

Wisconsin School of the Air
Afield with Ranger Mac
November 13, 1939

CONSERVING THE SCIL

Hello Boys and Girls:

Yesterday sleeps; tomorrow sleeps; only today is awake, and we ought to be awake with it - so,

This is your day -
Let's be up and away!

Last week it was my pleasure to visit with a large number of Trailhitters in their schoolrooms. I really had a happy time, and I hope they were not disappointed in Ranger Mac, because he didn't wear a broad rimmed hat, with braided ribbon 'round the crown, and a leather belt that stretches round, a roly-poly stomach like Santa Claus; I hope they didn't 'spect these because, Ranger Mac is not like that; fact is, he seldom wears a hat. But I did find out that many of you were disappointed in the broadcast on "Deserted Homes" given on the day of Halloween. Many and many of you thought that Ranger Mac was going to talk about haunted houses, inhabited by bats and rats and frequented by ghosts. Ranger Mac does not talk about such things in such a way because he knows that there are no things in Nature to be scared about and further he knows

That girls are awful 'fraidy cats
Scared of snakes and mice and rats;
Scared of swings that go up high
And of buzzards sailing high
Camping, fishing * these are fun
But the girls just scream and run
From worms and eels and things like that -
A girl's an awful 'fraidy cat!

Once I found a hornet's nest,
'An Jim and I an' all the rest -
(The boys, I mean) - poked 'round about
Until we'd chased some hornets out;
They buzzed and buzzed, those hornets did
'Till all the girls ran off and hid.
Now I would never run like that -
A girl's an awful 'fraidy cat!

Joyce:

So girls are 'fraidy cats, you say,
And boys are brave the live long day.

Well, Ranger Mac, you can't tell me
That you weren't scared as scared could be
Last Halloween when Patrick Finn,
All dressed in white, came creeping in-
You really thought he was a ghost!
If I were you I wouldn't boast.

Ranger Mac:

Last Halloween, now Joyce Jaeger,
You were frightened too, I wager;
Besides, it's best to have a care
When spooky things are in the air.

Joyce: Yes, then it different, I'll agree
On Halloween, as all can see.

Both: When spooks fly high with owls and bats,
Both boys and girls are 'fraidy cats.

So you can see why we didn't talk about haunted homes but about the homes that birds leave behind when they go south, many of which to be sure, have been taken over by mice for their winter quarters.

Today we are going to talk about something the nation has become scared about, alarmed about, and that is the way we have treated our most valuable natural resource - the soil. Look about you in your room. It would be difficult to find anything that did not come from the soil. Think about your daily lives, from the time you get up in the morning, put on your clothes which came from the soil, eat breakfast that came from the soil, pick up your pencil, paper and books which came from the soil; jump into the school bus that came from the soil; a bus propelled by power that came from the soil; a bus carrying individuals whose physical bodies are made up, nourished by the soil and in due course of time will return to the soil. You see just what I mean when I repeat that old adage "The soil is the Mother of Life." And yet that soil forms only a very thin covering over the face of the earth. Some places only a few inches in depth; other places maybe extending to a few feet. This precious thin film is the source of the things we need in life. It has taken nature thousands of years to prepare this 6 to 8 inches for productive plant growth. This 6 to 8 inches, about the depth of a spade, is the life-giving part of our soil.

It contains organic matter called humus, which is made by vegetable matter decomposing and mixing with the earthy soil. This humus is rich in plant food and has the power to hold water. This top soil is the nation's most valuable resource. Knowing what has taken place in the past, one can say that a nation is rich, happy and enduring only as it preserves this top soil. History shows five hundred cities once flourished in what are now the dry scantily populated plains of Asia Minor. Today we think of China as a land of death and drought, of famine and flood, but once upon a time China was a land of plenty, so was India, Greece, Babylon, Mesopotamia, northern Africa - all supported large populations. Their decline to impoverished nation and people can be written in terms of how they mistreated that top 6 or 8 inches of valuable soil. History points out that it is suicide for a nation to abuse its soil. And now, I believe, we have come to the point in our own history when we can say that the good farmer is one who shall preserve the soil. Sometime you ask your father whether he believes the farms in your community are as fertile as they were 25 years ago; whether crop yields are as high as they were 25 years ago? You notice for yourself whether or not any fields have been abandoned because the fertility has been exhausted; or abandoned because erosion has removed the top soil. We don't have to go far to find examples of misuse of the soil. Then when we multiply the cases in your own communities by the great number of communities in our country, we get an alarming total. The fact is, according to estimates made by our government, over 50,000,000 acres of land has been destroyed in our country since white man came 300 years ago. Another 50,000,000 are seriously damaged, and on 200,000,000 acres erosion has started. 50,000,000 acres is a lot of land to lose in so short a space of time. That is five times the cultivated land of England. We could not last long as a nation if that continued.

In May of 1934 I was planting trees with school children on a school forest. We noticed that the sky was overcast with clouds of peculiar color. Quite soon it began to rain, and we noticed that our garments and our faces were smeared with dirt. We found out later that that dirt was the soil blown from the newly made desert of the United States, from the dust bowl of Oklahoma and Nebraska.

Nothing like this has ever happened in America before and the children could not believe that the soil of these states was being added to their soil. That was really an historic event, that dust storm, because it called the attention of the nation to the fact that the destruction of Nature by man is one of the greatest problems that we have to face. If you heard the broadcast on the School of the Air last Thursday, called "Land of Uncertainty" you learned the why of these dust storms. First came overgrazing by beef cattle. The plants were so heavily grazed that no seeds could be produced. Then came the sheep; millions of them; sheep with teeth that slash right down to the crowns of the grass; sheep with hoofs like chisels to loosen the soil. Those were stirring times when the cattle men and the shearers competed for the grass in this public domain. Cattle and sheepmen fought for the grasses of our West while their stock wounded the soil. There were dust storms then but more local and not so severe. Then came the war. Millions of men in uniform, taken from the farms of Europe, all had to be fed. So pioneers strode forth on the high and dusty plains and found they could grow wheat there. Wheat would win the war. That was the cry. They turned the grass roots to the hot sun, the roots that had helped to hold that country together for centuries. In 1925 there were 25,000 tractors on these plains. In 1930 there were 146,000. This is some indication of the way these lands were given over to the plow. Then came the period of drought; six years of little rain. Along with it came the winds. They put on a horrifying show. They ripped off the top soil of some fields to the depth of the plow. Aviators who tried to ride above the dust say they went up as high as they could and still there was dust. It settled on the high buildings in New York, and beyond that on ships 200 miles at sea. The children planting trees on the school forest up north tasted the dust from the Plains. This is called wind erosion. We can see this type of erosion at work in the light soil areas of our own state, in Portage, Marquette, Waupaca, Adams and Waushara counties and farmers are planting rows of trees to break the force of the wind and save the top soil. We took the trees off the land to make room for more crops. It was a mistake and now we are putting the trees back again.

But wind is not the only form of erosion. Water causes far most serious damage than wind. With ax in hand, matches in their pockets, and the plowshare, our forefathers quickly upset nature's method of protecting the soil. A growing country called for more food. Forests were levelled with the axe and burned. Plows turned the original forest soil. The dashing rains on the bare soil had little effect at first but repeated cultivation and cropping, even on rich soil, will soon take its toll. Plant food goes, humus disappears, and erosion begins. In Wisconsin, where most farmers are dairy farmers, we return humus and some of the plant food to the soil in the form of manure. A sense of humor is a great possession to help along the path of life; but a sense of humus is a splendid one for a farmer to possess to help keep his fields in good condition. Humus in the soil increases the ability of the soil to hold water so that less water runs off to carry soil with it. Plowing under green crops such as soy beans, clover, alfalfa or rye is a good way to add humus to the soil. The pressure for more food in a growing nation has caused farmers to cut the trees from their hillsides and cultivate the slopes. By plowing along the slope, following a level course, and not up and down the slope, the ridges and furrows help to hold the water where it falls and thus reduce erosion. This is called contour plowing. In the hilly part of our state, as along the Mississippi River Valley, some farmers have built terraces which help to hold the water and also help to carry off the surplus water in an orderly way. These terraces look like huge steps up the slope. Strip cropping is another way to prevent erosion. In strip cropping bands of close growing crops are grown in strips along the slope, like grasses, legumes or small grains. Then between them strips of cultivated crops are grown. The close growing crops catch and hold the water so that it cannot accumulate and run down the slope. If a farmer must use the slopes for cultivated crops these are some of the methods he should use to prevent erosion, for water will flow down hill and with it will come the good top soil, unless he practices proper cultivation.

Some boys think that the earthworm, the angleworm, was put on this earth to supply bait for fishing. It makes good bait for some kinds of fishing, but it

serves a greater purpose than that. This worm is nature's first plowman. Down into the depths goes this plowman, bringing to the surface the subsoil, and boring a passage way that carries off the surplus water. Thus he helps to prevent erosion. He carries dead leaves and grasses into his burrow to line it, and thus adds humus to the soil. I wish I had the time to tell you of the wonderful work performed by this lowly creature that helps so much to keep our soil in good condition. Darwin, the great scientist, says about the earth worm "It may be doubted whether there are many animals which have played so important a part in the history of the world as this lowly organized creature."

So with this salute to nature's plowman that is a conservor of the soil, Ranger Mac wishes you much happiness until next week, with

May the Great Spirit

Put Sunshine into Your Heart

Today, and Forevermore, Heap Much!