

site of the old ones, the new nest being composed of the remnants of the several old ones, with some additions. The raven is very persistent and I have known one pair to lay four sets of eggs in one season and would probably have laid a fifth but unfortunately the nest was destroyed.

I have occasionally found them nesting in the steep banks of deep, narrow gulches, but usually they prefer a large gravel cliff in some secluded part of the hills, and in every instance the nests have been lined with sheep's wool gathered from the numerous bands of sheep feeding in the vicinity. I had intended to pay my respects to the ravens this year but have been otherwise engaged. However I procured a handsome set of Duck Hawk $\frac{1}{2}$ from a deserted raven's nest on April 5, 1899, and feel that since I cannot help it, that I should allow my birds a short vacation.



FURTHER COMMUNICATIONS ON BIRD PROTECTION.

"CIRCUMSTANCES ALTER CASES."

To My Fellow Collectors:—

"The science of ornithology demands the collecting of any reasonable number of birds to further its ends, and personally I have taken the lives of birds with as much zeal as any, when the skins were desired for actual use." I believe that I stand on the same ground as that defined by Mr. Barlow in our last BULLETIN. I am also in sympathy with the position taken by Dr. Cones in his editorial in April *Osprey*. To put the matter in my own words, I believe in collecting all the scientific specimens, birds' skins and eggs included, that we may want to use. I believe in series and large series. If, of one species, we can use 100 mammals or 300 fish, we had better take them. If specimens are to be compared, if we can learn anything from them, or if we can pass them on to another who is in need of the material, I believe we are justified in collecting in any quantity to supply that demand. I do not believe in collecting for the milliner or taking birds in nesting timewhen the same plumages may be had before nesting. I have refrained from shooting many birds because I thought they

had nests and I have shot birds when I knew they had eggs or young. "Circumstances alter cases."

In the numerous letters which have appeared in the last six months concerning "bird slaughter" and "egg hogging", there seem to be about three grounds upon which the various authors condemn collecting. It is wrong to kill birds and take their eggs because (1) it is cruel; (2) it is of no use or scientific benefit or (3) it will exterminate the species. If it is cruel to kill wild birds and take their eggs then we had better stop killing and robbing the domestic birds. I do not agree with the Rev. Mr. Henninger that "the *forcing a poor* Flicker to lay 71 eggs in 73 days" is cruel. How many eggs is a *poor* barn-yard fowl forced to lay in a year? Is it not cruel to *force* her to hatch duck's eggs? It is not commonly so considered. The question of cruelty is one which we cannot consider in this connection as it is a matter of personal opinion and not subject to discussion any more than religious dogmas are.

The value of large series of eggs from a single species is largely a matter of personal opinion. For my part I think as much can be learned from 150 eggs of the Red-tailed Hawk as from an egg each of 150 species of birds. In this connection it is hardly worth while to call attention to the indignation of F. H. K. in his review of *Eggs of Native Pennsylvania Birds, Osprey* for November, 1898, where he condemns the collecting of more than ? eggs of a species and of oological abnormalities altogether. The number of sets of a species which you will take must be regulated by yourself and decided without the help of the protectionist. Everyone learns by collecting a few eggs for himself. There is one class of collectors which should certainly be suppressed and they have been well dealt with, in writing, by Mr. Witmer Stone. See *Auk* XVI, p. 55. For the boys who gather eggs as they would pretty shells and the man who strives to possess the largest collection in town, we have no use. Neither can we consider such articles as the one asking "Hast thou named all the birds without a gun"? We don't do it that way on the Pacific Coast. The A. O. U. says it doesn't go!

In the possible extermination of birds we find the first point which the extreme bird protectionists have made. If we are seriously reducing the bird ranks it is time to call a halt and every sincere ornithologist will obey the command. Let us see what evidence we have

in the case. I believe that most of the writers speak without knowledge, for they certainly fail to present facts. The Rev. Mr. Henninger, however, gives us an array of figures from Davie's *Nests & Eggs of North American Birds* which is very alarming,—to the Rev. Mr. Henninger. (*Osprey*, Feb. '99.) Does he seriously fear that the taking of 500 Coot's eggs or 917 Kentucky Warbler's eggs will endanger these species? Blessed news; let us gather at once 5,000 eggs of *Passer domesticus* and wipe him from the earth! I do not wish to write anything in defense of Mr. Davie's book; it needs none. Long may it live. What I do wish is to set at rest the mind of the Rev. Mr. Henninger concerning the destruction of certain bird species at the hand of the egg collector. He objects to one man having 94 eggs of *Ptychorampus aleuticus*. I have never taken many eggs of this bird myself, but could show anyone where 94 eggs might be taken every day for two weeks and leave several thousand for seed. If I am not mistaken, I helped collect "50 eggs of the Guadalupe Petrel in two days," but I can assure the fearful that there were plenty of Petrels' eggs still in the ground.

If I tell him of taking 100 Shearwaters' eggs in one day, shall I be condemned? Yet there are thousands of Shearwaters' eggs left in that place. The fact that a few men only possess such large series as 112 eggs of the Chuck-will's-widow seems to make a lot of difference, to the widows. If everyone collected in big series the poor Chucks might have to try the Flicker's dodge of laying 71 eggs in 73 days. The Rev. Henninger shows how well he has learned his profession when he mentions an act and leaves his readers to imagine the attendant circumstances. 'Tis a common trick of the public speaker but goes not so well in writing. To illustrate what I mean let us take the case of the Guadalupe Petrel. This bird breeds, so far as known, only on Guadalupe, an uninhabited island 200 miles from civilization. A trip there is expensive and landing dangerous. At the time of our visit the eggs and nesting of the petrel were almost unknown. The island is over-run with wild domestic cats which make a business of catching petrels as the setting birds enter and leave their burrows. It is in all probability only a question of a short time before the cats will have exterminated the birds. In view of these facts I ask if we were not justified in taking fifty eggs in two days. Circumstances may alter some of the other cases.

As to the wholesale collecting of birds themselves, I cannot believe it is so dangerous as depicted. I have made a little calculation which really surprised myself. Here it is. Let us suppose that each collector in California kills 5,000 birds each year. There are not over 100 bird and egg collectors in our State so we would have 500,000 birds destroyed each year. Now the area of California is a little over 150,000 square miles, thus giving an annual destruction of three birds to each square mile! This, even, is a most exaggerated estimate, for I very much doubt if there are twenty-five collectors in California, each of whom destroys annually 1,000 birds or eggs. I have collected in the state for about eight years and have under 3,000 skins. The largest private collection I know of here contains little over 10,000 specimens.

I believe that the taking of birds for commercial purposes, the destruction of birds and eggs by boys and the extensive collecting of birds during nesting time, as described in our last BULLETIN are abuses of liberty which should be condemned and prevented. If we are to study biology in all its branches we must have liberty. As to what is abuse of that liberty each must be his own judge, as he is his own judge of what constitutes the abuse of friendship or of any other civil or personal relation.

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AMONG the graduates of the class of '99 at Stanford University, the Cooper Club was well represented. Mr. W. W. Price took his degree of Master of Arts in zoology, while Messrs. R. C. McGregor and Ralph Arnold received the degree of B. A. in ethics and geology respectively. Mr. Arnold was honored with the presidency of the class of '99, and has been the leader of the Stanford Mandolin Club for several years past.

WILFRED H. OSGOOD of the Biological Survey and a member of the Cooper Club, left Seattle on May 24 with Dr. L. B. Bishop of New Haven, Conn., and Mr. A. G. Maddren of Stanford University, for Dawson City on a scientific expedition. The party will be gone five months, travelling from Skaguay to Dawson City, thence by revenue steamer down the Yukon to St. Michaels. Mammals and birds will be collected, Mr. Osgood acting as chief naturalist of the expedition.