

Dr. Young

## ENTOMOLOGY 331 – FALL 2012/2013

### TAXONOMY OF MATURE INSECTS

#### COURSE OUTLINE

##### DESCRIPTION:

The instructional format includes lectures, laboratory periods, and field trips. Introductory lectures outline **historical and philosophical aspects of the discipline of taxonomic entomology, together with an overview of the Principles of Taxonomy (with readings, examples from the primary taxonomic literature, and discussion of the International Code of Zoological Nomenclature)**. This section is followed by lectures on **anatomy, classification, phylogeny, and general ecology of all extant adult insect orders** as well as salient comments on many of the **approximately 275 families** covered in the laboratory.

Laboratory periods will emphasize utilizing taxonomic keys to identify mature insects to order and family, specimen preparation, and study techniques. Students will also be expected to develop **“sight recognition”** capability for many of the taxa studied. Laboratory examinations will test both **sight recognition and “keying” skills**.

A **substantial** insect collection is required; additional field and lab time will be expected.

**PREREQUISITE:** Entomology 302 or equivalent, or instructor approval.

##### MEETINGS:

Lecture -

Monday, Friday  
1:20 - 2:10 p.m.  
Room 153 Russell Labs

Laboratory -

Monday, Friday  
2:25 - 5:25 p.m.  
Room 153 Russell Labs

## STAFF:

Dr. Daniel K. Young -

office: 445 Russell Labs

phone: 262-2078 (office); 837-9787 (home)

email: young@entomology.wisc.edu

Office hours - open hours (if you can't locate me, leave a written or email message!)

## REQUIRED MATERIALS:

[Numerous links to primary taxonomic research literature will be provided.]

Borror & DeLong's *Introduction to the Study of Insects*, 7<sup>th</sup> edition (Triplehorn & Johnson): classical North American standard reference

*International Code of Zoological Nomenclature* (4<sup>th</sup> edition) – available w/o cost at this link: <http://www.nhm.ac.uk/hosted-sites/iczn/code/>

Insect pins [#2 - get from me (\$4.00/pk100) (you'll probably need 2 packs of 100)]

## RECOMMENDED MATERIALS:

*Evolution of the Insects* (Grimaldi & Engel): a very good and reasonably up-to-date book for evolutionary overview and diversity: no keys

*Field Guide to Insects* (Borror & White): limited usefulness as a text, but very good line drawings which make a nice supplement to the lab manual.

Insect Collection Boxes (University Bookstore) [we will put together an order, too, and save a few bucks in doing so – will talk about this]

## EVALUATION:

|                         |      |
|-------------------------|------|
| Lecture .....           | 20 % |
| Exam 1 .....            | 20 % |
| Laboratory .....        | 80 % |
| Exams (6) .....         | 35 % |
| Insect Collection ..... | 45 % |

## POLICY ON MISSED EXAMINATIONS:

Generally, a make-up exam will only be given if absence from the scheduled examination is excused **IN ADVANCE**, **OR** if an illness or emergency situation warrants.

## CRITERIA FOR GRADING REQUIRED INSECT COLLECTION

The collection will constitute 45% of the course grade, and will be graded on the basis of 600 points as follows:

|                     |              |              |
|---------------------|--------------|--------------|
| 24 orders           | x 5 pts. ea. | = 120 points |
| 150 families        | x 3 pts. ea. | = 450 points |
| labeling & curation |              | = 80 points  |

**TOTAL = 650 points**

- 1) **errors** will count as a 2x value deduction
- 2) **grading** will be on a straight scale method (90-80-70, etc.)
- 3) for purposes of **taxonomic names** to be recognized, the text (Triplehorn and Johnson, 7<sup>th</sup> edition) will serve for **families** (though **a few exceptions will be noted**)
- 4) **ordinal** names to be recognized will be those listed in the course
- 5) identifications to **superfamily will not** count for family credit
- 6) submitted collections **must include an organized, printed inventory** by order and family
- 7) As your professor and Director of the UW-Insect Research Collections (WIRC), I reserve the right to retain selected specimens from your collections for permanent housing in the University of Wisconsin Insect Research Collection (this will most likely **NOT** involve many, if any, specimens!) The caveat is noted in order to make such specimens permanently available to the scientific community, as a whole.

As a corollary, you are strongly encouraged to **donate** your collection to the IRC if you do not intend to keep it protected or have no specific purpose for it. Likewise, please consider donating material to the IRC in the future (and, for those of you in a graduate program involving insects, note that vouchering your study is most strongly recommended – required, in fact, if you are in the entomology department)!