

# Guidelines and suggestions for the Qualifying Exam

## EEB Graduate Program

### PURPOSE

The purpose of the qualifying exam is to test:

- the breadth and depth of your knowledge in ecology and evolutionary biology;
- your ability to master new topics in ecology and evolutionary biology;
- your ability to write cogent scholarly prose that effectively synthesizes information and analyzes problems;
- your ability to respond to verbal questions, articulate arguments as you think, and generally engage in scholarly discussion and debate.

### OVERVIEW

There are two components, written and oral. The written comes first. Focal topic areas should be identified at least two months prior to your exam. The written component will have questions drawn from the focal areas. The oral component can include further questions drawn from the focal topics, but will also seek to challenge your scholarship, synthetic abilities, and analytical aptitude across the full spectrum of ecology and evolution.

### FOCAL AREAS

The first will usually be your planned or current topic of Ph.D. research. Preparing for the first topic will help you develop the conceptual/theoretical framework for your thesis. If you have defended your research proposal, there might be more questioning on the second area than on the first.

The additional topic areas should expand your knowledge of ecology and/or evolution, and test your ability to master new topics after brief, intensive preparation. The topics will be defined in consultation with the committee, who may indicate some key references. Master the topics thoroughly. Be familiar with the main theories, tests, and methods; the current state of knowledge; and the most active current research directions. You should feel qualified to teach a graduate seminar in these areas, and to write a credible grant proposal. Reflect on some proposal ideas and be prepared to discuss them. Of course, these guidelines apply to your first topic area too.

### WRITTEN COMPONENT

The committee will pose two questions from the topic areas. You will have 24 hours for each. Questions can be closed-book or open-book at the discretion of the committee. It is not expected that you will go without sleep to write your response. Questions will be designed to be answered with an 8-hour day of writing, followed by a couple hours of revision and refinement after a night's sleep. By the time you receive the question, you should already be quite well prepared, including having the appropriate literature on hand and within a bibliographic database. The committee may specify details, e.g. length. Both should be completed within a 7-day period. The written part should be completed a minimum of one week before the date of the oral exam. A longer interim period is recommended. If members of the committee consider the written responses inadequate for progression to the orals, they will notify the candidate.

There are examples of topic areas and subsequent questions [here](#).

## **ORAL COMPONENT**

Questions will be most detailed and in-depth in the focal areas. But the range of topics is unrestricted within evolution and ecology. The further from the two focal areas, the less detailed the questions are likely to be, and the more they will emphasize major issues, theories and fundamentals.

The format is usually informal. Questioning may pass freely from one committee member to another. The exam lasts 2-3 hours, sometimes longer. At the end, the committee will ask you to leave, so they can summarize comments on the exam (written and oral) and make a decision. The possible outcomes are:

- pass without requirements,
- provisional pass with prescribed work to strengthen weak areas,
- a second qualifying exam, with a full or reduced range of topics, or
- fail.

Outright failure is unlikely if you have progressed well in the program, been in close communication with your committee, and prepared well. The other three outcomes have all been common. A pass is essential for continuation in the graduate program.

## **SUMMARY OF ACTIONS TO TAKE**

- Plan with your advisor an approximate oral exam date (do this in year 1 of your program).
- Set up your qualifying exam committee (year 2). The committee should include 5 members: your advisor, three other Dartmouth faculty, and an outside examiner.
- Discuss the exam date and preparation with committee members.
- Coordinate with the external member and Bio Department office for the seminar date/title, travel etc.
- Set up a meeting date with the internal members of the qualifying exam committee at least 2 months before the oral exam. The objective of this meeting is to identify the focal topic areas. At least one week before this meeting, send a two-page summary of your proposal for Ph.D. research to the committee. If you have not already defended your proposal, this will be preliminary, but give it thought, as it will usually be the basis for the first topic area. Be prepared to suggest and defend additional, broader, topic areas; ideally these will be topics that you would like an excuse to develop a mastery of, but might not do so without the motivation of an exam.

## **PREPARATION FOR THE ORALS**

Master the material. Practice being in the “hot seat” (“mock orals” with grad students). Talk to committee members. By the time you take the exam, plan on being on equal intellectual footing with your committee, at least in your focal areas.