

mammals as well as birds are concerned. There would, however, be no more danger of this becoming either a sportsman's magazine or an exponent of sentimentalism than at present.

Purely technical matter would be given second place to life-histories, geographical notes, and field-and-study items, of the same character as those concerning birds alone and now appearing from issue to issue in THE CONDOR.

The auspices under which THE CONDOR is published should remain exactly as they are: the magazine would still be fostered by the Cooper Ornithological Club and would represent the interests of that organization to the highest degree.

Vote by postal card, "yes" or "no", with signature and date. Brief poignant comments are invited. Address before September 1:—J. GRINNELL, *University of California, Berkeley, California.*

DESTRUCTION OF BIRDS AS A RESULT OF VOLCANIC ACTION

[Editorial Note: Reports of the eruptive activity of Mount Lassen naturally arouse our interest as to the possible effects of such phenomena upon the animal life in the vicinity. The following letter indicates vividly how serious such a factor may become. We are indebted to Judge F. W. Henshaw both for calling our attention to this subject and for the privilege of publishing the letter. The authenticity of the account is established beyond doubt.]

Judge F. W. Henshaw,

San Francisco, California;

Dear Sir:

Referring to the conversation I had with you a few days ago, relative to the destruction of game birds in Alaska, resulting from the eruption of Katmai Volcano on June 6, 1912, I am sending you under separate cover the February, 1913, issue of the National Geographic Magazine, which contains a very comprehensive article by Dr. Geo. C. Martin, on the extent of damage caused by this eruption.

Some of the photographs accompanying the magazine article will give you a very vivid idea of the desolation that was caused, and what effect such a deposit as shown in the pictures would have on nesting birds, within the radius of the fall of ashes.

During the period of greatest volcanic activity, from June 6th to June 8th, 1912, birds would frequently drop from the air, and in every case that I witnessed, would be dead when they landed. This shows, I

believe, that the gases had a deadly effect on the mature birds while flying. I was at Kodiak during the eruption, distant about 100 miles from the volcano; so if the gases from the crater had such an effect on birds at that distance, it is safe to say that very few birds on the mainland of Alaska, and within the radius of the disturbance, could have escaped.

On June 9, 1912, I had occasion to make the trip by tug boat from Kodiak to Seward. For a distance of about 120 miles at sea, and until we passed beyond the line shown on the map on page 132 of the National Geographic Magazine, as the limit of the one-quarter inch ash deposit, the sea was literally covered with dead birds, of probably every variety known in that section of Alaska. I dare say, that during the entire progress of the trip, for 120 miles, there was not a time when from 15 to 20 dead birds could not be seen from the deck of the steamer. When one realizes that it would be impossible to distinguish these birds over an area exceeding the size of a pin point on the map, he can probably get some conception of the vast multitudes of birds that must have been destroyed.

Again, the eruption occurred during the nesting season, or when the young birds were too immature to fly. Nearly all the bays and indentations of the coast within the area of disturbance, as shown by the map referred to, are headed by large flat tracts of marshy land, with many small lakes and streams. These places are the natural breeding grounds of many varieties of our game birds, and it is safe to say that millions of these birds were on the nests at the time of the eruption. The country surrounding the large lakes, from Clarke Lake south on the Alaska Peninsula, is also a vast breeding ground, and most of this territory was covered by the deposit of ash.

Possibly the scarcity of mallard ducks during the 1912-13 hunting season in California can be attributed to some extent to this eruption. At any rate, this variety seems to be in greater abundance than any other during the nesting season in Alaska,—or that part of Alaska which was within the limits of the disturbance,—so I believe that the eruption must have affected, to some extent at least, the numbers of these birds that migrated south. [See also article above referred to, pages 179-181.—Ed.]

With kind regards, I am,

Very truly yours,

W. J. ERSKINE.

San Francisco, April 7, 1914.