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Vermont Fish & Wildlife Department and Board  
Louis Porter, Chris Bernier, Mark Scott and Fish and Wildlife Board via email

Gentlemen:

At the last Board meeting on September 21<sup>st</sup>, a Fish & Wildlife Board member suggested that a three-year trial should be conducted to assess whether extending the bobcat season would impact its population. While on the surface this seems a straightforward solution to the current controversy, there is no way this can be done with ANY scientific validity. I base that opinion on two fundamental reasons:

- 1) In the absence of a basic understanding of the relative importance of each of the several variables that control the bobcat population, it is impossible to design a “trial” that would appropriately control for these variables.
- 2) While conducting a “trial” seems simple, a trial that would result in data which could be used for objective decision making would involve a fairly rigorous experimental design, take much longer than three years, and cost tens of thousands of dollars to monitor the effect of the several variables that determine the bobcat population health.

The report “An Assessment of the Status and Harvest Trends of River Otter and Bobcat in Vermont” discussed several variables and uncertainties that potentially affect the bobcat population and thus, harvest data. At a minimum these variables included: trapping/hunting pressure, habitat characteristics, including habitat loss, climate/weather and the extent to which survey reports from a minority of trapper/hunters are representative of all hunters and trappers. Other variables that affect bobcat population health, and potentially harvest, include ecosystem dynamics such as predation and disease.

If the sample size, i.e., number of bobcats harvested, was sufficiently large, the number and location of trappers/hunters representative of all of Vermont habitats/locations and catch per effort, i.e., harvest per day of trapping/hunting, relatively constant over time, then one could infer from the harvest data the relative health of the bobcat population and, perhaps estimate the tolerance of the population to increased trapping pressure. However, as we know, this is definitely not the case. Bobcat harvest is very low, usually less than 40 per year over the whole state and we have no comprehensive data on hunter/trapper metrics because there is only an approximately 18% return on the self-directed surveys. As a result, we have no way of knowing the relative importance of each of the several variables that control the bobcat population. Conducting a trial involving extending the trapping season without first knowing how the current trapping pressure affects the population is scientifically specious.

Let’s ignore for a moment that we are lacking the appropriate foundation for conducting a “trial” and just focus on how a “trial” would have to be designed to produce sound scientific data which could be used for objective decision making. Such a “trial” would need a priori agreement on the hypothesis being tested, i.e., extension of the trapping season would (or would not) result in jeopardizing the stability of the bobcat population, the significance level for accepting or rejecting the null hypothesis and the error tolerance we would accept in making that decision. Important independent variables, e.g., trapper days, weather, etc., would have to be identified and controlled for in the experimental design. It

is doubtful that these details of the scientific design of a “trial” were contemplated when the “trial” was proposed.

Likely that concept underlying the proposal for an extended season was that once the resulting harvest data was available, a subjective post hoc decision would be made as to what the data meant. However, for reasons discussed above, if there is no understanding of the stability of the bobcat population under the current trapping/hunting regimen, these subjective decisions are only “guesses” as to the implications of the harvest data. These “guesses” are without any scientific merit and in my opinion, therefore, not defensible. To illustrate, would the decision be different if 8 more bobcats were trapped during the extended season than if 12 were trapped? How about 21 bobcats? If one were to answer this question scientifically, the decision criteria would have to be agreed upon before the trial was implemented. If you cannot formulate the decision criteria before the trial then you don’t need scientists, just folks who can count bodies and offer an opinion without a defensible rationale.

Sincerely,

Weldon Bosworth, Ph.D.