

there would be silence, and a small dark object would dart past through the dusk down amid the shrubbery. Then, at silent intervals, a single strange and rather startling note—a loud, sharp and somewhat nasal *speat* or *spneat*—which sounded as if delivered with a spiteful directness at some offensive object.

I had no means of estimating the height of the bird's ascent, but in the evening dusk it went up almost out of sight.

This performance I have heard at midnight on the bird's arrival in spring. It is also said to take place in the early morning. Is it ever indulged in the autumn?

WINTER BIRDS OF PRINCE EDWARD ISLAND.

BY FRANCIS BAIN.

PRINCE Edward Island, situated in the southern basin of the Gulf of St. Lawrence, possesses in some respects a climate peculiarly its own. Sheltered from the chilling breath of the Labrador Current by the elevated primary ridges of Nova Scotia and Cape Breton, it enjoys a summer season with a more elevated temperature, a purer atmosphere, a clearer sky, and more abounding sunshine on its rich, verdure-clad swells, than are to be found on the immediate Atlantic seaboard.

In winter, on the contrary, the shallow waters of the Gulf are soon covered with ice, sometimes extending unbroken as far as the Magdalens, and the temperature of the season is uniformly severe. Snow lies deep on the ground, and the rivers and bays for four months are firmly locked in ice. The atmosphere, however, is pure and bracing, and free from the damp chilling mists of the ocean seaboard.

These conditions have an influence on our winter avifauna. Water birds which frequent bays and mouths of rivers are completely driven away. Only a few deep-sea fowl stay to glean a hardy living where the blue waves break among the parting floes. The depth of snow is unfavorable to members of the Finch tribe which, like the Tree Sparrow, seek their living from seeds on the ground. But the splendid deciduous forests which flourish

on the fertile New Red Sandstone soil, afford food to some of the tribe during the inclement season, which are not known to winter in the neighboring Provinces.

The Purple Finch frequently winters here. He does not frequent the abodes of men, but the lonely forest, where the domed summits of the great yellow birches, *Betula excelsa*, are thick-laden with strobiles, is his home. The stay-at-homes never see him. But on a keen, bright morning, when the gilded twigs are surging aloft in the frigid blue, from their loftiest tops rings out the glad, sweet carol to startle and charm the adventurous woodman.

Strange that the occurrence of a roving song bird in a district should be connected with the distribution of the ancient geological formations. But it is so. The soils of the New Red Sandstone formation sustain a class of plants affording more suitable food for the forest choresters than is to be found in the Primary districts. The Connecticut Valley is well known as the winter home of many of our song birds. Western Nova Scotia has features of bird life distinct from the surrounding districts. And Prince Edward Island affords an oasis for the wintering of certain Fringillidæ in the midst of less fertile Primary lands.

The highly cultivated character of the country, with numerous stock yards and farmsteads, favors the wintering of birds. The Song Sparrow has been supposed not to winter north of Massachusetts. But among the stock yards of Prince Edward Island we often find the jovial songster tuning his pipe in midwinter as gaily as if he was in his old New England homestead.

In the latter part of October the Snow Buntings come here. It is worthy of remark that they appear in New Brunswick considerably earlier, indicating that they arrive from the North by that way instead of by direct flight across the Gulf. At first they do not frequent the cultivated districts, but may be seen foraging along the shores and in deserted grainfields. In December, when snow and ice bury up their food in the wilds, they come about the grain stacks and farm yards in large, white flocks, whirling, like snow drifts, in the keen winter air. They are very fond of oats, for which this Island is famous. They always shell the grain before devouring it, using only the farinaceous kernel.

It is rare to hear Snow Buntings sing, but on a bright morning in March, ensconced in a sheltered nook, I have heard them sing

a low, sweet song, resembling the Linnet's in general outline, but much less strong, full, and rapid.

The Redpolls arrive the first week in November, when the ripened and gilded cloak is just reft from the forest boughs. Then we see little of them, but will occasionally hear their gentle chitter as they pass back to the groves of great yellow birches, on the seeds of which they principally feed. Free and happy is their life in the wilderness now, as you may witness if you watch a group of them whispering and calling sportively as they rifle the seeds from the crowded strobiles of a giant *excelsa*. But when winter fully comes they are driven from the forest's summit, evidently suffering from the cold. They then crowd close in shivering flocks of fifty or more, and come and feed on hay stacks and on the seeds of goosefoot, polygonum, and other weeds about the gardens. I have seen the hunger-driven flock settle on loads of hay exposed for sale in the city market. Yellow birches are our only deciduous forest trees which carry a quantity of seeds through the winter, and it is this circumstance which makes them so important for the support of the winter flocks.

The Goldfinches leave the last of October, the last individuals evidently suffering during cold storms, and their place in winter is taken by a few wild, bounding Pine Goldfinches, whose slim voices sound sweet notes round the dark spires of ancient spruces where the White-winged Crossbills feed. We sometimes have large flocks of Red Crossbills, but their coming is very uncertain. They were in force in December, 1877, and in January, 1884. Spruce seeds were abundant both these seasons.

Pine Grosbeaks come in November, but their numbers are uncertain. When coniferous seeds are plenty, flocks of fifty bright-plumed beauties, with their gentle, unsuspecting, wilderness-ways and soft voices, come frequently about the spruce groves. But when these are scarce, as they are this season, it is rare to hear the call of a solitary wanderer in the most unfrequented forest scene. But Grosbeaks are not dependent alone on a precarious supply of cone-borne seeds for a living. They feed much on the buds of the trees, and will even go to the shores for a meal, like Buntings and Robins.

In midwinter they retire to the shelter of the deep, coniferous forests. On a sunny morning, when the fir drapery flashes with crystals, the group of forest wayfarers may be found in their

sheltered home, keeping each other company with quiet flocking calls, a male constantly breaking into a delightful Linnet-like song, with some peculiarly rich flute-notes of his own. In such circumstances they do not mount the blast-swept summits of the trees but content themselves with foraging on the lower sheltered boughs.

All these winter visitants, except Snow Buntings, are irregular and uncertain in their appearance here. During mild seasons we have them in numbers, but cold and stormy winters drive them to districts where food is more easily obtained. But Grosbeaks and Crossbills are never in numbers unless coniferous seeds are abundant.

But few Tree Sparrows winter here, although they are abundant in November. Black Snowbirds are almost equally rare, and it is only now and then that Robin favors us with his presence during the dreary months. One or two will sometimes stay where the berries of the mountain ash (*Sorbus americana*) are plenty.

Our only permanent residents really abundant in the winter months are the little Black-capped and Hudsonian Chickadees. We have rarely any Shrikes, and the Chickadees' mode of nesting secures them against the larger birds of prey, and, being the only insectivorous tribes of consequence during winter, they have an ample supply of food, so that they enjoy a regular paradise here among the groves of gray lichened firs. Everywhere you turn, even in the most severe weather, a merry *chick, pee dee* greets you, and a little black cap bobs from among the snow-laden boughs.

The Hudsonian Chickadee is less pert and obtrusive than its black-capped friend. Like a coy maiden in sober brown it keeps to the retirement of the thickets, attracting little attention with its soft, whispered notes. I think that both species, though plenty at all times, are less abundant in midwinter.

The Gold-crested Kinglet, and the Red-bellied and White-bellied Nuthatches are permanent residents, though by no means abundant. Besides the Downy and Hairy Woodpeckers, and a rare Black-backed Woodpecker, the Brown Creeper may sometimes be seen in midwinter. Blue Jays are numerous, but Canadian Jays uncommon. During severe winters Crows get very scarce, yet a few will brave the most Arctic temperature while grain stacks are to be pilfered from.

Goshawks are resident here and the terror of the desolate winter forest. Often we see the blood-stained snow and the scattered feathers of a Jay, or the fur of a hare, where this marauder has had his meal.

Among Owls, the Barred and Horned Owls are the most common. The Snowy Owl visits us in winter; and the curious bell-like tones of the little Acadian Owl form the first voice of spring in the wintry woodlands.

After the ice closes round the Island in January we see but few water fowl. Yet, in mild winters, occasional Golden eyes, Oldsquaws, Mergansers, or Eider Ducks, may be observed. Herring and Black-backed Gulls come in during softer spells and survey the ice-locked bosoms of the harbors for some quieter opening to fish in. But the Terns and the great flocks of Bonaparte Gulls, that all summer long drifted, like snow-clouds, round the blue bays, had all left in October, when these were first silvered with the breath of December.

The Kittiwake is the true bird of the wintery wave. In the narrows of the harbor, where the contracted current is swiftest, there is often a restricted opening in the ice, even in midwinter. When the deep waters of the Gulf are frozen solid as far as the eye can see from the most elevated hilltop, the Kittiwakes will come in and gather round this little spot of blue, circling and dipping and rending the keen air with their harsh *ke-a, ke-o*; reminding us, as we watch them amid nature's fiercest aspect, of the amazing possibilities of animate being.

It will be observed that our northern visitors are about the same as appear in the neighboring Provinces of the mainland. It is otherwise with our summer visitants from the South. A number of birds of more southern habit, as the Catbird, Bluebird, Scar, let Tanager, Rose-breasted Grosbeak, Indigo Bunting, Bobolink-Red-winged Blackbird, Meadow Lark, Baltimore Oriole, and Whip-poor-will, which visit New Brunswick and Nova Scotia, are never seen on Prince Edward Island. There is no reason to be found in the existing state of things why some of these birds should not stay over here and enjoy our delightful summer season, which is superior to that of the Atlantic seaboard. The reason is to be found in the fact that the Island was separated from the mainland in the earlier days of the modern period, when the climate was cooler than at present, and the more southern

tribes of birds had not yet distributed themselves in these northern Provinces. Since their distribution in these parts the Northumberland Straits have proved a barrier to their movements which they have not yet learned to overcome.

In studying the botany of the Maritime Provinces we find that the same thing exists in regard to the plants of Prince Edward Island. Many plants of more southern habit, common to the Provinces of the mainland, have been excluded from the Island by its early separation from the continent.

In the birds the fact shows the exceeding tardiness with which they adopt new lines of migration, and, consequently, the tenacity with which they adhere to established habits in their migrations and distribution.

It also reveals something of the great northward movement of the feathered tribes which must have followed the recession of the cold of the Glacial Period, pointing out those which were the last to arrive within the limits of these Provinces.

NOTES ON MANITOBAN BIRDS.

BY ERNEST E. T. SETON.

THE Peregrine Falcon (*Falco communis*) is a regular summer resident of this country, although, for some reason as yet unknown, it is not often seen on the Big Plain until August. I have had a number of good opportunities of studying the bird. It has several times visited the poultry-yard. On four occasions I have known the bold pirate to continue dashing round the barns whilst shot after shot was fired at him; on one of these he flew off after the third shot, probably hurt. On another occasion he was killed at the third shot, after killing his victim. On a third the fourth shot drove him off, and on yet another the fifth shot brought the bold bird to the ground. This last was a young male; his injuries were very slight, and so he was kept alive and sent to me. I kept him three weeks in captivity, and had a good opportunity of making notes. The vocal sounds uttered by this bird were three in number; a hissing menace, like that