

FOR FARMERS' STOCK BREEDERS AND GARDENERS

CONSERVATION

A WEEKLY COLUMN OF PRACTICAL OPINIONS ON THE VITAL ISSUES AFFECTING THE USES AND ABUSES OF NATURAL RESOURCES BY MR. LUDLOW JENKINS, MARSHFIELD.

SHALL DUCKS FOLLOW THE DOOD?

This is the obsequy title of a thirteen-page brochure, illustrated by distribution maps, graphs and cartoons, prepared by the National Association of Audubon Societies.

The keynote of this appeal for a closed season on waterfowl is outlined in the first paragraph, by quote: "J. N. Darling, Chief of the U.S. Biological Survey—who is in a more advantageous position than anyone else in the United States to know estimates (Bird-Lore, May-June, 1935) that there are 18 to 20 million ducks left on the North American continent. Approximately 900,000 duck stamps are purchased during the 1934 hunting season. On the basis of every licensed hunter of wild waterfowl in the United States, less than 40 birds are saved."

The conclusion drawn from official statements is that each licensed waterfowl hunter is slaughtering, with the total supply down to about 20,000,000, we must conclude that the hunters have already had, and consumed, all the birds that are coming to them. We are a nation of 125 million people, and each of us has an equal right to enjoy our national resources. Shall we surrender our waterfowl heritage to a mere handful of 600,000 hunters who have bought one-dollar "Duck Stamps"? One of the more reasonable of the sportsmen has admitted that the birds and other wild life species belong in part to the general public. We would now ask: What part? Shall we be satisfied with the few fragments of one duck that will be ours after the 999,999 uncounted ones have been killed, and perhaps eaten, with proportion of "their" 40 cents as a benefit government money charged by law with protection money remaining? This public resource is for all the people.

has decreed that he may destroy? It need not play that a surplus stock has been built up? The line of attack is presented under: Commercialization, Drainage, Legal Hunting and Drought. Many of the arguments for a closed season that are ably presented have been already elaborated in Nature Magazine. The case for the birds is so plain that every plea for their relief has been advanced. Their pitiable condition itself cries aloud to those who have hearts to feel. What will be the result if the destroyers are again authorized to take toll from the surviving off-spring that this fall will come back from the north? It is unthinkable that a civilized nation will permit an atrocious unlettered tribe of aborigines would scorn.

Under "Drought" are presented four maps—the breeding ranges as affected by drought of the Red-River, Ruddy, Gadwall and Pintail. We regret the brevity of the comment, for here lies the key to duck abundance. The three first mentioned breed mainly in the drought area, and are among those nearest to extermination. But the Pintail, with the Mallard, Canada Goose and Green-winged Teal, breed over a great area in the Far North, beyond drought, drainage, commercialization or extensive hunting, and these are the principal ones that are now furnishing fodder for the guns. But the great area where they go to breed, somewhere between one and two millions of square miles, with prairie of lakes and marshes teeming with food, is now largely tenantless. This waterfowl paradise is now scarcely one-tenth occupied.

We hope that our readers and every member of the National Association of Audubon Societies and its local branches, and every Nature lover in America who can be reached, will demand that shooting be forbidden.

CROP REPORT

Below will be found a brief synopsis of telegraphic reports received at the Head Office of the Bank of Montreal from its branches. Our Managers have knowledge of each local situation and are in touch with crop conditions in all sections of the districts mentioned.

GENERAL

Crops in the Prairie Provinces are ripening rapidly and harvesting, which has commenced, will be general in about ten days. Rains, varying from scattered showers to heavy downpours, have been beneficial in Manitoba and Alberta and at a few points in Saskatchewan. In Saskatchewan crop conditions remain unsatisfactory over most of the province, with conditions in Alberta varying from good to a virtual failure and with those in Manitoba on the whole favorable. Improvement has been shown in the feed situation and the condition of pastures in the Prairies generally. In Quebec warm, showery weather which has been ideal for growing crops has continued during the week, and the outlook remains satisfactory. Favourable growing conditions also continue in Ontario, where harvesting of fall wheat is about completed and the cutting of early oats and barley is well advanced. In the Maritime Provinces warm, dry weather has continued, aiding the growth of most crops, but rain is now needed in many parts. Damage to grain crops in Nova Scotia is feared from army worms which have appeared in large numbers in some sections. In British Columbia warm weather continues, with beneficial rains in the interior, and grain crops are maturing satisfactorily. Hay conditions are good, with excellent crops. Details follow:

PRAIRIE PROVINCES

ALBERTA—Rains, except in the Peace River District, have been beneficial to crops and pastures. Sunshine is now required. A heavy growth of weeds is reported in the east central area, and considerable hail damage has occurred in northern and central areas. Crops in other districts are good, except those in the southeast where there is a virtual failure. SASKATCHEWAN—Reports indicate that little grain will be threshed in the greater portion of the southern and central regions. Harvesting will be lessened, it is expected that the crop will not be seriously affected, as most of the wheat has filled well. Slight damage from grasshoppers and army worms is reported. Coarse grains generally are satisfactory.

PROVINCE OF QUEBEC

EASTERN TOWNSHIPS AND OTTAWA VALLEY—Grains are maturing satisfactorily and indications point to good average yields. Canning peas are turning out fair to good. Fodder corn is showing strong and rapid growth. Potatoes and other root crops are doing well. Rains have retarded the finishing of haying operations in some parts. Pastures generally are in excellent condition. Tobacco plants are growing nicely. Wild and cultivated berries are being marketed in plentiful quantities and apples and other tree fruits are promising. LOWER ST. LAWRENCE AND LAKE ST. JOHN DISTRICT—Grains are filling well and potatoes and other root crops give promise of normal and better yields. Rains have delayed somewhat the harvesting of a good average hay crop. Pastures are good. The blueberry crop is not up to expectations at some points but generally berries and small fruits are plentiful.

PROVINCE OF ONTARIO

Yields of wheat, while variable, are generally satisfactory. Canning of a good pea crop is completed. Sugar beets and other root crops are making satisfactory progress. Corn and tomatoes are showing excellent growth. A heavy hay crop has been stored under difficult conditions, due to frequent rains. Pasture is standing up well. Small fruits of all kinds have been generally plentiful. Early apples and peaches are promising; late varieties of apples are expected to be below average. Priming of blue-cured tobacco has commenced, the yield may be below average but of a good quality leaf. Burley and black tobacco on heavier land has been damaged by excessive curdling expected yields.

MARITIME PROVINCES

Grains are mostly heading well. Potatoes and other root crops are showing satisfactory growth. Weather has been favorable for haying operations, which are about finished. Pastures are holding up.

Well Drilling

Communicate with Trask Well Co., Ltd. Vaughan H. Groom, Summerside Manager for P. E. Island

NEWSY NOTES

BY AGRICOLLA

TWO TIMELY CIRCULARS

Whenever Prof. Herbert Groh, of the Division of Botany, sends me any of his circulars I prepare to enjoy some good reading. Circular 120, on the "Poison Ivy" comes at the right time, for the plant is abundant at certain points, principally, I think, on our shores. A year or two ago I found it growing behind some sandhills on the North Shore.

The "poison" is a resinous oil, with which every part of the plant is impregnated; and if by any chance this oil gets on the unprotected skin a distressing itchiness is set up which may last for days. The leaflet or circular treats particularly on recognition of the "Ivy", treatment for poisoning, and eradication of the plant. The circulars may be obtained gratis from the Division of Botany, Experimental Farm, Ottawa.

The other Circular (No. 127) deals with the "Plants responsible for Hay Fever." The excitants of this annually recurrent malady are mostly of vegetable origin, including more especially the wind-borne pollens; and the Circular lists the most prominent offenders. The concluding paragraph reads: "Extensive treatises have been written and experiments are still in progress seeking to bring order out of past chaos in the understanding and treatment of Hay Fever," and intimates that the circular is intended to give a general idea of what has already been accomplished.

A PARASITIC INSECT

Last fall I collected some cocoons of the Cecropia Moth and tied the twigs to which they were attached, to the climbing Bittersweet on the veranda. Spring came and passed, with no action on the cocoons; so finally I opened them, and the cause came to view. There remained but the shell of the Cecropia pupa and beside it the shells of fifteen smaller pupae. The caterpillar of the Cecropia had been parasitized by some Ichneumon Fly depositing its eggs either on or under its skin; and after the Cecropia had assumed the pupal stage, the eggs hatched into larvae which devoured their unfortunate host. Then they took on the pupal covering and slept the winter away safe inside the big cocoon.

The story was not finished, for this week I noticed a strange insect on the window-pane in the living room. A puff of fly-spray, and it was transferred to the mounting-board for examination. It was a hymenopterous (four-winged) fly, so I got down that invaluable Bulletin "The Hymenoptera or Wasp-like Insects of Connecticut," by H. L. Viereck, and slowly traced the insect out. At last I came upon it, the Ophion maceratus of Linnaeus. This long-bodied, straw-colored insect, I read, is a parasite of the Cecropia moth. Sama Cecropia; and its size agreed with the smaller cocoons inside the big one. It has no popular name; not one insect in a thousand has.

There is a copy of Viereck's Bulletin in our Public Library, and the student of entomology will find a drawing of Ophion in the plates at the end.

PROVINCE OF BRITISH COLUMBIA

All crops of roots and vegetables are yielding well and ears of mixed vegetables are moving in volume from the Okanagan. Potatoes are 100% of average, with shipment of late varieties commencing. The crop of field tomatoes is 80% of average, and shipping has commenced. Apples are moving in heavy volume, with a 60% crop. Other tree fruits are maturing well and the following yields are now indicated: apples and pears 90% of average, peaches 110%, plums and prunes 100%. Livestock is in good condition, and pasturing is ample. Irrigation water is plentiful.

ASTRONOMICAL NOTES

Away to the eastward, about 9.30 in these early August nights, I see the "Great Square of Pegasus" shining prominently in the darkened sky. The Square consists of four stars of about second magnitude, three of them in the constellation Pegasus, the fourth belonging really to Andromeda. At present the Square seems to stand on one of its "points" or angles, which is just a little way above the horizon. That lowest point is a somewhat dull star, called by genib, but known to moderns by the old Arab astronomers "Al-the more prosaic name of Gamma Pegasi. All four stars have Arabic names as may be seen in any good Star Atlas.

From time immemorial the Flying Horse Pegasus, has symbolized the aspirations of the poet. Tennyson thus uses it to typify the conflict between the spiritual and the bodily passions, in that remarkable poem "The Vision of Sin": "I had a vision when the night was late: A youth came riding toward a palace gate. He rode a horse with wings, that would have flown. But that his heavy rider kept him down."

And that, I take it, is a pretty general experience of mankind. The old Greek legend puts it another way. When Perseus cut off the head of the monstrous Gorgon, Medusa, her blood gave rise to or generated the winged horse Pegasus. Prince Bellerophon of Sphyr caught the beast, and saddled and bridled it; but on its flight to the sky, he fell off! There is likely to be a symbolic meaning to all this; which I must leave to wiser heads.

The new Finster's comet is coming in for a share of attention. Wasn't it Tom Hood who predicted many direful things upon an occasion of this sort? It was to so warm that he "saw a roasting chicken sit upon some frying eggs!" Comets, these times, however, are not looked upon as harbingers of woe.

Here are some particulars of a typical comet. When it first comes into view, often a long way from the sun, it appears as a faint hazy cloud, sometimes with a central brighter "nucleus," but with no tail as yet. At it nears the sun this head—the coma—becomes more clearly defined, but not "sharp" in outline. Nearer to the sun the tail begins to grow, sometimes more than one; and the growth attains its maximum as the comet swings round the sun. It is to be noted that the tail always points away from the sun, and does not follow the comet as the sparks follow a rocket. This is because the tail is composed of minute particles of matter blown out from the nucleus by the pressure of radiation from the sun.

Comets are surprisingly light; sometimes a comet will pass near a planet, and in that case the pull of the planet may divert the comet to an entirely new path; but "it has never been possible to detect any effect of the pull of a comet on a planet." For all that, a comet may weigh several million tons—whereas our earth weighs (in tons) 6 followed by twenty-one zeros!

Again, the head of a comet may be as large as the sun, and the tail may have a volume many times greater. The weight, being so small, the density of matter in the head must also be small, and in the tail smaller still. When the comet passes an ordinary star, the star is visible and it loses no brightness. So attenuated is a comet's tail that the earth may pass through it without any ill effect; this happened with Halley's comet in 1810. (The firm of Mawson and Swan

THE LILAC LEAF-MINER

By R. E. Balch, Entomological Laboratory, Fredericton, N. B.

History

This species has been introduced as a pest from Europe. It is now widely distributed in Eastern Canada and causes a great deal of disfigurement to lilacs by mining in and rolling up the leaves. It does not attack other plants.

Description of Insect and Damage Caused

The adult, a brown moth, one-quarter inch long, appears early in June, flying and laying its eggs during the evening. The eggs are in groups of 5 to 10 on the underside of the leaves. In a week or so they hatch and the small caterpillars mine in between the two surfaces of the leaves. This at first shows up as discolored spots, later the mines become larger and appear like large blotches, sometimes bladder-like when they run together.

After about three weeks the pale-green caterpillars come out on to the surface of the leaves and roll them over, tying them down with silk and feeding inside the roll. They are now pale-yellowish in color and about 1-1/2 inch long. Ten days or so later they drop to the ground where they pupate. In about two weeks (early August) a second generation is repeated. The injury may continue until the middle of September, when the insect goes into hibernation in the ground.

CONTROL

Although the habit of mining and leaf-rolling makes this insect rather difficult to control, a careful spraying with nicotine sulphate has given good results and will prevent serious injury. It is necessary to watch for the first signs of the injury and spray as soon as the discolored spots appear with nicotine sulphate (Black Leaf 40). 1-2 table-spoons per gallon of water. Follow this with another spray two weeks later, using 2 table-spoons to the gallon. The spray should be applied to the foliage in a fine mist so as to wet both sides of the leaves. The first application will probably be necessary early in June, or for the second generation around the middle of August, but the exact time varies somewhat from year to year and locality to locality. Picking off and burning the spotted leaves early in the season will help to check the injury, but this must be done of course while the larvae are in them. (mentioned above) included Sir Joseph Swan, the inventor of the electric light.

WHAT ARE YOU WORTH?

When I went to school there used to be a chapter in the Arithmetic headed Present Worth; and have just about forgotten the pesky thing, but I believe the examples wanted to know what lump sum you should pay now, for a business with so many years to run, at a certain rate of profit each year. An American professor according to the Ottawa Citizen, has been working at the same kind of problem and has shown us just where we stand in our life's work. Medical men, he says, are at the top of the economic tree, their working life span is 42 years, and the present value of their average earnings for that time is \$108,000. Lawyers come next, working 43 years and gathering in the shekels to the tune of \$105,000. Education and religion cannot attain to such figures: the minister's average length of service is 44 years but his economic value is \$41,000. The Public School teacher has 45 years before him, with the prospect of earning \$28,700. But it is the farmer who gets the shabbiest deal of all: he must work (and the professor says nothing of the unpaid labor that his family puts in) for 51 years at the not-unimportant job of raising food for everybody else, and his return is \$15,500. Farm labor comes last on the list with \$10,400 for 51 years work. This is away below "Unskilled Labor" which has an expectancy of 44 years and \$15,200.

The professor is south of the boundary line, he is remembered, and his figures are averages, but it is probable that Canadian statistics are not very different. There is room for a great improvement in the farmer's lot. He will never make it on the individualistic system he has hitherto favored.

CAVE-MEN IN ENGLAND

In 1861 the quarrymen were demolishing the Heathery Burn Cave a limestone cavern in a romantic and secluded ravine, about a mile and a half north of Stanhope in Wearside, Durham County. The limestone was used by the Wearside Iron Company and the operations involved the complete destruction of the cave.

When the floor was removed it was found to be stalagmitic, from two to eight inches in thickness, and under it were many pre-historic remains. Of primary importance were portions of two human skulls, which Professor Huxley described as "belonging to the same race of rather small and lightly-made men, with prominent superciliary ridges and projecting nasal bones," that he had seen in other parts of England. Very many other human bones were found at the

Grow Cucumbers in Air And Save Space

GROW CUCUMBERS IN AIR AND SAVE SPACE

The idea of growing cucumbers as climbing vines rather than as ramblers over the face of the earth where they take up much room is gaining in popularity. The idea has been spread through the medium of some of the great greenhouse plants about the country devoted entirely to the winter growing of cucumbers for the cold season market. In these glass houses the cucumbers are trained on strings and go straight up to the roof.

They may be as easily grown in the home garden in this manner as in a greenhouse and with great economy of space. A sunny back porch may have cucumbers as shade producing vines and it is as attractive in appearance as some vines that are grown as ornaments. The vine will climb quickly if given support and will produce just as abundantly in an upright position which is its natural position when growing, being provided with tendrils for climbing. Often cucumbers on the edge of a corn planting will seize upon a cornstalk as support.

Six-foot trellises can be made at home to accommodate the vines very easily and when they reach the top they can be pinched back to be kept in bounds. When grown to upright supports as climbers the problem of furnishing them the moisture in hot weather is much easier to handle than when they sprawl about the ground. They can be given a mulch or trenches can be dug a foot away from the vines on either side of the row to be filled



CUCUMBERS TRAINED ON WIRE TENCE

much in their later career. It is possible to get so much nitrogen into the soil in the way of humus and fertilizer that the cucumbers will run too luxuriantly to leaf and vine. If the vine seems to be running too luxuriantly pinching out the ends of the principal shoot and the buds on blossoming and fruiting. Always encourage the vine to bring on the rest of the family.

Control Of Virus Disease Of Potatoes

(Experimental Farms Note)

Mosaic, leaf roll and spindle tuber are three important diseases of virus origin, commonly found affecting the potato. These diseases do not herald their presence by the production of rots or wiltings and thus may easily be overlooked by the casual observer. Nevertheless, such diseases may reduce yields as much as 25 per cent and they are now recognized as the disorders responsible for the "running out" or degeneration of potato varieties or strains.

Mosaic diseases are characterized by the mottling effects which they produce in the foliage. Leaf roll causes a slight general yellowing of the foliage and an upward rolling of the leaves. Spindle tuber intensifies the normal green colour of leaves, imparts an upright, starry appearance to the plant, and causes the production of spindle tubers with bulging eyes. The infective agents of these diseases occur in all parts, including the tubers of diseased plants. These diseases are all infectious and each can be transmitted to healthy plants by several methods, especially by insects and grafting.

The Dominion Laboratory of Plant Pathology at Fredericton, N. B. is engaged in an intensive study of potato virus diseases, with particular reference to their control. These investigations confirm the necessity of planting certified seed stock, and roguing out of diseased plants, the control of insects, especially aphids or plant lice, and the destruction of cultivated or weed hosts in which potato virus diseases are being harboured. Potato growers are urged to adopt the system of tuber-unit planting in isolated seed plots. Such plots should be rogued thoroughly shortly after the plants emerge and the practice continued at weekly intervals throughout the growing season. If mosaic is eliminated from the seed source, aphid transmission of disease is greatly lessened. In roguing seed plots or large fields, remove aphid infested, virus infected plants as soon as possible. Rogued plants should be deposited in some type of closed container, carried from the field and then destroyed, preferably by burning. Do not pile plants at the end of the potato field.

For further information write your nearest Plant Pathological Laboratory. One test it took from 4 to 8 weeks on a diet containing neither of these supplements to clear the flesh of the birds of the fishy taste.

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Tree Heaviest Loser as Two Owners Fight Blackheart Disease



The tree, over which neighbors Little Kern and J. R. Edmonds of Lawrence, Kent, had long argued, suffered most when Kern, as the photo shows, decided to remove that portion of his property—all but nine inches of the trunk.

Advertisement for Dominion Illustration Station Field Day, featuring a table with dates, places, and operators, and promotional text.