The Insect Diversity of East Texas (Entomology Lab)

BIOL 4132 Fall 2022
Dr. Jon Seal BEP 264, Thursday 2-4:50 pm
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Course Objectives: Insects are the most diverse taxonomic group on earth and comprise a significant portion of biomass in many terrestrial ecosystems. Consequently, insects have attracted the attention of conservation biologists in recent years; however their study requires specialized knowledge and skills.

This course is designed to give brief exposure to most facets of studying insect biodiversity, which includes an introduction to the primary literature, collecting and quantitative methodology, the preparation of specimens and ultimately the identification of insects to the level of family. Most of this we will accomplish by preparing a collection of local insects.

We will furnish the collecting equipment, boxes, killing jars, traps, vials, net and cabinets on loan. You must return this equipment at the end of the course. Failure to do so will result in the withholding of your grade. Hand lenses are quite helpful in observing and finding insects in the field. You might wish to purchase one.

Textbook: One textbook is required: The Field Guide to the Insects (Peterson Field Guide Series) by Borror and White. We will also have several entomology texts in the laboratory room that will aid in the identification of insect families, subfamilies and sometimes genus and species that you can use. There will also be some assigned readings, for which there will be a short quiz.

Assigned Reading List (TBA)


Work Due and Grading: There will be two quizzes at the end of the introductory material. One will deal with insect anatomy/morphology and the other with insect order identification. The bulk of your grade will come from your insect collection. Each student must curate their own insect collection; however, you may share insects with others if you have excess specimens, i.e., you will collaborate with one another to get the insects you need for your collection. The completed reading assignment will be uploaded on Canvas by the deadline announced in class. Assignments not uploaded by the deadline will result in 0 points. Emailed assignments are not accepted. Plan ahead. Do not wait until 5 minutes before the deadline to submit your assignments. Additional details will be announced in class.

Important: This class will require a considerable amount of work conducted outside of class. Plan on finding yourself in a collecting frenzy earlier in the semester. Since this is fall and most insects will go dormant, most collections will take place during the first half of the semester.

DO NOT UNDERESTIMATE THE AMOUNT OF TIME THIS CLASS WILL REQUIRE.
It would be a good idea to clear your weekends during the first half of the semester and otherwise make time to collect insects and prepare your collection. Also, take advantage of warm spells throughout the semester. This class gives you the excuse to go camping or hiking (be aware of laws about collecting on public lands, however!). I also recommend that you collect on your own during the entire period, especially if you are going someplace warmer (e.g. south Texas or south Florida) over the Thanksgiving holidays. Start collecting now and continue to collect!

**Excursions:** We will take excursions on university grounds or the TPWD Nature Center to collect insects. Field excursions will be announced the evening before on Canvas or email. Except for the quizzes, you may use class time to collect insects on the campus grounds.

**Schedule:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic or Activity</th>
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<tr>
<td>Aug 22</td>
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<tr>
<td>Aug 29</td>
<td>Collecting, preserving, systematics, external anatomy</td>
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<td>Sept 5</td>
<td>The insect orders, phylogeny; pinning and preserving</td>
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<td>Sept 12</td>
<td><strong>Quiz</strong> (anatomy)</td>
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<td>Sept 19</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<td>Sept 26</td>
<td><strong>Quiz</strong> (orders)</td>
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<tr>
<td>Oct 3</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<td>Oct 10</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<tr>
<td>Oct 17</td>
<td><strong>Quiz</strong> (readings)</td>
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<tr>
<td>Oct 24</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<td>Oct 31</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<td>Nov 7</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<tr>
<td>Nov 12</td>
<td>Open lab (collecting, pinning, identifying your insects)</td>
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<tr>
<td><strong>Nov 22</strong></td>
<td><strong>Thanksgiving Holiday week – no class!</strong></td>
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<td>Nov 28</td>
<td>Final curation, all work due</td>
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Note: Other than the quizzes, the amount you collect per week is up to you (the 10 families per week is recommended).

Evaluation:
- readings quiz (10%)
- orders quiz (10%)
- morphology/anatomy quiz (10%)
- insect collection (70%) (includes an inventory report/list of specimens in your collection)

Each quiz will be worth 10 percentage points that will be added to the amount of points you receive for your collection. There are a total of 100 percentage points possible for this course. This means that to receive 100 percentage points, you will need at least 70 points from your collection and ace all of the quizzes. Or you can receive 20 points total on the three quizzes and earn 80 collection points to yield 100 percentage points. For example: a successful collection will have around 60-70 families from around 10 orders will yield 80-90 points. If this collection is arranged properly, this student will have a good chance of getting a B, even if they bomb the quizzes.

Final letter grade will be based on a straight percentile scale (i.e., ≥ 90%, A, 80-89%, B, etc.) Note that there is no maximum points for the collection (the more you collect, the more points you get), and the minimum points required are dependent on your quiz grades.

Points for the collection are allocated as follows:

- The first 20 orders 1 point each
- Orders above 20 5 points each
- Families (and subfamilies) 1 point each
- Neatness 10 points max

Entomology Internet Links

Insect Collections:

- Texas Natural Science Center (UT-Austin) http://www.utexas.edu/tmm/tnhc/entomology/index.html
- Texas A&M http://insects.tamu.edu/feature/museum/
- American Museum of Natural History (New York City) http://www.amnh.org
- Field Museum (Chicago, Illinois) http://www.fieldmuseum.org
- National Museum of Natural History (Washington, DC) http://www.mnh.si.edu
- Arthropods of La Selva (Costa Rica) http://viceroy.eeb.uconn.edu/alas/alas.html
- Louisiana Arthropod Museum (Baton Rouge) http://www.agctr.lsu.edu/arthropodmuseum/
- Mississippi Entomological Museum http://www.msstate.edu/org/mississippientmuseum/
- Florida State Collection of Arthropods http://www.fsca-dpi.org/OverviewFrame.htm

Entomological Societies:

- Entomological Society of America http://www.entsoc.org
UNIVERSITY POLICIES

UT Tyler Honor Code
Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students Rights and Responsibilities
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www.uttyler.edu/wellness/rightsresponsibilities.php

Campus Carry
We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. Please be aware that many research and teaching laboratories in the Department of Biology are approved Exclusion Zones. Be alert to signage throughout the HPR and BEP buildings. More information is available at http://www.uttyler.edu/about/campus-carry/index.php

UT Tyler a Tobacco-Free University
All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Grade Replacement/Forgiveness and Census Date Policies
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. (For Fall, the Census Date is Sept. 12.) Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester’s Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date (Sept. 12th) is the deadline for many forms and enrollment actions of which students need to be aware. These include:
• Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
• Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
• Schedule adjustments (section changes, adding a new class, dropping without a “W” grade)
• Being reinstated or re-enrolled in classes after being dropped for non-payment
• Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).
Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability Services
In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor’s directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

**Student Standards of Academic Conduct:** Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

(i) “Cheating” includes, but is not limited to:
- copying from another student’s test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed “crib notes”. The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
- falsifying research data, laboratory reports, and/or other academic work offered for credit;
- taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
- misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.
(ii) “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another’s work and the submission of it as one’s own academic work offered for credit.

(iii) “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

(iv) All written work that is submitted will be subject to review by SafeAssign™, available on Blackboard.

**UT Tyler Resources for Students:**

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu, http://www.uttyler.edu/writingcenter/
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu, https://www.uttyler.edu/tutoring/
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) https://www.uttyler.edu/counseling/