

**Conservation Biology: A Research Service Learning Course**  
Spring 2007, Dr. Julie Reynolds

**Think Globally, Act Locally**  
**Writing Project #1**

What is the importance of biodiversity? There are no simple answers to this question. Biodiversity itself is a complex, perhaps amorphous concept, extending from genes to ecosystems and biomes, and to interactions and processes. Moreover, how does one define “important”? There are a myriad of ways in which we value biodiversity. Our value systems range from purely economic to ecological ones. Cultural values are also prominent, but rarely universal. Values of biodiversity may also exist wholly outside the human context, as is the case of inherent values of species.

It is therefore easy to get overwhelmed by the question of why is biodiversity important. There are, however, ways to bring the question into focus. As in human life, sometimes how we value others comes most into focus when we are about to lose them from our lives – a friend moves to a new city, or a grandparent dies. Their passage often provokes reflection upon the ways in which they were important to us. In other words, we sometimes can most easily articulate the value of something to us when we are about to lose it.

Similarly, many wild species are about to depart from our lives, and their passage can force us to come to grip with whether their extinction – and hence their existence – has value to us or not. The World Conservation Union (IUCN) maintains a list of imperiled or extinct species that can serve as a useful point of discussion on why is biodiversity important. The list, known as the “IUCN Red List of Threatened Species,” is compiled for species all over the world. It is relatively easy to get a list of all the species known to be currently threatened with extinction, to become familiar with some of these species, and then to ask, individually and as a group, is their fate important to us, and if so, how?

Throughout the semester, we will struggle with these questions, looking at both the global epidemic and finally narrowing our focus to species within our own area (i.e., those within the Eno River State Park) to drive home the point that conserving biodiversity is important everywhere – not just in the rainforests of South America or the coral reefs of the South Pacific. Further, we all have responsibility to these species, and our actions every day affect the lives of the millions of other species that share our planet.

**Overview of project**

Step 1: Obtain the Red List of Threatened Species .....	2
Step 2: Distinguishing between supported claims, opinions, and propaganda .....	3
Step 3: Evaluate why species are important .....	2
Step 4: Create annotated bibliography .....	3
Step 5: Analyze case study .....	3
Step 6: Write a case study .....	4

Step 7: One-on-one conferences .....	5
Step 8: 2 <sup>nd</sup> draft due – to be reviewed by peers in workshops .....	5
Step 9: 3 <sup>rd</sup> draft due.....	5
Step 10: Final draft due.....	5

## **Step 1: Obtain the Red List of Threatened Species**

1. The Red List of Threatened Species is constantly being updated and modified. For the most recent version, access the following Internet site: <http://www.redlist.org/>
2. From the web page, select the “Search” option.
3. The new screen will display a series of options for searching the database. Perform as many searches as you would like, but focus on species that are threatened, endangered, vulnerable, or data deficient.
4. Generate a list of species that interests you (you will do this again in Step 2). Inspect your list. These are the species that, without concerted conservation effort, are at greatest risk of extinction. Bring a hard-copy of your list to class on Wednesday January 17<sup>th</sup>.

(Visible thinking journals: you may want to reflect on your **initial reactions** to the list you generated. The purpose of this exercise is to capture **your thoughts and feelings** on this subject at the beginning of the semester, so don’t be overly concerned with the structure and format of the essay.)

## **Step 2: Evaluate why species are important**

Using the list you generated in Step 1 (and Primack p. 34-59), consider the following questions. What does it matter if these species go extinct? In other words, why are they important? Search through your list of imperiled species and identify species (at least one should be aquatic – freshwater or marine – and you should only have one animal on your list) that have ecological/environmental use value, direct use value, and cultural/spiritual value.

Indirect use value: Select an imperiled species that has significant ecological value, function, or service. Describe the ecological value that species offers. Ecological values can often be the most elusive to identify, so think hard about each species and how it fits into and contributes to the ecosystem where it lives. Does the species provide pollination services? Does it prey on pests? Does it play a role in nutrient and carbon cycles? Think broadly about ecosystem interactions and consider what role these species might play. What ecological loss would each species’ extinction represent? Write down the species’ name and its ecological roles.

Direct use value: Now search through the species list and identify an imperiled species that provide significant value as a good or product. Describe that value. Does the species represent a source of food? Of fiber? Of materials? Of medicine? Is it traded? What loss would its extinction represent? Write down the species’ name and its value as goods.

Other indirect values - Cultural and spiritual value: Now search through the species list and identify an imperiled species that has cultural or spiritual value, and describe that value. Does the species play a role in myth or literature? Is it beautiful? Is it scary? Is it intriguing or curious?

What loss would its extinction represent? Write down the species' name and its cultural significance.

Bring your lists of species and their associated values to class on Friday, January 19<sup>th</sup>. Be prepared to discuss whether we as a society bear an obligation to act as responsible stewards of these species. Should we conserve them for the present or the future values (*potential value*) that they contribute to the human species? **Take sides and explore multiple perspectives.** One extreme position is that the fates of none of these imperiled species matter in the larger context of human suffering that is so widespread today. Another extreme is that we must save every species at any cost because they all have an inherent right to exist (*intrinsic value*). Don't forget to consider whether we have an obligation to future generations to conserve these species (*bequest value*).

### **Step 3: Distinguishing between supported claims, opinions, and propaganda**

For an endangered species that interests you, explore the Internet for three pieces of writing about this species. One piece should contain a supported claim, another should be an opinion piece, and the third should be a piece of propaganda. Print out each of these documents, and bring them to class on Wednesday, January 24<sup>th</sup>. Be prepared to tell your classmates which text has a supported claim, which is an opinion piece, and which is propaganda.

### **Step 4: Create annotated bibliography**

Pick one critically endangered, endangered, vulnerable, threatened, or “data deficient” species from the Red List of Threatened Species for whom there is controversy surrounding the management of this species (you will critically analyze this case study in Step 6). On Friday, January 26<sup>th</sup>, we will meet in the Bostock Library computer classroom (room number to be announced soon) during our normal class meeting time. Prior to class, you should download “Annotated bibliography and library assignment for WP1” (posted in ASSIGNMENTS folder of Bb) and complete Questions 1-2. *Bring this worksheet to class – without it, you will not get nearly as much work completed during class!*

During this library class, you will be given the opportunity to work on retrieving articles from the library's scientific databases that will help you with your research for WP1. After class, you will create an annotated bibliography (due on Wednesday, January 31<sup>st</sup>). One of your peers will be checking your worksheet – this must be completed by Wednesday, February 7<sup>th</sup>.

### **Step 5: Analyze your case study**

Finally, given all the information you assembled, you should begin to analyze your case study by stating your main claim, outlining your argument, and citing supporting evidence. Your **main claim** states your position (synonymous with the main point of your essay). Be aware, however, that the word “position” can be interpreted either broadly (i.e., “There is an urgent need for more scientific research so we can understand the true habitat requirements of this species.”) or narrowly (i.e., “Since this species is protected under the Endangered Species Act, the federal and state government must enforce this law and prevent the development of this area.”).

Questions you will want to ask to get started include:

- Is this issue timely? Why should your targeted audience care about what you have to say?
- Why is this species threatened?
- What is the status of this species?
- What is its natural range and distribution, and what is its current distribution?
- What other species are having a strong negative effect on this species (consider predators, prey, mutualists, and invasive species)?
- What abiotic factors affect this species (hint: don't forget to consider pollution, global warming, and diversion of water resources).
- What is being done to manage this species?
- What competing interest groups are involved in this case? Think about the rights and roles of private land owners, businesses, environmental advocacy groups, the government, scientists, and the public at large. How are these rights balanced with the rights (or lack thereof) of the threatened species?
- What laws or regulations offer protection to your species?
- What is the value of this species (consider both indirect and direct values)?

Upload an outline of your argument to the assignments folder in Blackboard before the beginning of class on Friday, February 2<sup>nd</sup>.

### **Step 6: Write a case study**

For this writing project, your goal is to write an article suitable for publication in one of the following Duke journals:

- *Deliberation*, A Journal of First-Year Writing at Duke University  
(<http://uwp.aas.duke.edu/writing20/publications/deliberations-current.html>)
- *Vertices*, The Journal of Science and Technology at Duke University  
(<http://www.duke.edu/vertices/>)

For full credit on this assignment, you must submit your essay for consideration to your targeted journal.

The length of your essay is up to you, and should be appropriate to the publication you are targeting. Always give a meaningful title to every piece of writing you do. Put your name, the date, and the draft number on the first page (but there is no need for a cover page, which is just a waste of paper!).

Save your essay in a file with the filename *lastname.WP1.draftnumber.doc* (obviously, substitute your last name and draft number into this filename!). The document should be a MS Word file. For each draft of this writing project (WP1.1, WP1.2, and WP1.3) you will need to submit an electronic copy to the Assignments folder in Blackboard before class on the due date. (When the final draft is due, you will also turn in a portfolio of your work on this topic. See syllabus for details about the portfolio.)

Cite every article that you use in your essay, both in the text and with a list of references at the end of the essay. Chapter 4 of Pechenick's book (available in Course Documents → "Additional Reading" folder) has information about the correct way to cite sources.

Upload your 1<sup>st</sup> draft to Blackboard before the beginning of class on Friday, February 16<sup>th</sup>.

### **Step 7: One-on-one conferences with Dr Reynolds**

You will have the opportunity to discuss your project with me in a one-on-one conference during the week of February 19<sup>th</sup> – 23<sup>rd</sup>. You will be able to sign up for conferences using a Discussion Board in Bb. Please bring two hard copies of the draft you would like to work on to the conference (we cannot work without them!). If you miss a conference without letting me know in advance, you forfeit your opportunity to work with me on this draft.

### **Step 8: Completion of 2<sup>nd</sup> draft, and peer review**

Your second draft of WP1 will be due on Monday, February 26<sup>th</sup> by 5pm. Please post your draft to the Discussion Board forum “File Exchange for WP1.2.”

### **Step 9: Peer Review**

You will then be assigned into groups of three, and you will review the drafts written by both of your team-mates. The instructions for peer reviewing will be posted soon (stay tuned!). Your critiques are due by the beginning of class on Wednesday, February 28<sup>th</sup> – you must upload your critiques to the Discussion Board PLUS bring three hard copies of each of the two critiques that you did, plus one hard copy of each of the papers being reviewed (including your own!) to class on Wed. 2-28-07. We cannot do the important work of peer review if you do not show up to class on time and with all your materials (see Syllabus “Attendance and Due Dates” to remind yourself of my policies).

### **Step 10: Final portfolio due**

Your final draft of this writing project is due on Friday, March 9<sup>th</sup>. I would like you to upload your final draft to Blackboard by class on the 9<sup>th</sup>, but I would also like you to submit a portfolio that shows me the process you went through as a writer. Here are the items that should appear in your portfolio – number each item in the portfolio clearly (preferably hand written in red ink). Place the items in your folder in reverse chronological order.

1. Annotated bibliography
2. Outline, with my comments towards revision
3. WP1.1
4. Any notes you and I took during our conference
5. WP1.2
6. Peer reviews written by your 2 classmates
7. My comments on WP1.2
8. WP1.3
9. A cover letter that provides me with a point-by-point response to each of your reviewer’s comments and describes what publication where you plant to submit your essay.

Here are the criteria I will use to assess your final draft

**1. Does the writer present an independent agenda?** A writer's agenda can be articulated in a single sentence, or may become apparent across a number of sentences, or through the entire document. The agenda is found in articulations of the essay's purpose, scope, and intent. The main claim should be specific, non-trivial, and substantial (as opposed to vague, obvious, and/or insignificant).

**2. Does the writer provide evidence in support of a claim?** This category addresses the ways in which writers provide support for their arguments. Evidence may take the form of facts, data, reports of others' research, quotes from a primary source, etc. One way to think of evidence is that it represents a base of publicly available information upon which writers can build credible claims and conclusions.

**3. Does the writer discuss the implications for continued inquiry?** Writers situate their work within a field of inquiry by suggesting ways that their writing may change readers' perceptions, alter the conversation within a field, or provide a basis for future research. This move may be made anywhere within an essay, but most often at the beginning as a framing device or at the end, as part of the writer's concluding remarks.

**4. Does the writer acknowledge and address counterarguments or opposition?** Student writers often see the ideal essay as one that presents uncontested claims and evidence, thus overlooking that issues worth writing about have complexities that defy a single interpretation or position. With this measurement, I seek to ascertain your ability to acknowledge plausible counterpoints to your arguments or alternative interpretations of available evidence. These moves recognize the ongoing conversation about the writer's topic within a field of study.

**5. Was the writer's use of sources appropriate, complete, and free of errors?**

Are the sources treated fairly and accurately? Is the information from those sources communicated without bias? How well does the author balance the problem of oversimplification/obfuscation? Are sources cited appropriately? Did the author provide you with enough information to find the cited examples on your own (if you were so inclined)?

**6. Was the writer's tone appropriate, given the target audience?**

Do you, as a reader, find the essay interesting and/or intriguing? Does the author work to keep the reader's interest? Does the author anticipate the reader's questions? Is the tone of the writing appropriate to the targeted audience? Did the author use vivid examples to illustrate key points? Did the essay reveal to you something you had never considered, or did it clarify or reframe an idea that you were already familiar with? Did the author use any words, phrases or sentences in a way that you found particularly compelling? Did the author use any words, phrases or sentences that you found problematic?

**7. Was the writing coherent?**

Is the essay coherent? Is the overall structure of the essay apparent? Is there a clear, over-arching organizational structure to the essay? Do paragraphs have topic sentences that capture the meaning of the entire paragraph? Is there a logical flow between sentences within paragraphs? Did the essay flow; i.e., were you able to read the essay without pausing at awkward phrases or backtracking to clarify the writer's meaning? Did the essay end by wrapping up the conversation, or did it just stop?

**8. Were the writing's mechanics correct?**

Were the mechanics (spelling, grammar, punctuation, title, page numbers, formatting, etc) and presentation of this essay appropriate and professional?