

New Soils Building
November 5, 1934

Dr. Herbert Friedmann
U. S. National Museum
Washington, D. C.

Dear Dr. Friedmann:

Since your visit here I have been thinking hard about your statement that you are willing to initiate some new policies in connection with your present office in the A.O.U.

I made the off-hand suggestion that you consider the possibilities of "songbird management," by which I meant the development of environmental manipulation as a tool for the perpetuation of rare non-game species.

On further thought, however, it appears to me that the A.O.U. could at this moment inaugurate a much more comprehensive attack on the problem of preserving the rarer members of our avifauna. "Management" is only one of several tools for accomplishing this objective, and before we can make a good guess as to whether it is the best tool in any given case, we should, I think, begin with an orderly inventory of all rare species and a preliminary appraisal in each case of what is wrong and what needs to be done.

In short, I propose that you initiate a "Survey of Rare Species." The survey would proceed from the premise that recent advances in ornithology, especially the advances in ecology, physiology, and disease, slight as they are, enable us to guess a little more accurately than heretofore why particular species are declining.

Secondly, the rapid changes now taking place in national land policy afford opportunities for conservation measures which heretofore did not exist (I will give examples of this later).

Thirdly the advances in applied ecology or management now enable us to adopt the attitude that where we do not know what is wrong or what needs to be done, we can deliberately find out through employing research processes.

Fourthly, the general public acceptance of the idea of planned recreation makes it possible to interest the public in general in the deliberate retention of rare forms, whereas a decade or two ago it was necessary to assume that only ornithologists recognized the necessity of such a move.

Let me give some examples to convey the urgency of the above ideas:

Sage Hen. A decade ago it would have been the unanimous verdict that the sage hen was declining through shooting alone. It is now clear, however, from the advances in range management and game management that over-grazing probably

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accounts for the extreme susceptibility of this species to over-shooting and that a large shrinkage would probably be under way even if there were no shooting. Moreover, there are strong indications that the species is cyclic, which further increases the danger of extirpation during some cyclic low. While we may feel confident that over-grazing is directly involved, we do not yet know at just what stage in the life process its bad effect are most pronounced, nor just what plants are involved, nor just what degree of relief from over-grazing would give the species an upward turn. However, these obscure points are all determinable through ecological research.

Most important of all, we have great changes in land policy under way which directly affect the sage hen habitat. The public domain bill is one example. The rapid extension of national forests and parks is another example. If these new agencies were specifically charged with the duty of perpetuating the sage hen in certain particular spots over which they have ownership of control, it is likely that the species could be safeguarded without the expenditure of special funds (such as the Audubon Refuge in Nevada).

We now have certain western universities (viz, Utah and Wyoming) fully conscious of their opportunity to make an ecological study of sage hens but so far entirely lacking in the few dollars it would take to support an investigator. An organization like the A.O.U. ought to be able to persuade the federal bureaus which are spending millions on conservation to find a way to divert a few dollars for the support of such researches.

The above is simply my guess on the status of the sage hen. If you mobilized the guesses of all the competent people in the A.O.U., you ought to be able to shake down a program, or at least an idea, more effective than anything so far available.

Bell's Vireo. Here is a rare species which is rare because the particular habitat combination which it requires for breeding is accidentally being eliminated by land industries. No difficult factor like shooting is operating against this species. Research ought to be able to discover just what the habitat combination is and there should be at least a few land owners who might be ultimately willing to try the stunt of reproducing this combination for the purpose of deliberately attracting this bird. In other words, this is a straight case in need of "songbird management." The A.O.U. should be able to attract funds by bequest or otherwise for such a research enterprise.

Sandhill Crane. I am becoming convinced through a census of breeding cranes in Michigan, Wisconsin, and Minnesota, that this species is falling victim not merely to shooting, but to a combination of shooting plus shrinkage in suitable habitats. The bird breeds in peat marshes which are in the hay meadow stage, that is, marshes which were originally tamarack and sphagnum but in which the plant succession has been forced back one stage, that is, to hay meadows with scattered copses of tamarack. When these marshes are forced back two stages by either drainage or fire, the bird disappears.

All three states are now spending large sums of federal money for reflooding particular marshes, that is, for throwing the plant succession forward

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from Stage 3 to Stage 2. In Wisconsin I have charge of one federal project which is converting 100,000 acres of drained marsh in this way. However, I have learned from experience that this will not automatically take care of the cranes because Wisconsin was about to throw a gridiron of fire roads across the particular spots suitable for crane range. They were thinking of muskrats, ducks, and prairie chickens and had entirely forgotten the cranes. Wisconsin may not accept my unsupported opinion that certain areas in these marshes should be dedicated to cranes primarily, but if the Wisconsin Conservation Department were publicly charged by the A.O.U. with the responsibility for taking care of the cranes incidental to its reflooding projects, it could not very well backwater on the matter. What I am driving at is that the Wisconsin Conservation Commission should be made publicly accountable for the welfare of the cranes which are now in its custody. I am pessimistic enough to doubt whether the game organizations alone can be counted upon to exert this kind of pressure for an unshootable species.

Moreover, to do a really intelligent job there should be a life history study to designate more accurately than I can now do, just what the habitat combinations are which need to be preserved and just what minimum unit of acreage constitutes a breeding range. The indications are that the food supply during the summer consists mainly of certain marsh bulbs, and if these could be definitely specified, it is highly probable that the controllable factors, such as fire, could be so handled as to increase and extend this food supply.

If the A.O.U. could show a positive plan for the perpetuation of crane breeding ranges, then it could also demand a more active enforcement of the laws prohibiting the shooting of cranes. These laws are not enforced. As in the case of swans and woodducks, most violators are let off because they did not know what the bird was.

Trumpeter Swan. Shooting was probably a heavier factor in the decline of this species than in the case of the sandhill crane, but even so, it would be well to have the National Park Service and the Canadian government specifically designated by the A.O.U. as the custodians of its future existence. Moreover, with a little closer analysis of the breeding requirements, additional locations might be found which could absorb any increase obtained in the present locations. The official custodians could probably be charged with creating such room for expansion.

Ivory-bill Woodpecker. It is commonly assumed, of course, that this species is the victim of the shrinkage in the virgin timber, but has anyone ever made a real analysis to determine whether habitats could be expanded? Moreover, are the owners of the land on which the present remnant is found specifically and publicly charged with its perpetuation? I doubt it. The Forest Service is buying land on a large scale in the southern forests. Is it not possible that an expansion of habitat could be arranged by publicly charging the Forest Service with this responsibility?

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Spruce Hen. This species is about to disappear from the United States. The reason is perfectly clear: Pulp operations and fire roads have invaded the remaining spruce swamps. The species is definitely cyclic, hence some untimely potting of a covey or some untimely lumbering of the ~~less~~ swamp in a region may wipe it out without anyone being conscious of the act. *last*

The Forest Service is now buying millions of acres which include many suitable spruce hen habitats. I feel safe in saying that there is not a man in their organization who is even remotely conscious of any specific responsibility for perpetuating this bird. On the other hand, I am equally sure that a specific request from the A.O.U. would result in prompt and intelligent action. This is a perfect example of how the fixation of accountability might save a species to the nation without the expenditure of a single additional cent. A life history study would, of course, also help.

Condor. It seems to be generally agreed that the condor is falling victim to predator poisoning. If the A.O.U. determined the exact localities in which remnants persist or might in time become re-established, and if the A.O.U. then asked the Forest Service and the Biological Survey to keep poison out of these areas, I doubt if these bureaus would be able to backwater. As the situation now stands, they have only been charged with responsibility by particular individuals to whom an animal can be imputed and who accordingly can be ignored.

I do not pretend that the above is a very orderly statement of what I am getting at. It is merely a raw idea, but it could be reduced to orderly form. Did you hear Mr. Darling's remarks to the A.O.U. in Chicago? In a polite way he definitely accused the organization of being passive in its conservation policy. What he meant was that the A.O.U. continually laments things that go wrong, but it has no positive program for correcting the abuses of which it complains. I feel that Mr. Darling's criticism is well taken. I also feel that the positive program which A.O.U. should have should be quite different from the programs of other and dissimilar national organizations. Perhaps the above suggestions contain a hint of what a positive A.O.U. program might be.

I would be interested to know of your reaction to these suggestions. Let me also thank you for giving us the opportunity for getting acquainted with you through your visit to Madison. I look forward to a chance of pursuing further the many interesting questions which we started to talk about.

With best regards,

Yours sincerely,

Aldo Leopold
In Charge, Game Research