

adding that there must be others like them found elsewhere, as nature did not make a distinct species for one little locality; this last letter cannot now be found.

DEAR SIR: I duly received the two specimens of trout which you have forwarded to me. They reached Cambridge in a perfect state of preservation, and I was not a little surprised on examining them to find that they belonged to an undescribed species. I have carefully compared them to-day with all the trout occurring in the United States which I have thus far been able to secure, from Lake Superior to Labrador, and as far south as they reach, and I find them to differ specifically from all. As the specimens are all three females, I should be much obliged if you would secure some males for me. Should so-called lake herring, or whitefish, as they are also called, be found in your waters, which I suppose to be the case, I would be much obliged if you could secure some of these for me.

Allow me to close by returning my best thanks for the specimens you have sent me, which I have at once put up in my museum.—L. AGASSIZ.

CAMBRIDGE, MASS., *October 12.*

THE CRISTINE LAKE TROUT.

I have examined the trout recently received from Cristine Lake, New Hampshire, whence they were sent by Mr. S. M. Crawford, and find them to be *Salvelinus fontinalis* (Mitch.) Gill & Jor.

The proportions and other specific characters are the same as in the Monadnock Lake trout recently reported upon, but the coloration is different. The ground color of the sides and upper parts is a rich purple, the sides are profusely ornamented with crimson spots, and the pectorals, ventrals, and caudal, even now, are largely suffused with vermilion. Another peculiarity of these trout is their elegant shape.

WASHINGTON, D. C., *April 8, 1884.*

155.—SNAKES DESTRUCTIVE TO CARP.

By RUD. HESSEL.

[From letters to Prof. S. F. Baird.]

During the past few days a great many snakes have appeared at the ponds, many of which have been killed, as follows: August 4, 16; August 5, 32; August 6, 52; August 7, 32; August 8, 39; August 9, 14; August 10, 15; August 11, 21. This makes 221 snakes killed in one week.

In the smaller snakes I found from 9 to 15 young carp, and in the larger ones sometimes over 25, besides undigested skeletons of fish. They contained no frogs or tadpoles. We can, therefore, see that one

medium-sized snake devours 40 young carp per day, for they digest very quickly. That would make for 225 snakes 9,000 carp per day, and 63,000 per week. That number is correct, sir! and it shows that snakes are more injurious than cranes, herons, and other birds.

I kill them by shooting, oftentimes seeing only a small part of the head in the water, or hiding beneath water-plants. I have had opportunity to see how they catch the young fish, and how they devour them. An old-wall constitutes their best hiding-place. I often shoot them sitting in the cracks of the old wall, the head looking outside, watching the poor little fishes.

UNITED STATES CARP PONDS, *August 12, 1883.*

August 15 and 16, I did not kill any snakes, by reason of the low temperature and rain. On the following days I killed 72: August 17 52; August 18, 7; August 19, 8; August 20, 5.

UNITED STATES CARP PONDS, *August 20, 1883.*

The snakes, so numerous in the ponds for some time past, have almost wholly disappeared. During the past five days I shot only 3, though watching closely for them. Since July 1 we have killed over 900, mostly by shooting.

UNITED STATES CARP PONDS, *August 26, 1883.*

During the past week I killed about 150 snakes in the west pond. To-day I killed 19. All had young carp in their stomachs.

UNITED STATES CARP PONDS, *September 25, 1883.*

#### 156.—WHAT MUSK-RATS SOMETIMES EAT.

By CHARLES CARPENTER.

[From a letter to Prof. S. F. Baird.]

An old trapper, who trapped for years in the marshes of Sandusky Bay, tells me that musk-rats usually live on the roots and tops of water-plants, but in severe winters, when the water freezes deep, they do eat fish.

The winter of 1842 and 1843 I spent on Put-in Bay Island (South Bass Isl.). I trapped and speared a little. It was a severe winter. The shallow water froze to the bottom, and on opening some houses, I found half-eaten fish in them, which, I think, were black bass. In one house I found the remains of two fish of good size.

A few years ago I saw a musk-rat on the ice before my house, and on looking at him with a spy-glass, saw he had a large fresh-water clam which he was trying to open. Mr. S. G. Goodrich in his *Animal Kingdom*, page 483, says, "In winter, when hard pressed, they sometimes devour each other, and when one is wounded the others eat him."

KELLEY'S ISLAND, OHIO, *January 29, 1884.*