

## The Lay of the Land

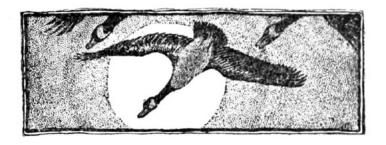
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## Contents

1.	The Muskrats are Building	1
2.	Christmas in the Woods	13
3.	A Cure for Winter	24
4.	The Nature-Student	39
5.	Chickadee	52
6.	The Missing Tooth	62
7.	The Sign of the Shad-bush	73
8.	The Nature Movement	80
9.	June	89
10.	A Broken Feather	96
11.	High Noon	104
12.	The Palace in the Pig-pen	112
13.	An Account with Nature	122
14.	The Buzzard of the Bear Swamp	132
15.	The Lay of the Land	140



## The Muskrats are Building

We have had a series of long, heavy rains, and water is standing over the swampy meadow. It is a dreary stretch, this wet, sedgy land in the cold twilight, drearier than any part of the woods or the upland pastures. They are empty, but the meadow is flat and wet, naked and all unsheltered. And a November night is falling.

The darkness deepens. A raw wind is rising. At nine o'clock the moon swings round and full to the crest of the ridge, and pours softly over. I button the heavy ulster close, and in my rubber boots go down to the river and follow it out to the middle of the meadow, where it meets the main ditch at the sharp turn toward the swamp. Here at the bend, behind a clump of black alders, I sit quietly down and wait.

I am not mad, nor melancholy; I am not after copy. Nothing is the matter with me. I have come out to the bend to watch the muskrats building, for that small mound up the ditch is not an old haycock, but a half-finished muskrat house.

The moon climbs higher. The water on the meadow shivers in the light. The wind bites through my heavy coat and

sends me back, but not until I have seen one, two, three little figures scaling the walls of the house with loads of mud-and-reed mortar. I am driven back by the cold, but not until I know that here in the desolate meadow is being rounded off a lodge, thick-walled and warm, and proof against the longest, bitterest of winters.

This is near the end of November. My wood is in the cellar; I am about ready to put on the double windows and storm doors; and the muskrats' house is all but finished. Winter is at hand: but we are prepared, the muskrats even better prepared than I, for theirs is an adequate house, planned perfectly.

Throughout the summer they had no house, only their tunnels into the sides of the ditch, their roadways out into the grass, and their beds under the tussocks or among the roots of the old stumps. All these months the water had been low in the ditch, and the beds among the tussocks had been safe and dry enough.

Now the autumnal rains have filled river and ditch, flooded the tunnels, and crept up into the beds under the tussocks. Even a muskrat will creep out of his bed when cold, wet water creeps in. What shall he do for a house? He does not want to leave his meadow. The only thing to do is to build,—move from under the tussock, out upon the top, and here, in the deep, wiry grass, make a new bed, high and dry above the rising water, and close the new bed in with walls that circle and dome and defy the winter.

Such a house will require a great deal of work to build. Why not combine, make it big enough to hold half a dozen, save labor and warmth, and, withal, live sociably together? So they left, each one his bed, and joining efforts, started, about the middle of October, to build this winter house.

Slowly, night after night, the domed walls have been rising, although for several nights at a time there would be no apparent progress with the work. The builders were in no hurry, it seems; the cold was far off; but it is coming, and tonight it feels near and keen. And to-night there is no loafing about the lodge.

When this house is done, then the rains may descend, and the floods come, but it will not fall. It is built upon a tussock; and a tussock, you will know, who have ever grubbed at one, has hold on the bottom of creation. The winter may descend, and the boys, and foxes, come,—and they will come, but not before the walls are frozen,—yet the house stands. It is boyproof, almost; it is entirely rain-, cold-, and fox-proof. Many a time I have hacked at its walls with my axe when fishing through the ice, but I never got in. I have often seen, too, where the fox has gone round and round the house in the snow, and where, at places, he has attempted to dig into the frozen mortar; but it was a foot thick, as hard as flint, and utterly impossible for his pick and shovel.

Yet strangely enough the house sometimes fails of the very purpose for which it was erected. I said the floods may come. So they may, ordinarily; but along in March when one comes as a freshet, it rises sometimes to the dome of the house, filling the single bedchamber and drowning the dwellers out. I remember a freshet once in the end of February that flooded Lupton's Pond and drove the muskrats of the whole pond village to their ridgepoles, to the bushes, and to whatever wreckage the waters brought along.

The best laid schemes o' *muskrats too* Gang aft a-gley.

But ganging a-gley is not the interesting thing, not the point with my muskrats: it is rather that my muskrats, and the mice that Burns ploughed up, the birds and the bees, and even the very trees of the forest, have foresight. They all look ahead and provide against the coming cold. That a mouse, or a muskrat, or even a bee, should occasionally prove foresight to be vain, only shows that the life of the fields is very human. Such foresight, however, oftener proves entirely adequate for the winter, dire as some of the emergencies are sure to be.

The north wind doth blow,
And we shall have snow,
And what will Robin do then,
Poor thing?

And what will Muskrat do? and Chipmunk? and Whitefoot? and little Chickadee? poor things! Never fear. Robin has heard the trumpets of the north wind and is retreating leisurely toward the south, wise thing! Muskrat is building a warm winter lodge; Chipmunk has already dug his but and ben, and so far down under the stone wall that a month of zeros could not break in; Whitefoot, the woodmouse, has stored the hollow poplar stub full of acorns, and has turned Robin's deserted nest, near by, into a cosy house; and Chickadee, dear thing, Nature herself looks after him. There are plenty of provisions for the hunting, and a big piece of suet on my lilac bush. His clothes are warm, and he will hide his head under his wing in the elm-tree hole when the north wind doth blow, and never mind the weather.

I shall not mind it either, not so much, anyway, on account of Chickadee. He lends me a deal of support. So do Chipmunk, Whitefoot, and Muskrat.

This lodge of my muskrats in the meadow makes a difference, I am sure, of at least ten degrees in the mean temperature of my winter. How can the out-of-doors freeze entirely up with such a house as this at the middle of it? For in this house is life, warm life,—and fire. On the coldest day I can look out over the bleak white waste to where the house shows, a tiny mound in the snow, and I can see the fire burn, just as I can see and feel the glow when I watch the slender blue wraith rise into the still air from the chimney of the old farmhouse along the road below. For I share in the life of both houses; and not less in the life of the mud house of the meadow, because, instead of Swedes, they are muskrats who live there. I can share the existence of a muskrat? Easily. I like to curl up with the three or four of them in that mud house and there spend the worst days of the winter. My own big house here on the hilltop is sometimes cold. And the wind! If sometimes I could only drive the insistent winter wind from the house corners! But down in the meadow the house has no corners: the mud walls are thick, so thick and round that the shrieking wind sweeps past unheard, and all unheeded the cold creeps over and over the thatch, then crawls back and stiffens upon the meadow.

The doors of our house in the meadow swing open the winter through. Just outside the doors stand our stacks of fresh calamus roots, and iris, and arum. The roof of the universe has settled close and hard upon us,—a sheet of ice extending from the ridge of the house far out to the shores of the meadow. The winter is all above the roof—outside. It blows and snows and freezes out there. In here, beneath the ice-roof, the roots of the sedges are pink and tender; our roads are all open and they run every way, over all the rich, rooty meadow.

The muskrats are building. Winter is coming. The muskrats are making preparations, but not they alone. The preparation for hard weather is to be seen everywhere, and it has been going on ever since the first flocking of the swallows back in July. Up to that time the season still seemed young; no one thought of harvest, of winter;—when there upon the telegraph wires one day were the swallows, and work against the winter had commenced.

The great migratory movements of the birds, mysterious in some of their courses as the currents of the sea, were in the beginning, and are still, for the most part, mere shifts to escape the cold. Why in the spring these same birds should leave the southern lands of plenty and travel back to the hungrier north to nest, is not easily explained. Perhaps it is the home instinct that draws them back; for home to birds (and men) is the land of the nest. However, it is very certain that among the autumn migrants there would be at once a great falling off should there come a series of warm open winters with abundance of food.

Bad as the weather is, there are a few of the seed-eating birds, like the quail, and some of the insect-eaters, like the chickadee, who are so well provided for that they can stay and survive the winter. But the great majority of the birds, because they have no storehouse nor barn, must take wing and fly away from the lean and hungry cold.

And I am glad to see them go. The thrilling honk of the flying wild geese out of the November sky tells me that the hollow forests and closing bays of the vast desolate north are empty now, except for the few creatures that find food and shelter in the snow. The wild geese pass, and I hear behind them the clang of the arctic gates, the boom of the bolt—then

the long frozen silence. Yet it is not for long. Soon the bar will slip back, the gates will swing wide, and the wild geese will come honking over, swift to the greening marshes of the arctic bays once more.

Here in my own small woods and marshes there is much getting ready, much comforting assurance that Nature is quite equal to herself, that winter is not approaching unawares. There will be great lack, no doubt, before there is plenty again; there will be suffering and death. But what with the migrating, the strange deep sleeping, the building and harvesting, there will be also much comfortable, much joyous and sociable living.

Long before the muskrats began to build, even before the swallows commenced to flock, my chipmunks started their winter stores. I don't know which began his work first, which kept harder at it, chipmunk or the provident ant. The ant has come by a reputation for thrift, which, though entirely deserved, is still not the exceptional virtue it is made to seem. Chipmunk is just as thrifty. So is the busy bee. It is the thought of approaching winter that keeps the bee busy far beyond her summer needs. Much of her labor is entirely for the winter. By the first of August she has filled the brood chamber with honey—forty pounds of it, enough for the hatching bees and for the whole colony until the willows tassel again. But who knows what the winter may be? How cold and long drawn out into the coming May? So the harvesting is pushed with vigor on to the flowering of the last autumn asters—on until fifty, a hundred, or even three hundred pounds of surplus honey are sealed in the combs, and the colony is safe should the sun not shine again for a year and a day.

But here is Nature, in these extra pounds of honey, making preparation for me, incapable drone that I am. I could not make a drop of honey from a whole forest of linden bloom. Yet I must live, so I give the bees a bigger gum log than they need; I build them greater barns; and when the harvest is all in, this extra store I make my own. I too with the others am getting ready for the cold.

It is well that I am. The last of the asters have long since gone; so have the witch-hazels. All is quiet about the hives. The bees have formed into their warm winter clusters upon the combs, and except "when come the calm, mild days," they will fly no more until March or April. I will contract their entrances,—put on their storm-doors. And now there is little else that I can do but put on my own.

The whole of my out-of-doors is a great hive, stored and sealed for the winter, its swarming life close-clustered, and covering in its centre, as coals in the ashes, the warm life-fires of summer.

I stand along the edge of the hillside here and look down the length of its frozen slope. The brown leaves have drifted into the entrances, as if every burrow were forsaken; sand and sticks have washed in, too, littering and choking the doorways.

There is no sign of life. A stranger would find it hard to believe that my whole drove of forty-six ground hogs (woodchucks) are gently snoring at the bottoms of these old uninteresting holes. Yet here they are, and quite out of danger, sleeping the sleep of the furry, the fat, and the forgetful.

The woodchuck's is a curious shift, a case of Nature outdoing herself. Winter spreads far and fast, and Woodchuck, in order to keep ahead out of danger, would need wings. But he wasn't given any. Must he perish then? Winter spreads far, but does not go deep—down only about four feet; and Woodchuck, if he cannot escape overland, can, perhaps, *under*land. So down

he goes *through* the winter, down into a mild and even temperature, five long feet away—but as far away from the snow and cold as Bobolink among the reeds of the distant Orinoco.

Indeed, Woodchuck's is a farther journey and even more wonderful than Bobolink's, for these five feet carry him beyond the bounds of time and space into the mysterious realm of sleep, of suspended life, to the very gates of death. That he will return with Bobolink, that he will come up alive with the spring out of this dark way, is very strange.

For he went in most meagrely prepared. He took nothing with him, apparently. The muskrat built him a house, and under the spreading ice turned all the meadow into a well-stocked cellar. The beaver built a dam, cut and anchored under water a plenty of green sticks near his lodge, so that he too would be under cover when the ice formed, and have an abundance of tender bark at hand. Chipmunk spent half of his summer laying up food near his underground nest. But Woodchuck simply digged him a hole, a grave, then ate until no particle more of fat could be got into his baggy hide, and then crawled into his tomb, gave up the ghost, and waited the resurrection of the spring.

This is his shift! This is the length to which he goes, because he has no wings, and because he cannot cut, cure, and mow away in the depths of the stony hillside, enough clover hay to last him over the winter. The beaver cans his fresh food in cold water; the chipmunk selects long-keeping things and buries them; the woodchuck makes of himself a silo, eats all his winter hay in the summer while it is green, turns it at once into a surplus of himself, then buries that self, feeds upon it, and sleeps—and lives!

The north wind doth blow, And we shall have snow.

but what good reason is there for our being daunted at the prospect? Robin and all the others are well prepared. Even the wingless frog, who is also lacking in fur and feathers and fat, even he has no care at the sound of the cold winds. Nature provides for him too, in her way, which is neither the way for the robin, the muskrat, nor the woodchuck. He survives, and all he has to do about it is to dig into the mud at the bottom of the ditch. This looks at first like the journey Woodchuck takes. But it is really a longer, stranger journey than Woodchuck's, for it takes the frog far beyond the realms of mere sleep, on into the cold, black land where no one can tell the quick from the dead.

The frost may or may not reach him here in the ooze. No matter. If the cold works down and freezes him into the mud, he never knows. But he will thaw out as good as new; he will sing again for joy and love as soon as his heart warms up enough to beat.

I have seen frogs frozen into the middle of solid lumps of ice in the laboratory. Drop the lump on the floor, and the frog would break out like a fragment of the ice itself. And this has happened more than once to the same frog without causing him the least apparent suffering or inconvenience. He would come to, and croak, and look as wise as ever.

## The north wind *may* blow,

but the muskrats are building; and it is by no means a cheerless prospect, this wood-and-meadow world of mine in the gray November light. The frost will not fall to-night as falls the plague on men; the brightness of the summer is gone, yet this chill gloom is not the sombre shadow of a pall. Nothing is dying in the fields: the grass-blades are wilting, the old leaves are falling, but no square foot of greensward will the winter kill, nor a single tree perhaps in my woodlot. There will be no less of life next April because of this winter, unless, perchance, conditions altogether exceptional starve some of the winter birds. These suffer most; yet as the seasons go, life even for the winter birds is comfortable and abundant.

The fence-rows and old pastures are full of berries that will keep the fires burning in the quail and partridge during the bitterest weather. Last February, however, I came upon two partridges in the snow, dead of hunger and cold. It was after an extremely long severe spell. But this was not all. These two birds since fall had been feeding regularly in the dried fodder corn that stood shocked over the field. One day all the corn was carted away. The birds found their supply of food suddenly cut off, and, unused to foraging the fence-rows and tangles for wild seeds, they seem to have given up the struggle at once, although within easy reach of plenty.

Hardly a minute's flight away was a great thicket of dwarf sumac covered with berries; there were bayberries, rose hips, green brier, bittersweet, black alder, and checkerberries—hill-sides of the latter—that they might have found. These were hard fare, doubtless, after an unstinted supply of sweet corn; but still they were plentiful, and would have been sufficient had the birds made use of them.

The smaller birds of the winter, like the tree sparrow and junco, feed upon the weeds and grasses that ripen unmolested along the roadsides and waste places. A mixed flock of these small birds lived several days last winter upon the seeds of

the ragweed in my mowing. The weeds came up in the early fall after the field was laid down to clover and timothy. They threatened to choke out the grass. I looked at them, rising shoulder-high and seedy over the greening field, and thought with dismay of how they would cover it by the next fall. After a time the snow came, a foot and a half of it, till only the tops of the seedy ragweeds showed above the level white; then the juncos, goldfinches, and tree sparrows came, and there was a five-day shucking of ragweed-seed in the mowing, and five days of life and plenty.

Then I looked and thought again—that, perhaps, into the original divine scheme of things were put even ragweeds. But then, perhaps, there was no original divine scheme of things. I don't know. As I watch the changing seasons, however, across the changeless years, I seem to find a scheme, a plan, a purpose, and there are weeds and winters in it, and it seems divine.

The muskrats are building; the last of the migrating geese have gone over; the wild mice have harvested their acorns; the bees have clustered; the woodchucks are asleep; and the sap in the big hickory by the side of the house has crept down out of reach of the fingers of the frost. I will put on the stormdoors and the double windows. Even now the logs are blazing cheerily on the wide, warm hearth.