**Supplementary materials for**

**CHAPTER 4**

**of**

***The Biology and Conservation of Animal Populations***

**by John A. Vucetich**

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A. **Study Guide and Discussion Points**

Below is a list of notable quotes from chapter 4. Re-read the passage of text into which each quote is embedded. Then discuss with a classmate the questions associated with each quote.

* Page 45 states: “*...ethics is an academic discipline that provides formal assessment of claims about what we should and should not do.*” How does this notion of ethics compare and contrast with other common understandings of the word “ethics”?
* Page 46 states: “*An essential tool for synthesizing facts and values is argument analysis.*” Why is it important to have a method that can synthesize facts and values?
* Page 47 states: “...*if two conditions hold: (1) all of the premises are true, and (2) the argument’s logical structure is valid*...” Develop an example of a conservation-related argument where condition (1) holds, but condition (2) does not. Can you think of another example of a conservation-related argument where condition (2) holds, but condition (1) does not?
* Page 48 states: “*Second, an invalid argument does not guarantee that the conclusion is false; it only means that the conclusion is not supported by that argument. There may be some other argument that is sound and valid that leads to the same conclusion*.” Develop an example of an invalid argument whose conclusion is likely true. (Hint: Think of a claim related to conservation that is (or is likely) true, then provide a poor reason to think that it is true.)
* Page 51 states: “*An important stance for evaluating an ethical claim is to temporarily suspend your belief (as best you can) and analyze the ethical argument as if nothing were at stake… This disposition is valuable for discovering insight that you may not already have*.” What are some specific strategies you can adopt to favor this frame of mind?

Pages 50-56 describe the process of building an argument about elephant culling. In general terms, how would you summarize that process? (The interest here is not to summarize the specific argument for elephant culling. The interest is for you to be able to explain, for any case, how does one build an argument.)

Pages 54-55 include a section called “Evaluating premises on a first pass.” In general terms, how would you summarize this process?

What is confirmation bias?

*Overabundance* is an idea that rises frequently in conservation decision-making. In what ways is overabundance a mixture of scientific and ethical ideas? What are the best strategies for handling the idea of overabundance in an argument? Illustrate your response with an example – aside from examples presented in the textbook.

*Ecosystem Health* is an idea that rises frequently in conservation decision-making. In what ways is ecosystem health a mixture of scientific and ethical ideas? What are the best strategies for handling the idea of overabundance in an argument? Illustrate your response with an example – aside from examples presented in the textbook.

Page 59 states: “…*good goals do not necessarily justify harmful methods*.” Think of cases in conservation where this idea is important to consider.

Conservation decisions need to be made in a timely manner. But it seems as though ethical inquiry would often not lead to definitive answers in a timely manner. Given that circumstance, how can ethical inquiry be made part of conservation decision-making? And more generally, how can it be valuable to dwell on questions for which a definitive answer seems elusive? (See pages 62-64 for guidance.)

What happened in Kruger National Park in the years since a decision was made to refrain from culling elephants? What general lessons might arise from considering the specific case of Kruger’s elephants? (See pages 64-65 for guidance.)

**B. Building and Evaluating Arguments**

To develop your skills in building and evaluating arguments, follow a procedure like this:

1. Find a case related to the conservation of populations. (See below for tips and leads on finding a case.)
2. Work with a fellow student to develop an argument representing the reason to act in a particular way with respect to that case. You’ll share your argument with other students, so it might be a good to include a little text that provides any information or insight that’d be useful for communicating yourselves to others.
3. Trade your argument with another pair of students who’ve developed their own argument for the same case. Then each pair of students can evaluate the argument that they’ve been given – evaluate that is with respect to (i) the appropriateness of each premise and (ii) the logical structure of the argument.
4. Afterward, the four students can convene as a group to discuss insights they learned from the experience.

Some leads that can be the basis for a case:

1) Whale hunting and the Makah people:

<https://www.washingtonpost.com/nation/2024/06/14/makah-tribe-whale-hunting-waiver/>

2) Killing warblers in the name of conservation research:

* Bangert, R. 2005. The ethics of lethal methods. *Front. Ecol. Environ.* 3: 241.
* Sillett, T. S. *et al*. 2005. Authors’ reply [to Bangert (2005)]. *Front. Ecol. Environ.* 3: 241–242.
* Vucetich, J. A., & Nelson, M. P. (2007). [What are 60 warblers worth? Killing in the name of conservation](https://nsojournals.onlinelibrary.wiley.com/doi/abs/10.1111/j.0030-1299.2007.15536.x?casa_token=AZtZ4AxoRbsAAAAA%3AFphaQ3AeBx6bH-MeXiDcwEzukZEKIv784ONqADJOpWKjAoNhPeU82czbcorPjSI7TgEGGFuad2Eq). *Oikos*, *116*(8), 1267-1278.

3) Killing barred owls to protect spotted owls. One route into this topic may be found here: <https://e360.yale.edu/features/barred-owls-spotted-owls-hunting>

4) Killing wolves to protect endangered populations of caribou: <https://www.theguardian.com/world/2024/apr/23/wolf-culls-canada-caribou-saving-endangered-mountain-caribou>