

Guidelines for Discussion

Overview:

The objectives of the discussion section are to learn how to critically review scientific literature and to gain a broad understanding of the evolution of animal behavior. To accomplish these objectives, we will complete two tasks: 1) write weekly responses about select peer-reviewed journal articles and 2) participate in student-led discussions of a variety of topics pertinent to ecology and behavior.

This is an upper level biology course. As such, we cover advanced topics at the intersection of biological and social sciences. As we explore these topics we will find that often there is not a single correct answer to the questions we discuss, and sometimes there will be no correct answer. During discussion sections, I urge you to bring forward thoughtful questions and be open to the opinions of others. Your grades from the discussion section will be based on your participation and demonstration of a thoughtful approach to investigating and explaining challenging ideas. To guide our discussions sections, we will read 1 article per week. You are expected to have read the article and written your response prior to class.

Goals:

1. To write concise and organized responses.
 - a. It is easy to write pleonastic, periphrastic, and convoluted responses. It takes practice, thoughtfulness, and discipline to write simply and convincingly. *This is our main goal.*
2. To read and understand primary research in the field of animal behavior
 - a. Articulate the hypotheses being tested.
 - b. Identify the study population and other important variables that were measured.
 - c. Understand the experimental design.
3. To interpret and critique the results, conclusions, and shortcomings of each article.

Grading:

The discussion section comprises 20% of the class grade with the following breakdown:

12% = *Weekly Written Responses (15 pts/wk for 8 wks = 120 pts total)*

4% = *Leading Discussion Section (40 pts total)*

4% = *Participation in Discussion Section (4 pts/wk for 10 wks = 40 pts total)*

1. Weekly Written Responses:

Each week you must turn in a printed copy of your discussion response following both the Formatting and the Content instructions below.

(1) Format: – 2 pts

- Your name, date, and discussion section
- 11 pt Arial Font
- Single spaced
- Margins 1 in
- **350 – 450 words** (approximately half a page)

(Note: Strict formatting instructions, including word limits, apply to research manuscripts, grant applications, and many other aspects of formal writing. We will follow formatting rules.)

(2) Content:

Respond to each of the following prompts in **no more than** 1-3 sentences each. Write simply and concisely, while avoiding jargon and esoteric terminology.

- Identify the main question/hypothesis, or goals of the paper – **1 pt**
- Describe the study population (captive vs. free-living, sample size, species) – **2pts**
- Describe the study design (experimental vs observational) and clearly identify what is the dependent and independent variable(s) – **2 pts**
- Interpret results from a key table or figure – **2 pts**
- Summarize the main findings – **2 pts**
- Identify a possible limitation of this research – **1 pt**
- Identify something good or noteworthy about this research – **1 pt**

- Discuss the utility of this research for the general public (does the work contribute to improving human health, conservation etc.?) – **1 pts**
- Write a question of your own about something you don't understand in this paper – **1 pts**

2. Leading Discussion Section:

Each week, pairs of students will lead discussions on the assigned articles. Each student will present once during the semester. You will be graded based on two criteria:

(1) Discussion Preparation:

- Meet with Tracy before class – **10 pts**
Discussion leaders must meet with Tracy one week prior to when they present (during Tracy's office hours or by appointment). Discussion leaders must come to the meeting prepared with a plan for the discussion section, including key points they want to touch upon.
- Turn in questions before discussion section – **10 pts**
When it is your turn to lead the discussion you must send Tracy a list of thought provoking questions intended to foster discussion & understanding. These questions must be submitted by noon on Monday before the discussion session during which you present. We prefer you submit your questions as a group and indicate who came up with each question, but you may also submit your questions individually. Please email questions to Tracy (montg215@msu.edu) with 'IBIO415' in the subject line.

(2) Leading Discussion:

- Introduce/summarize the paper – **10 pts**
(This should take about 5-10 minutes, but do not spend the bulk of time reviewing the paper that everyone has read.)
- Guide the conversation and prompt discussion with questions/ideas – **10 pts**
(Your job as leader is to guide the conversation and provide thoughtful questions to stimulate discussion and further understanding. The types of questions that work best are those that do not have a concrete answer but rather probe the big-picture topics of the paper. For the most part, as the leader you should let the rest of the class do most of the talking, but you should feel free to guide the conversation as you see fit. Each member of the leading group should be involved in both introducing the paper and in guiding the discussion.)

3. Participating in Discussion Section:

Your participation in weekly discussions will be graded out of four possible points per week according to the following rubric:

- Absent without a valid excuse – **0 pts**
- Present but no contribution to discussion – **2 pts**
- Present and contributing to discussion – **4 pts**

****Note**:** **Each week you must bring the paper with you to the discussion.** This is so that you can refer back to graphs and figures during the discussion. If you do not have a copy of the paper (printed or downloaded) with you at the start of class, you will not be eligible for more than 1 point.

Be a good listener and participant. Discussion section should be a comfortable and inclusive place to share your ideas and questions. Keeping this in mind, please help generate a respectful, open, and engaging environment by sharing your ideas and allowing others to share their ideas without negative judgment.

Missing discussion:

You are expected to attend every discussion. If you must miss discussion due to illness or another emergency, you need to email Tracy **before discussion** and with as much notice as possible. She may request proof of your need to be absent (e.g., doctor's note). In some extenuating circumstances, it may be acceptable to email Tracy after your missed discussion. Please talk with Tracy if you think this applies to your situation.

You will still be required to turn in your written response before you return to the following week's discussion section.

Discussion readings

These should be read **BEFORE** your discussion section each week. Assignments for each paper need to be handed in at the **BEGINNING** of discussion class.

Week 1	No Discussion held.
Week 2	Monclus et al (2015) Do Yellow-bellied marmots perceive enhanced predation risk when they are farther from safety? An experimental study. <i>Ethology</i> 121: 831-839.
Week 3	Gray et al (2009) Behavioural phase polyphenism in the Australian plague locust (<i>Chortoicetes terminifera</i>). <i>Biology Letters</i> 5: 306-309.
Week 4	Weaver et al (2004) Epigenetic programming by maternal behavior. <i>Nature Neuroscience</i> 7: 847-854.
Week 5	exam review
Week 6	Day et al (2006) Testosterone increases display behaviors but does not stimulate growth of adult plumage in male golden-collared manakins (<i>Manacus vitellinus</i>). <i>Hormones and Behavior</i> 49: 223 – 232.
Week 7	Andersson (1982) Female choice selects for extreme tail length in a widowbird. <i>Nature</i> 299: 818 – 820.
Week 8	Tibbetts (2008) Resource value and the context dependence of receiver behaviour. <i>Proceedings Royal Soc B</i> 275: 2201-2206.
Week 9	Writing project topic & outline presentation & discussion
Week 10	exam review
Week 11	Silk et al (2009) The benefits of social capital: close social bonds among female baboons enhance offspring survival. <i>Proceedings Royal Soc B</i> 276, 3099–3104.
Week 12	Peer review of writing projects
Week 13	Bell et al (2004) Suppressing subordinate reproduction provides benefits to dominants in cooperative societies of meerkats. <i>Nature</i> 5: 4499.
Week 14	van de Waal et al (2014) Wild vervet monkey infants acquire the food-processing variants of their mothers. <i>Animal Behaviour</i> 90: 41–45.
Week 15	exam review