Biology Building
February 19, 1931

Mr. C. Dennis Hart
Game Conservation Institute
Clinton - Hunterdon County
New Jersey

Dear Mr. Hart:

The Wisconsin Conservation Commission has referred your letter relative to predators to me. I have carried on a considerable amount of work dealing with predaceous species in connection with the Wisconsin Quail Investigation which I am conducting. I suspect also that I am the one with whom you talked in New York at the last American Game Conference.

My Wisconsin studies lead me to believe that as a rule introduced predators like dogs and cats could well be reduced to advantage. Against native predators native game--given proper combinations of food and cover--is fairly able to take care of itself. A game bird species that has successfully lived in association with a predator species for thousands of years under the usual climatic extremes and the vicissitudes attendant upon life in the wild, might not be able to cope as satisfactorily with a new enemy.

I think you are perfectly right in your views concerning the relative destructiveness of "ground vermin" and "winged vermin," to nests, except in one detail. The skunk, in the middle west and probably elsewhere, does not appear to be nearly as serious a game enemy as is commonly supposed. From the standpoint of agriculture he is, in the main, a very good citizen, constituting one of the most effective natural checks upon the tremendously destructive white grub, which grub is not especially exposed to insectivorous birds. The skunk is also one of the principal checks upon the various turtles--detrimental when present in excess to waterfowl, muskrats, etc.

All in all, the skunk is a slow, lethargic creature, rather swine-like in habits. If nests of ground birds were capable of moving out of his way, he probably wouldn't break up any of them. I don't see how he, considering his build and habits, could be an enemy of adult birds except under unusual circumstances. Feces examined in Wisconsin and in Michigan (by Wight) showed little except insect and some small mammal remains. Stoddard (Georgia Quail Investigation) recommends that the skunk, where proving troublesome, be kept down to reasonable numbers--not beyond a point of easy recovery--by trapping when the fur is prime, thus utilizing a valuable by-product.

On crows and weasels I have practically no data, but what little I have indicate that the weasel possesses sufficiently great potentialities for damage (not necessarily in the wild, but around poultry establishments, etc) to warrant his control, except in rat-infested places like city dumps and other small rodent reservoirs. There are some places where blood-thirstiness can be utilized to advantage. Better results in crow control can probably be accomplished by watching and eliminating habitual egg-stealing individuals rather than by promiscuous bombarding. This axiom can be applied also to the true winged predators. However, the crows are sufficiently numerous and canny to stand a great deal of persecution, a statement that cannot be made of many species of hawks and owls.

It is very lamentable that the most valuable of our hawks and owls are exactly the ones to suffer most from the usual "vermin control" measures carried on by the populace at large. The big slow-moving, almost exclusively rodent-eating hawks by reason of their conspicuousness and comparative unwariness--for example, the Roughleg--are just the ones that get shot, whereas the bird-eating Accipiters (Cooper's, Sharp-shin, etc.) rarely give the shooter a chance at them, nor do these latter often light on pole traps. As a consequence, the highly beneficial hawks of the Buteo type have been much reduced over great tracts of North America where formerly plentiful, while the Accipiters seem to show no corresponding decrease in numbers.

Time and space do not permit a detailed discussion of raptor food habits in this letter, but I might sum up certain predator recommendations for the lake states, based upon my Wisconsin studies.

(1) Predators to be controlled under most conditions:

a. Cooper's Hawk, Sharp-shin, and Goshawk, provided control can be accomplished without disproportionate sacrifice of beneficial species.
b. Introduced predators--dogs and cats.

(2) Predators to be subjected to judicious control, depending upon circumstances:

a. Great Horned Owl, except where rats and rabbits constitute a problem.
b. Weasel.
c. Grey fox (distinguished from red).

(3) Predators to be subject to moderate control:

a. All common furbearers--red fox, mink, skunk, raccoon, etc.--by proper hunting and trapping in winter. Adequate seed stock should be left.

(4) Predators not to be subject to control, whether destructive or not:

a. Rare species (eagles, ospreys, duck hawks, pigeon hawks, gyrfalcons, horned owls where scarce, marten, fisher, otter, etc.)

b. Miscellaneous species doing little harm or little good but of ornithological or scientific interest.

(5) Predators generally to be encouraged except individuals which develop bad habits:

a. Redtailed, Red-shouldered, and Broadwinged Hawks, Marsh Hawks, and Sparrow Hawks.

b. All small and medium-sized owls.

(6) Predators of almost faultless food habits, to be encouraged as much as possible:

a. Rough-legged and Swainson's Hawks.

b. Barn Owls.

Of course, in practice the layman cannot always be sure of identification of all the hawk species in the field--neither can the professional, for that matter. But it is not hard to distinguish between groups like Buteos and Accipiters according to outlines, flight peculiarities, and general habits.

In concluding this letter, which is growing out of bounds, I might remark that sweeping recommendations applying to "vermin control" over the whole country are to be avoided in every way, nor should anything be done in this respect that can't later be undone should need arise. Likewise I might remark that the heavy mortality observed by Bump and others is not peculiar to game birds. The juvenile mortality of the predators themselves is simply terrific; throughout nature it is "dog eat dog." This was simply the natural safeguard (before man and modern firearms appeared on the scene) against overpopulation, which invariably results in either starvation or disease. From the biologic point of view, there is nothing reprehensible about predators taking most of the young of a given species any more than there is for that species to have a high reproductive rate to make up for the losses.

Man, to serve his own ends, manipulates the environment, including the predators; if he manipulates conservatively and wisely he succeeds; if he manipulates with blind prejudice and disregard of simple biologic principles he gets himself into all sorts of grief. Stoddard, my former official superior, once told me that he advised people if they didn't know the difference between the good predators and the bad, not to kill any of them.

I expect to publish a predator article, and possibly one on game foods and cover, in American Game towards fall. You might be able to find something of value bearing upon lake state game problems when these articles come out. Please understand me in that I am not attempting to stretch my Wisconsin and mid-west findings to New England; I'm not familiar with what you are up against there, but some of your problems might not be dissimilar to mine.

Yours sincerely,

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Quail Investigation