- (3) Avoid fungi having a milky juice, unless the milk is reddish.
- (4) Avoid fungi in which the cap is thin and very brittle, and in which the gills are nearly all of equal length, especially if the cap is bright-colored.
- (5) Avoid all tube-bearing fungi in which the flesh changes color when cut or broken, or where the mouths of the tubes are reddish and in the case of other tube-bearing fungi experiment with caution.
- 6) Avoid fungi having clay-colored gills and a spider web or woolly ring on the stalk.
- (7) In case of doubt discard the plant.

MUSHROOMS WHICH MAY BE GATHERED.

The foregoing rules are given as a warning against comparatively few plants; the edible mushrooms are more numerous and those that may be gathered are as follows:—

All the puff balls and coral fungi; any of the hedge hog or spiny fungi and the morels; also any mushroom whose gills become brown; mushrooms having reddish or orange milk; all mushrooms that melt down into an inky liquid when mature; many mushrooms with white gills, but care must be taken to be absolutely certain that they have no poison cup or volva.

LEARN TO KNOW THE MUSHROOMS.

Before attempting to eat a large number of mushrooms one should learn to know them by their individual characters, the same as he would learn to know berries or other wild fruit. The best way to do this is to secure a book describing the various kinds and then gather the different ones and compare them with the descriptions and illustrations. Another way is to go out into the woods and fields with someone who knows the mushrooms and have the different kinds, both poisonous and edible, pointed out and the characters explained.

Still another way to learn the mushrooms is as follows. Carefully dig up the mushrooms so that all the fruit body including the very base of the stem is present. Wrap in dry paper, taking care not to crush the specimen, attach a note describing where the plant grew, i.e. fields, woods or road side; whether it grows in the ground, or wood and the color of the fresh specimen. The specimen should then be enclosed in a strong cardboard carton or wooden box and sent in to the Department of Botany, Ontario Agricultural College, Guelph, Ont.

If the specimen is carefully packed, it will arrive in fair condition and the name and properties of the mushroom will be sent to you by the next mail.

BOOKS THAT DESCRIBE MUSHROOMS.

McIlvaine, Chas.—One Thousand American Fungi.

Hard, M. E.—Mushrooms, Edible and Otherwise.

Atkinson, Geo. G.—Mushrooms, Edible, Poisonous, etc.

Marshall, Nina L.—The Mushroom Book.

Gibson, Hamilton—Our Edible Fungi.

Murrill, W. A.—Edible and Poisonous Mushrooms.

Stone, R. E.—Mushrooms of Ontario: Ontario Department of Agriculture, Bulletin No. 263.

NOTES ON THE SUMMER BIRDS OF THE GASPE PENINSULA, PROVINCE OF QUEBEC.

BY CHARLES W. TOWNSEND, M.D., BOSTON.

In planning a trip to any spot in North America, one naturally turns to the indices of the Auk and the Bulletin of the Nuttall Ornithological Club in order to learn what ornithological work has been done in that region and what birds one may expect to find. As far as I can discover there has been no list published and no mention made of the birds of the Gaspé Peninsula in these journals. The only notes of this region published by ornithologists elsewhere that I can find are by Mr. Wm. Brewster, ¹; Mr. Frank M. Chapman² and Mr. P. A. Taverner³. In none of these notes is there any attempt to list the birds of the region, and it therefore seems worth while to present the following preliminary list. The gen-

erosity of Mr. Taverner in putting his notes, made chiefly at Percé in the summers of 1914 and 1915, at my disposal has made this list of much greater value than if my own notes alone were to be drawn upon.

I feel sure that Mr. Taverner's work in these regions has had the greatest influence in determining

⁽¹⁾ Notes on the birds observed during a summer cruise in the Gulf of St. Lawrence. Proceedings, Boston Society of Natural History, Vol. 22, pp. 364, 412; 1883.

⁽²⁾ Bird studies with a camera, New York, 1900, pp. 128-145. Gannets of Bonaventure, Bird Lore, Vol. 1, 1899, p. 71.

⁽³⁾ The Gannets of Bonaventure Island, The Ottawa Naturalist, Vol. 32, 1918, pp. 21-26.

the Provincial Government to make Percé Rock, Bonaventure Island and Bird Rock near the Magdalens, bird reservations. This splendid piece of work was accomplished in 1918 and the wonderful colonies in these three localities are now protected for all time. These reservations are of great value and interest not only to ornithologists but to the general public and they will become more and more known and visited. Both Percé Rock and Bonaventure Cliffs have a beauty and grandeur of size and form and coloring that is unequalled along our Atlantic Coast, but their wonderful charm is increased manyfold by the variety and abundance of the bird life that adorns them. The Provincial Government, which has made them reservations, together with Bird Rock off the Magdalens, is to be greatly congratulated, and it is to be hoped that this is but the beginning of their work and that other reservations may be added elsewhere, especially along the Labrador Coast where they are so much needed. The splendid work of the Audubon Society in the United States may well be taken as a model.

The Gaspé Peninsula projects like a lower lip at the mouth of the St. Lawrence River into the Gulf of St. Lawrence. It lies north of New Brunswick from which it is separated by the Bay of Chaleur and the Restigouche River. A single track railway runs along the southern shore nearly to the end of the peninsula at Gaspé, and for a few miles along the northern shore as far as Matan. A carriage road follows the shore of the whole peninsula and there are a few short side roads extending but a mile or two into the interior which is an uninhabited region of forest and mountains. Villages inhabited for the most part by fishermen of French and Channel Island descent, are scattered along the coast.

The geology of the Gaspé Peninsula is most interesting and complicated. At Percé, for example, are outcrops of Cambrian, Silurian and Devonian limestones with strata almost vertical, overlaid in places with a great mantle of horizontal red sandstones and conglomerates. The mountains near the north coast are of gray Silurian limestones and serpentines. At the places visited there was no evidence of general glaciation, but only of slight and local glaciation. There are few lakes and the streams are deeply cut.

The vegetation is of the Hudsonian type,—the forest is largely of spruce,—black and white, and balsam fir. Arbor vitae, canoe birches and aspens are common. A few white pines, larches, yellow birches, mountain ashes and sugar maples are to be seen. The avifauna is largely Canadian with a number of Hudsonian and also of Transition forms.

The itinerary of my trip was as follows:— Crossing on July 5th, 1919 from Campbellton,

New Brunswick, where the Restigouche River meets the Bay of Chaleur, I spent two days at Cross Point in the Township of Mann, and had an opportunity to observe the birds in the woods and fields there. July 7th was occupied in travelling the 150 miles to Cape Cove, from which I was taken by automobile nine miles to Percé. The railroad journey was such a leisurely one, with so many breakdowns of the engine that I was able to see something of the birds and flowers of the region. At Percé, a quaint little French fishing village with beautiful setting of rock, cliff and mountain, I stayed until August 6th and explored the neighborhood including Bonaventure Island, Corner of the Beach and Barachois. On the latter date I went by motor boat some twenty-eight miles to Grande Grève near the eastermost tip of the Forillon, the narrow peninsula that stretches between Gaspé Bay and the Gulf of St. Lawrence. Here I stayed until August 25th and explored the neighborhood including a walking trip through Cape Rosier and Griffin Cove to Fox River, and back through the "portage" to Peninsula, and along the southern coast of the Forillon to Grand Grève. A day was spent in the neighborhood of Douglastown on the southern side of Gaspé Bay and another at Gaspé and on the lower waters of the York River.

Before presenting the annotated list I would say a few words about the two new bird reservations at Percé.

Percé Rock is an isolated mass of nearly vertical strata of Devonian limestone some 1500 feet long, and 288 feet high at its highest point and 300 feet wide at its greatest breadth. It is connected with the shore only at low tides by a bar two or three hundred yards long. At the outer end stands a smaller isolated mass or pinacle. The main rock is pierced by an arch with a span of about eighty feet and from this the rock receives its name. Percé Rock is an object of exceeding beauty not only on account of its striking shape and great size, but also on account of the brilliancy and variety of its colouring. Its beauty and interest are greatly enhanced by its bird inhabitants which throng its inaccessible summit and form a circling cloud. Breeding Kittiwakes to the number of about 400, occupy the shelves and niches of the northern face over the Double-crested Cormorants, a thousand or more and Herring Gulls to the number of 2,000 breed on the flat surface of the summit. A few Black Guillemots nest in some of the holes and corners on the sides of the rock.

I was enabled to make a fairly intimate study of the home life of these birds of the summit through the kindness of Mrs. Frederick James, whose late husband was the beloved artist of the little village of Percé. At her invitation I spent many interesting hours looking through her powerful telescope from the piazza of her house on Cape Cannon.

Bonaventure Island, is three miles distant from Percé and is of still greater value and importance. It is about three miles long and a mile and a half broad. The outer side faces the sea in sheer cliffs of horizontal strata of red conglomerate and sandstone four and five hundred feet high. On the cliffs and niches and along the shelves, tier above tier nest a very large and notable collection of water birds. The most important of these in size and numbers are the Gannets which are most numerous towards the southern end. Mr. Taverner has estimated their numbers to be 8,000. Herring Gulls breed on the cliffs to the number of several hundreds if not thousands. A smaller number of Kittiwakes nest near the northern end of this outer side of the island on vertical cliffs that possess but few and small niches. Murres and Razor-billed Auks, perhaps 500 pairs of the former and 100 of the latter also lay their eggs on the cliffs. A small number of Puffins and a few Black Guillemots are also breeders there, while in the holes and crevices on top of the cliffs Leache's Petrels nest. No Cormorants breed here but visitors from Percé Rock may often be seen.

I visited Bonaventure Island three times, passing in a motor boat close under the cliffs and camping and spending two days on each of the first two occasions; the last time I spent only the day. It is possible to take up a position on the edge of the cliffs where one can sweep with a glass, tier on tier of nesting Gannets and be within thirty feet of the nearest. As they fly by they are almost within arm's reach. With an eight power prismatic binocular and a thirty power telescope I spent many hours watching these birds. With the expert aid of Willie Duval, descendant of of Captain Peter John Duval the original owner of the island, I was able to climb a hundred feet or more up the cliffs from below and crawl along a ledge close to Puffins and Murres. Mr. Taverner4 has vividly described such an adventure.

ANNOTATED LIST.

1. Gavia immer. Loon.

One flying by Bonaventure Island. Mr. Taverner reported a few.

2. Fratercula arctica arctica. Puffin.

Thirty or forty pairs of these birds breed in the deep clefts or holes in the cliffs of Bonaventure Island, mostly at the northern end of the eastern cliffs.

3. Cepphus grylle. Black Guillemot. Common and very tame all along the rock shores, breeding in holes and in the clefts be4. Uria troille troille. Murre.

About five hundred pairs breed at Bonaventure Island. I met with them at other places on the coast, but do not know whether they breed away from the island or not. Several times I saw Gannets that had alighted in the same niche in the cliffs drive the Murres out. Mr. Taverner reports seeing a number of ringvia.

5. Alca torda. Razor-billed Auk.

Perhaps a hundred pairs breed at Bonaventure Island. They were to be seen singly, sometimes among the Gannets and in companies of two or three often with Murres in clefts or ledges smaller than those frequented by the Gannets. Flocks of ten or fifteen Murres on the water generally included one or two Razorbilled Auks.

- Rissa tridactyla tridactyla. Kittiwake.
 About 400 breed on the northern face of Percé Rock near the arch and about as many on the cliffs of Bonaventure Island.
- Larus marinus. Great Black-backed Gull.
 A few seen in July. More common in August.
 No evidence of breeding.
- 8. Larus argentatus. Herring Gull.

Abundant. Breeds on the top of Percé Rock to the number of about 2,000, on the cliffs of Bonaventure Island and the Murailles at Percé, on the sea cliffs below Mt. St. Albans and on the Bon Ami cliffs near Grand Grève and doubtless on many other cliffs of the Peninsula.

Cod fishing is the chief industry of the coast and the fish are cleaned and split at tables on the beaches or on fishing stages. The heads and entrails are left where they fall and are eagerly sought by Herring Gulls, who gather when the fish are brought in, and do important work as scavengers. They are very tame and may often be seen searching for scraps on empty boats riding at anchor. I have counted as many as 30 on one boat. Until the young are on the wing none but full plumaged adults are to be seen; no birds with black tips to their tails were found in these flocks. The young appeared in the air the last week in July.

A cloud of Herring Gulls, was constantly flying about Percé Rock and their cries were always to be heard by day and frequently by night. The bugle-like courtship song frequently resounded and fighting among the adults on the Rock was frequent.

(To be continued)

tween the strata of the rocks. Young were first seen in the water August 1st.

⁽⁴⁾ Ottawa Naturalist, XXXII, 21-26.



Townsend, Charles Wendell. 1920. "Notes on the Summer Birds of Gaspe Peninsula, Quebec." *The Canadian field-naturalist* 34(4), 78–80. https://doi.org/10.5962/p.337960.

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