

Unit 1 - What are arthropods? What is systematics?

Open Entomology Project

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Introduction

In this module we will discuss systematics as a field of research, and we'll touch on the importance of specimens as data, references, and vouchers (Turney *et al.*, 2015). Read the course syllabus and familiarize yourself with the grading policy, dates of exams and due dates for assignments, *etc.* We'll also discuss some ethical issues regarding the collection of organisms, and we'll learn how to make specimen preps.

Test yourself

In each unit handout you will find questions, typically prefaced with the unit number ("4-1" and "4-2", for the first two questions in unit 4, for example). You should answer these in your lab notebook, which will be checked weekly. Your lab notebook grade is based on your effort in answering these questions, rather than whether your answer was right or wrong.

Question 1-1: Could you explain the following terms to one of your peers?

1. Arthropoda
2. classification
3. Hexapoda
4. Insecta
5. nomenclature
6. phylogenetics

Question 1-2: Can you draw a phylogeny and interpret its meaning? Why are these diagrams important?

Question 1-3: Could you explain to a friend how this class is graded?

Question 1-4: Can you describe three ethical issues we need to consider when collecting organisms? If you were to edit the Insect Collector's Oath (Trietsch and Deans, 2016) how would you change it?

References

- Trietsch, C. and Deans, A. R. Insect collector's oath. <https://github.com/OpenEntomology/InsectBiodiversityEvolution/tree/master/insect-collectors-oath>, 2016. Accessed 11 August 2016.
- Turney, S., Cameron, E. R., Cloutier, C. A., and Buddle, C. M. Non-repeatable science: assessing the frequency of voucher specimen deposition reveals that most arthropod research cannot be verified. *PeerJ*, 3:e1168, 2015. doi: 10.7717/peerj.1168.