby, features of gardening, of the fine art of gardening of the garden clubbers. A regular business proposition may not exactly be classified as a hobby, or as recreation. For that matter, though, even a hobby or recreation is not meant to be 100% fun. It is not 100% devoid of work. I take it that all work consists of two fundamental characteristics, drudgery and pleasure. Naturally nobody is particularly fond of drudgery. Nevertheless, I suppose that life without any drudgery at all would be insipid and mawkish, indeed. We need the ice and snow of winter as well as the sunshine and rain of summer. We need abundance as well as scarcity. We need toil and trouble as well as repose and peace. As stated above, the greatest pleasures in life are those which come from our personal efforts and undertakings. We may not eliminate drudgery altogether from our work, not even from our hobbies, but we can decrease it more and more so that it becomes less and less a burden, and as such less and less objectionable. Judging from the expressions of our garden clubbers we are enjoying our gardens and garden club activities to a very high degree of satisfaction and contentment.

As stated before the fine art of gardening covers a vast range of interests. It is in the wide out of doors. It means close contact with nature and nature's ways of doing things. And what vast educational values nature possesses! What wonderful secrets nature still conceals! It may be said that nature is the origin, pattern and prototype of human labor and achievements. It is the inspiration and the subject matter of artistic as well as scientific endeavors. The philosopher





and the religionist think, and dream about it. The architect and the musician try to follow and imitate it. Geopolitics is rapidly developing into one of our most important studies of international relations. Our gardens, indeed, have within them the materials of myriads of atomic bombs. We have reason to think and to talk about the innumerable wonders of our gardens in our garden club meetings. Nature naturans. Nature is naturing. It is perpetual motion. It is everlastingly changing. It is tremendous force. It is colossal power. It is in constant conflict. It is in endless readjustment. It is creation and recreation. We garden clubbers rather believe in amicable human adjustments and harmonious endeavors. We believe in gardening as an art as well as a science, as a hobby as well as an occupation.

Gardening furnishes vast opportunities for study and labor. It provides food for idealists, visionaries and dreamers. No matter how extensive and diffusive the realm of the garden clubber really is, he knows, however, full well that it has very definite and precise limitations. He knows that he must ever be a naturalist and a realist and that as such he is conditioned and restricted by his particular environment. He may experiment, indeed, on a vast scale, but he must always keep in mind if he lives in South Dakota he must pay attention to South Dakota's natural physical conditions. We know that we need not try to raise tropical fruit and vegetables. We know that it will not do to grow bananas, coffee, tobacco and cotton. The gardener, indeed, may be an idealist, a visionary, a dreamer, but he must perforce of the natural conditions which surround him be a realist. He is a naturalist, a botanist, and a zoologist, and as such he must be a realist and practicalist. He knows very well that if he wants to grow cucumbers and squashes he must protect the vines against festering diseases of plant and animal life.

May we repeat that we garden clubbers, in fact, are realists? We are even looking forward to and working for actual results. We are ever alert of the needs of our garden and endeavor to supply them. Our gardens may be in need of moisture at the present time and we should try to provide it. In fact, in many parts of our state rainfall has been below normal this autumn and, therefore, our trees, shrubs, indeed all our perennial plants have not enough water for winter. Now that most of our perennials are dormant for the time being they should be given a good soaking so that the roots can absorb all the moisture they can hold and become turgid and saturated

and thus get ready to perform their proper function next spring. If lawns, shrubs, flowers and trees are to be given city water at all, this is the best time of the year to do it. A good soaking is hereby recommended.

The city as a community is interested in its good appearance. It knows that it takes time to grow trees, to secure fine lawns and flowers and shrubs. It pays to conserve and foster what we have. Vermillion is contributing its share and its good wishes to our natural endeavors by halving its regular water rates for the time being. To be specific our water rates at present are 15c per 100 cubic feet.

By good soaking is not meant exactly to dash several pails of water on each tree and let it go at that. The root system of a tree reaches out about as far in circumference as the branches. It is precisely the outreaching root clusters that need the moisture. A good garden hose and water sprayer therefore, are matters of convenience. As to amount of water, six inches of it may be considered a good soaking. If a soaking of six inches is wanted, it is easy to figure the amount of water needed for a given surface. Let us say that the root system reaches out a distance of eighteen feet from the trunk of the tree. The square of the diameter multiplied by .7854 gives the area of the circle, which in this case is 257 square feet. To put six inches of water on an area of 257 square feet, therefore, requires 115.5 cubic feet of water. According to our water rates here in Vermillion this amount of water would cost little more than 15c. A tree with root spread of six feet would cost about eight cents and a tree with four feet, about four cents. The reading of the water meter in each case would show the amount of water used. Probably the very best thing would be to give the whole lawn a good soaking of water. There is little evaporation during the winter months and the water, therefore, would soak into the ground deeper than during the summer. It may be added that the evergreens give off moisture even during the winter and that naturally they peculiarly need plenty of water at all times.

The day may come when, if you are caught downtown in a shower without an umbrella, you simply step inside a booth, drop a nickel in a slot, turn a handle and stand under a "shower" that sprays your clothes with a waterproof plastic. Then walk home dry thru the rain. Sounds far-fetched, but the new process and water repellent clothes are already here.—Capper's Farmer.



## EVIDENCES OF SEQUOIA MAGNIFICA IN THE BLACK HILLS

By  
H. R. Woodward



H. R. Woodward

There are but two living species of sequoia in North America, *sequoia sempervirens* or redwood, found within the fog belt of the Pacific from Oregon to the Santa Cruz mountains south of San Francisco, and *sequoia Wellingtoniana* or big tree of the Sierra range within California. Sometimes this species is designated as *gigantea* or *Washingtoniana*. Both species are of ancient origin and while there are but two remaining species

there have been as many as 40 fossil forms described. The most prominent fossil form is *sequoia magnifica*, a large petrified species in the northern Rocky Mountain areas. The name *sequoia* is taken from *sequoya*, a Cherokee chief who was inventor of the Cherokee syllabary.

Under exceptional conditions, great pressure and a long period of time being most important, wood can be replaced by silica and thus turned to stone. All the structure of the wood is still retained. This process is called petrification. Trees have been covered millions of years ago to such a depth that they were under tremendous pressure. Hot or warm water containing silica seeped through and replaced the wood molecule by molecule. Small amounts of a compound of iron will give the wood a red appearance and in the last stages of petrification may become agatized.

Throughout the Black Hills in the outcropping of the Cretaceous, the presence of petrified trees is very common and pieces of petrified wood are very much in evidence. There are no trees standing, but along the ridges of the Lakota sandstone may be found segments of trees either singularly or arranged in intact rows from the butt almost to the tip of the tree. Some of these have been removed and arranged as an attraction for visitors in city parks. One large trunk several feet in length and three to four feet in diameter lies at the base of the Cretaceous ridge at Cascade Springs near the highway. It is almost too large to be moved; hence it has remained there without disturbance through more than a half century of settlement. A fairly large area is to be found north of Rapid City near highway 14, and has been given the name of Petrified Forest.

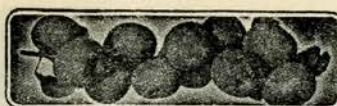
The presence of fossilized cycads, palm-like plants, which are silicified evidence of a tropical flora is also found in the Cretaceous. There are evidences also in smaller fragments of deciduous trees as well as pine and sago palms.

The best evidence of sequoia has recently been discovered in Dudley Canyon about a mile east of Hot Springs where a smaller canyon, starting near the top of the Battle Mountain hogback enters Dudley Canyon. This "chunk" of petrified wood was only discovered about the middle of October, 1945. It is so huge, and it lay along side massive pieces of broken sandstone containing a similar covering of lichens, that it had been unnoticed up to that time. This piece is about ten or eleven feet long and is about seven feet wide. Its width shows it to be a slab off a larger section since its rings in cross-sections show it to have been the segment of a circle about twelve to fourteen feet in diameter. There can be no doubt that this specimen is a species of sequoia.

There seems to be a striking similarity between this slab and specimens of *sequoia magnifica* very much in evidence elsewhere in the western states. Of course since there are no standing examples and since there is so much wood found in the Black Hills it may have drifted in before it petrified, on surface waters, growing a long distance from where it now lies. That seems improbable however because of certain factors known to be necessary for petrification and on the surfaces of the various seas and oceans now existing there is little evidence of floating timber. These trees may have originally stood upright in petrified form and may have been upset by disturbances. No branches attached to the main trunk have been noted. It seems like the larger the stem the better its chances have been to become silicified. Warping of the rings of annual growth give evidence of extreme pressure at some time along the way.

In the not too far distant future more will be known of the cellular makeup of various types of petrified wood. Dr. Clyde Max Bauer, park naturalist in Yellowstone has been making, and so far his findings have not been made known, an attempt to identify from thin cut sections by means of a microscope, the similar and closely related species. He being a geologist is primarily interested in establishing certain geologic assumptions from the data available, but it will no doubt throw a great deal of light on the ancestry of our present species of sequoia. It may throw further light on the extent of the old shorelines of the Pacific ocean in the pre-Rocky Mountain era, which existed 60,000,000 years ago.





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**Wayside Gardens**

100 Mentor Ave., MENTOR, OHIO

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do with Indian lore and Horticulture and combinations of both. I can hear them here by going down the hall to our radio studio but our small radio in the office won't reach out for enough to bring them in. These talks are five minutes in duration, I believe, and all very good. Tune in some time.

I am glad to include some observations in a recent letter by President R. W. Smith regarding conditions at Dickinson. They are as follows: "Since the fall has been extremely dry, except for the snow, there should not be much winter-killing due to late fall growth in trees and shrubs. Due largely to the heavy precipitation last November (1944), and last March, our trees made a very good growth this year despite the below-normal precipitation during the growing season. The growth apparently slowed up in time for the wood to harden before heavy frosts occurred. Our evergreens seem to have grown from 14 to 18 inches this year, and a few even more than that."

Dr. C. B. Waldron left Fargo for Toledo, Ohio, this week. He will spend the holidays there with son Clarence and then journey on to Babson Park,

Florida, where he will become associated with son Max in a "Horticultural Service" enterprise. This officially severs the fifty-five years C. B. Waldron has had at N. D. A. C.

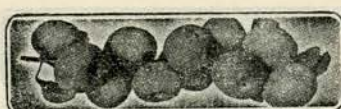
President Ralph Smith has painted a most excellent portrait of C. B. which now hangs in the office of the Dean of Agriculture in Morrill Hall here at the college.

Dr. Waldron was guest at the annual dinner of the Fargo Garden Society on December 11, the day before he entrained for Toledo and he bade us farewell with a few brief but interesting remarks on his fifty-five years in North Dakota. He is an Honorary Life member of both the Fargo Garden Society and the North Dakota Horticultural Society. He holds honorary memberships in many other organizations as well, of course, but none so important as the two listed. While he has gone to make his permanent home in a more gentle climate, he has promised us the fruits of his able pen from time to time. We are going to miss him here.

Reports on comparisons between Buttercup and Butternut Squash are coming in but we want many more. The man from New Hampshire who so kindly donated the Butternut seed will be

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## FRUIT AND VEGETABLE NOTES

By  
F. X. Wallner



F. X. Wallner

A four ton load of fresh vegetables and fruit, arrived on the Minneapolis market for Thanksgiving in 18 hours. The usual time by refrigerated freight is 9 days. The produce labelled "8 days ripe and 8 days fresher" was all taken by a group of stores in the Twin cities. There were 500 gift packages, fresh figs, the season's first navel oranges, avocados, all tree ripened, fresh asparagus and spinach in cellophane bags, of course, no cheap vegetables like we have in our cellar, but fancy vegetables and fruit for the Thanksgiving dinner from the warm and sunny climate of southern California. I have never seen the Chicago Water St. Market as busy and jammed as Tuesday before Thanksgiving. Trucks, cars and one horse hucksters were all stalled for several hours, and several traffic cops were trying to get it moving. I can believe the claim is true that more produce changes hands here in a day than any place in the nation, or say on the earth. The interesting thing is to see so much of one thing, Chinese cabbage, cucumbers, peppers, mushrooms, lettuce by the car load and truck load. Also broccoli, cauliflower, red cabbage, in fact everything. I even saw plenty of Hubbard squash, Marblehead Buttercup, acorns and summer squash. There was all kinds of onions, sets, small creams, big sweet spanish, red, yellow and white globes, green bunched from the south, by the barrel. Thousands of bunches of green spinach, kale, mustard, parsley, leeks, endive. I can think of only two vegetables that I did not see, watermelons and sweet corn. Some stores handle only potatoes of all kinds. Lots of cabbage just fresh cut, much of it the Savoy or curly, only the best eating. Root crops were plentiful, bulk carrots as low as \$18 per ton, delivered in Chicago, No. 1 grade, so there was little chance to sell South Dakota root crops on this market. Government was buying some at \$28 per ton, drying them, giving them away, to get some of the surplus off the market. The price usually picks up a little on root crops after New Year's. It was interesting to see a little horse back a big wagon up to a platform between big trucks so close there was hardly room for the wagon. The driver was not in his seat, but stand-

ing in front of the horse making signs with his hand and foot. Another fresh fruit shipment of special interest was the gift baskets to U. S. ambassador John G. Winant, in London, on the flagship Washington, on its first flight from Washington to London. A big tonnage of perishables will be transported by plane, in the near future. At a special meeting of Directors in Sioux Falls, the last of November, we discussed the feasibility of holding our annual meeting at the same time that the Great Plains Horticulturists meet in Brookings. We endorsed this plan and we could sure have a profitable meeting if we could meet again with this group, if we can again lure them to our state. If this plan is carried out, we will meet for the Garden club program the day before they arrive, and have the big day with this great array of talent.

Basic scientific facts of how a tree grows are reduced to a few simple paragraphs in a three-color poster the Forest Service of the U. S. Department of Agriculture has prepared, as follows:

Light and heat are necessary for chemical changes. The leaves prepare the food obtained from the air and soil and give off moisture by transpiration. The air supplies carbon, the principal food of the tree, which it takes in on the under surface of the leaves.

The buds, root tips, and cambium layer are the growing parts of the tree. The leaves manufacture food for the growing processes. Water, containing minerals in solution, is absorbed by the roots, carried up through the sapwood to the leaves, and is there combined with carbon from the air to make food. This food is carried by the inner bark to all growing parts of the tree, even down to the root tips. The tree takes in oxygen over its entire surface through breathing pores on leaves, twigs, branches, trunk, and roots.

Trees increase each year in height and spread of branches by adding on a new growth of twigs. The heartwood (inactive) gives strength. The sapwood (xylem) carries sap from roots to leaves. Cambium (the layer of cells where growth in diameter occurs) builds tissue-wood inside and bark outside. Inner bark (phloem) carries food made in the leaves down to the branches, trunk and roots. The roots anchor the tree and supply the water and mineral elements the tree takes from the soil.

The 16x21-inch poster, "How A Tree Grows," intended particularly for use in schools, gives this scientific information in pictorial form and is available from the Forest Service, U. S. Department of Agriculture, Washington 25, D. C.



## BEEBE'S PHILOSOPHY

By  
H. E. Beebe

### Right Resolutions Reveal Real Roads



H. E. Beebe

About the time this is read you have probably broken some of your good resolutions but have not those—in the meanwhile—given you some mental stimulus that may result in some good action later—unconsciously?

Thoreau said, "We all march to some distant drum dimly heard—sometimes so dim we do not realize with what we are keeping time."

This that is expressed in much better words by Lydia Ward (no relation of Pinkham and Montgomery) entitled January:

Full well I know bleak winds will sweep  
The hills when Winter's king commands;  
And snow will yet lie white and deep  
Where now in shallow drifts, it stands—  
For this is January.

And yet, and yet I hear a voice  
Fragrant with promise of the May—  
And voice of spring, and I rejoice,  
And sing this little roundelay—  
Tho this is January.

Another winter bouquet idea from the December "Back to Eden" is the placing of sprigs of holly in half cooled paraffin in a bowl. When the paraffin cools the twigs will be held upright and also keep the moisture in longer. This afternoon Jim Nace furnished some red berried pyrocanthus which is looking right at me altho a frost a week ago took two-thirds of the many flowers. Perhaps readers wonder why I often mention methods of making winter flower decorations by artificial means or proper preparation immediately after picking. It is purely mathematical—due to the teaching of Prof. Akeley at South Dakota University—during the months of October to April there are very few flowers out doors in the Dakotas and 7 is greater than 5.

Also my ideas of very definite help to nature by artificial watering, protection from wind, and heat reservoirs seems to be penetrating the rugged individualists. Witness Dean Walster of North Dakota in our South Dakota Annual Report which Bro. Simmons just sent out, on page 96—

"Three North Dakotans Grow Fruit"—Bobb set up so he can irrigate. Gerbracht and Swensen depend on shelter belts and tillage to conserve moisture. Also Swenson picked a northeast slope. That article is just full of observations that will pay every home lover on a farm or in town in the Dakotas to read aloud in the extension clubs.

Walster has had the advantage of excellent training, having traveled over North Dakota for years and at home with an Ipswich girl.

Another North Dakotan who has seen the light is our genial Secretary at Fargo—Harry Graves. In the September 20th Dakota Farmer Harry and Paul Kasson, County Agent (who used to give me AAA checks in Bowman County), visit Dvorak of Dickinson which is in the far west part of the Dakotas and tell about the apple, plum, apricot, and pear trees—and grape arbor. The fact is that this article sounds like George Gurney's catalog come to life.

In the years we remember so well, 1930 to 1936, the six Dvorak children formed a scoop brigade—from a shallow pond into an irrigation ditch. When this grew too humoresque a crude water wheel, power driven, was made. The result was good gardens when others were driving to town for cans. The picture of their house shows the proper arrangement—tall trees in back and low shrubs in front and no trees there at all.

Mrs. Beebe, who has always done the horticulture work while I was in the house writing about it, just handed in an item by Luther Burbank—If we had paid no more attention to our plants than we do to our children, on raising children (she teaches in an Adventure school in North Hollywood) but I cling to John Robertson's idea who, when asked how children should be reared said, "Often."

This seems to be running to North Dakota but a quotation from the Slope County Leader regarding the passing of Mrs. Wm. Ohlendorf seems to give a hint how to achieve a degree of immortality—"On a southern exposure hillside her flower garden was a marvel to all of the welcome visitors. It was generally conceded that she was the best authority on the sturdiest flowers adapted to our climatic conditions."

The editor of "The Garden Path," Mrs. Marshal Johnson, writes so truly of this month: "We have been snowed under both inside and out. Just finished the mailing and can see across the room to the window. On the sill are forsythias and pussy willows in bloom. You see we are making believe that spring is just around the corner of the garage."

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