Welcome to Insects of North America

Lecture: T-Th 11-12:20 in ENV 391

with Dr. Jaime Baxter-Slye

jaime.slye@unt.edu

ENV 332

Slye's office hours: W 1-4 ENV 332

or click here to use Slye's bookings page

Laboratory .302 T 1-3:50 in ENV 358

with Julia Renfrow

juliarenfrow@my.unt.edu

Office Hours: room time

Laboratory .301 Th 1-3:50 in ENV 358

with Jonothan Cantu

jonothoncantu@my.unt.edu

Office Hours: room time

UNIVERSITY OF NORTH TEXAS

UNT COLLEGE OF SCIENCE Department of Biological Sciences

UNT ADVANCED ENVIRONMENTAL RESEARCH INSTITUTE

Get involved! https://linktr.ee/baxterslye

Fall 2025 Insects of North America

BIOL4070/5070.001 & one lab either .301 or .302
must register for both one 3 hr lecture credit & one 1 hr laboratory credit

When: Lecture T & Th 11-12:20; .302 lab T 1-3:50 or .301 lab Th 1-3:50
Where: Lecture ENV 391 and Lab ENV 358 and on-site at field locations.

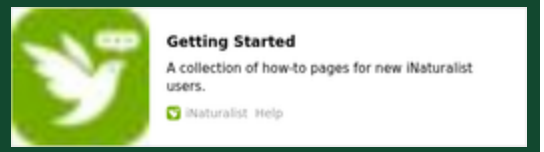
What will I need?

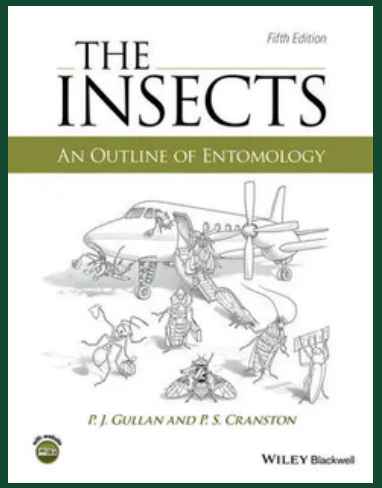
You provide:

The Insects: An Outline of Entomology, 5th EditionISBN: 978-1-118-84615-5



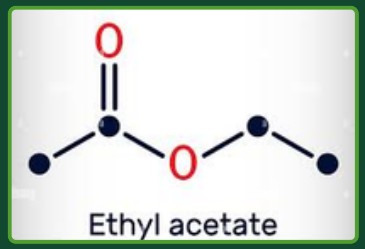






We provide & you return

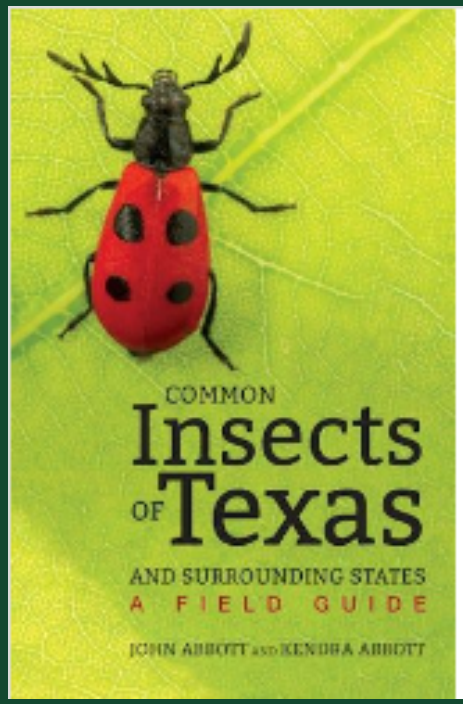





Transportation will be provided to field trips

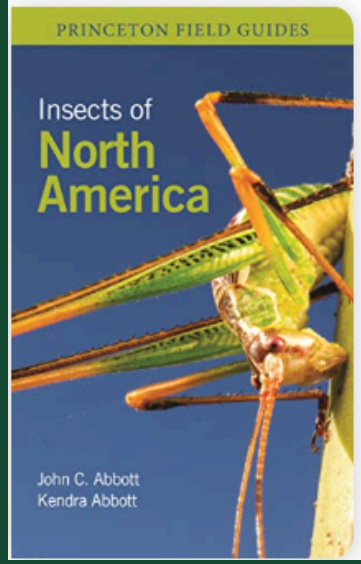
Suggested Laboratory References



Common Insects of Texas and Surrounding States

Thanks to its size and geographic position, Texas is home to nearly 30,000 species of insects, likely making its insect population the most diverse in the na...

University of Texas Press /



Insects of North America

John C Abbott, Kendra K. Abbott

★★★★½ 4.67 6 ratings · 2 reviews

The ultimate photographic field guide to North American insects

This amazing field guide enables you to identify all 783 families of insects currently recognized in the United States and Canada. Richly illustrated with more than 3,700 stunning photos along with keys to families for many of the orders, Insects of North America features a comprehensive introduction that discusses classification and nomenclature, insect diversity, global threats, the latest collecting and curatorial techniques, and the many ways these remarkable organisms impact society. Combined with in-depth taxonomic coverage, this is the essential resource for both professionals and amateurs interested in the most diverse group of animals on the planet.

Insects of North America Lecture and Laboratory (BIOL4070/5070) is an upper-level undergraduate & graduate-level entomology class with both traditional and applied approaches.

Concepts include morphology, physiology, ethology, classification and control of insects and related arthropods.

A pinned insect collection, an iNaturalist insect collection presentation, a group site assessment using insect community structure, traditional exams ('opportunities'), lab practicals, and active participation will be assessed.

Prerequisite(s) : Completion of the Foundation requirements for your declared Biological Sciences major or Department consent. If major is outside of Biological Sciences, follow the Foundation requirements for the Biology BA. May not be repeated at the graduate level as BIOL 5070.

Enrollment Information	
Enrollment Requirements	B107 / C+ in {[(BIOL 1710 / B101) AND (BIOL 1720 / B102) AND (BIOL 1750 / BIOL 1760 / BI03)] AND [(BIOL 2041+2 / 2140 / 2241 / 2251 / 2302 +2312) / B104] AND [(CHEM 2370 + CHEM 3210) / B106] AND [MATH 1650/ MATH 1680]} 2.5 GPA average in these courses.

Learning objectives include:

- **Focus on traditional learning during lecture which includes importance, morphological, physiological, management, and conservation of insects.**
- **Communicate entomological concepts via exams and presentations.**
- **Learn, memorize and sight ID families of insects in the north central Texas region. dentification skills will be assessed in 2 practical exams: students will sight ID insect orders and families covered in the lab.**
- **Collect & photograph insects to be identified, pinned, and submitted as an insect collection. Students' insect collections will be graded on the number of insect families collected and the quality of pinning and labelling of specimens. In lieu of excessive insect killing, a portion of the insect collection will be photographs and iNaturalist documentation, organized into a slide show presentation.**
- **A site assessment using insect community structure metrics will be conducted during field trips and presented via a slide deck as a group project.**

Unique opportunities include:

A Blackland Prairie reconstruction site will be assessed using insect community structure.

- **Thirty-eight students will work together to document insect and plant interactions.**
- **Groups will work together to evaluate data and use community metrics to inform stakeholders about the prairie health.**
- **The presentation will be in the form of a professional information pdf that can be passed on to stakeholders.**

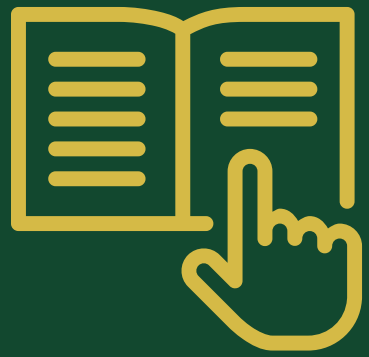
Nature photography skills will be obtained.

- **In lieu of killing excessive amounts of insects, students will learn how to photograph live, active insects in the field and use the iNaturalist community together with formal insect keys to identify the insects.**

Student portfolio developement

- **The traditional insect collection, the iNat collection, and the group presentation can be added to the student portfolio.**

Read material on CANVAS & One Drive for the upcoming week



Actively participate & take high-quality notes...be present

Study by re-writing, making associations, teaching others

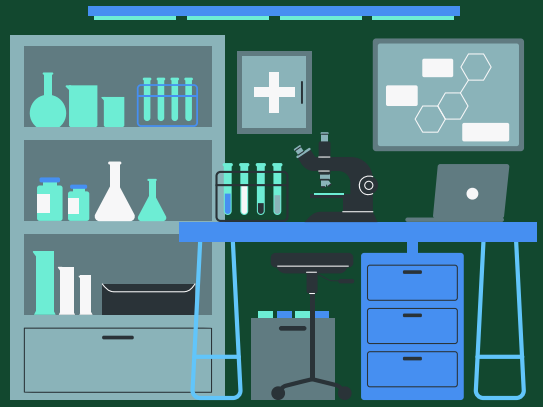
Lecture meets in
391
every T & Th

11^{00}

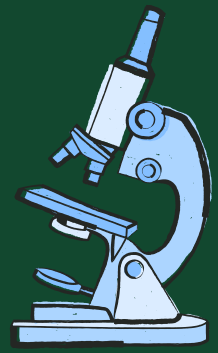
Lab meets in 358
or loading dock
on T or Th

13^{00}

For lab workdays, meet in lab and take active notes



Be able to sight ID insects and spell
scientific names correctly



or conduct field surveys or work on projects in lab

Class Schedule & Points

Insects of North America (BIOL4070/5070) Lecture Plan, subject to change

Lecture Date	Coverage	Points
8.19	Introduction, Syllabus Agreement, begin Ch. 1	5
8.21	Ch. 1	5
8.26	Ch.7	5
8.28	Ch.7	5
9.2	Ch.2	5
9.4	Ch. 2	5
9.9	Ch. 3	5
9.11	Ch. 3	5
9.16	**Opportunity I: Ch. 1, 7, 2, & 3**	**100**
9.18	Ch. 4	5
9.23	Ch. 5	5
9.25	Ch. 5	5
9.30	Ch. 6	5
10.2	Ch. 6	5
10.7	Ch. 8	5
10.9	Ch. 9	5
10.14	Ch. 10	5
10.16	Catch up & Review	5
10.21	**Opportunity II: 4, 5, 6, 8, 9, & 10**	**100**
10.23	Ch. 11	5

Insects of North America (BIOL4070/5070) Laboratory Plan, subject to change

Laboratory Date	Lab Activity	Points
8.19 or 8.21	Introduction, Syllabus & Safety Agreement with Questionaire, Group Formation, Equipment Distribution; Morphology and Microscope lesson; Grasshopper external morphology dissection	20
8.26 or 8/28	**Orders:** Collembola, Diplura, Protura, Archaeognatha, Zygentoma, Ephemeroptera & Odonata ; go over field techniques	20
9.2 or 9.4	**FIELD TRIP to LLELA:** Bring collecting equipment, snack, water, sunscreen, hat and backpack. (2 hr logistics, 1 hr 15 mins observation time) focus on forest of Barn Owl Ridge	20
9.9 or 9.11	**Orders:** Plecoptera, Dermaptera, Orthoptera, Embioptera, Phasmatodea, Mantodea & Blattodea	20
9.16 or 9.18	**FIELD TRIP to LLELA:** Bring collecting equipment, snack, water, sunscreen, hat and backpack. (2 hr logistics, 1 hr 15 mins observation time) focus on prairie of Barn Owl Ridge	20
9.23 or 9.25	**Orders:** Psocodea, Phthiraptera, Thysanoptera, Hemiptera, Neuroptera, Megaloptera, Raphidioptera	20
9.30 or 10.2	**FIELD TRIP to Pollinative Prairie:** Bring collecting equipment, snack, water, sunscreen, hat and backpack. (45 mins logistics)	20
10.7 or 10.9	**Group Workday, Collection Check: 5 pinned (1 to genus, 3 to family at least; 45 iNat observations; at least 4 iNat slides complete)**	20 100
10.14 or 10.16	**LAB PRACTICAL I (approx 1.5 hrs), 15 min break, and Group Workday (1 hr)**	100
10.21 or 10/23	**Orders:** Coleoptera; optional night mothing at LLELA 6:30pm - 10:30pm	20

Class Schedule & Points

10.23	Ch. 11	5
10.28	Ch. 12	5
10.30	Ch. 13	5
11.4	Ch. 14	5
11.6	Ch. 15	5
11.11	Ch. 16	5
11.13	Ch. 17	5
11.18	Catch up & Review	5
11.20	**Grad Student Group Presents (15 mins) / Group Workday**	**100**
11.25-27	Thanksgiving, No Classes	
12.2 **12.4**	**Undergrad 10 min Presentation (40 mins), Buffer (10 mins); Discussion (30 mins)**	**100**
Final Tuesday, Dec 9th 10:30 AM-12:30 PM.	**Final Opportunity Ch. 11, 12, 13, 14, 15, 16, & 17**	**100**
	if 95% SPOT filled, plus 5 points on Final Opportunity	
Total Points		**525**
Final Presentation (19%)		100
Opportunities (57%)		300
Participation (24%) (extra credit available to make up to 20 points)		125
Extra Credit up to 20 points: mothings, student org workdays, on your own native bed cleanup		

	Orders: Coleoptera	
10.28 or 10.30	**Orders:** Diptera, Mecoptera, Siphonaptera; optional night mothing at LLELA 6:30pm - 10:30pm	20
11.4 or 11.6	**Orders:** Trichoptera, Lepidoptera	20
11.11 or 11.13	**Orders:** Hymenoptera	20
11.18 or 11.20	Group Workday & Collection Help	20
11.25 or 11.27	Thanksgiving, No Classes	
12.2 or 12.4	**LAB PRACTICAL II**	**100**
12.5	**FINAL COLLECTION & EQUIPMENT Due by 4pm**	**100**
	if 95% SPOT filled, plus 5 points on Final Collection	
Total Points		**660**
Collection: mid-point & final (30%)		200
Practicals (30%)		200
Participation (40%) (make-up in office hours only)		260
Extra credit cannot be used for lab		
200 points will be deducted if equipment (net, kill jar, insect case) are not returned by 12/5		

Final Tuesday, Dec 9th 10:30 AM-12:30 PM.

Final Letter Grade = number of points received / 1000 *100 = % rounded to the nearest whole number
A = 89.5 - 100; B = 79.5 - 89.4; C = 69.5 - 79.4; D = 59.5 - 69.4; F < 59.4

Insect Collection

Insect Collection

Pinned	**Final Points**	**Mid-Point Points**
2 from Collembola, Diplura, Protura, Archaeognatha, or Zygentoma	2	
1 from Ephemeroptera	1	
1 from Odonata	1	
2 from Dermaptera, Orthoptera, Embioptera, or Blattodea	2	
2 from Psocodea, Phthiraptera, Thysanoptera, Hemiptera	2	
1 from Coleoptera	1	
1 from Trichoptera or Lepidoptera	1	
10 Total Pinned Insects of High Quality (straight, label correct) (must have one wing spread, one envelope, and one slide or micropinned)	10	5
3 Total with genus-level ID with key notes (provide the key that you used with your dichotomous selection rationale)	3	1
7 Total with family-level ID or finer (provide the key that you used with your dichotomous selection rationale)	7	3
INAT		
Minimum 15 observations from *each field trip* to lowest possible ID	45	45
Slide deck showing observation link, photo, & imporantance/notes about taxa		
aestetics of slide deck (title slide, organization, no typos)	4	2
		4
****While the iNat community may offer ID suggestions, it is up to the student to denote important morphological features		slides complete
on the slides to ensure quality control and identification using a key.*****		
Must have:		
2 from Ephemeroptera or Odonata	2	
4 from Plecoptera, Dermaptera, Orthoptera, Embioptera, Phasmatodea, Mantodea & Blattodea	4	
4 from Psocodea, Phthiraptera, Thysanoptera, Hemiptera, Neuroptera, Megaloptera, or Raphidioptera	4	
2 from Coleoptera	2	
2 from Diptera, Mecoptera, or Siphonaptera	2	
3 from Trichoptera or Lepidoptera	3	
4 from Hymenoptera	4	
TOTAL	**100**	**60, with grade adjusted to 100% for 100 points**

Group Project: Create a Public-Friendly PDF of Graduate Pollinative Prairie Insect Assessment Undergraduate LLELA Barn Owl Ridge Insect Assessment

Group Projects

Grad group does the Pollinative Prairie for their project; All undergrads do LLELA

Tu labs 17 plus 3 grad; Grad group, 4 undergrad groups of no less than 3 people;

Th labs 18 plus 0 grad; 4 undergrad groups of no less than 3 people

10 min presentation	**Points**
One important fact about site and why its important we do the insect study per group member	10
Map of site with key features	15
Key findings: metrics, important taxa, plant hosts	25
One management goal per group member	10
Clean & Professional (see expectation example)	10
All members present well (appear practiced)	10
Presentation is timely and polished	10
Presentataion is aestically pleasing, no typos	10
Total for Presentation	**100**

Attendance Policy

- We use ‘active participation’ in lieu of attendance.
- Participation = active discussions, actively conducting surveys, making documentations, collecting data, acting in a professional manner, and remaining safe and calm.
- If a University excused absence occurs, students should immediately make arrangements with their TA to make up the lab before the end of the week or make other arrangements if that is not possible.
- We ask that if you miss lab, you contact your group and your TA ASAP so that we can work together to get caught back up.
- Your group depends on you. Please don’t skip.

Red-tailed Hawk (*Buteo jamaicensis*) at the Pollinative Prairie

Late turn in policy for any assignment

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					All assignments due Fridays by midnight	Late -1
Late -1	Late -1	Late -1	Late -1	Late -1	Late -1	
	After 8 am on the 2nd Friday post deadline, no assignments taken for any points unless Dean's note or University excused reasons.					

Excused Absences

1. An absence may be excused for the following reasons:
   a. religious holy day, including travel for that purpose;
   b. active military service, including travel for that purpose;
   c. participation in an official university function;
   d. illness or other extenuating circumstances;
   e. pregnancy and parenting under Title IX; and
   f. when the University is officially closed.
2. A student is responsible for requesting an excused absence in writing, providing satisfactory evidence to the faculty member to substantiate excused absence and delivering the request personally to the faculty member assigned to the course for which the student will be absent.
3. When an absence is excused, the faculty member will provide a reasonable time after the absence for the student to complete an assignment or examination missed.
4. Faculty members are required to find a fair resolution if a student missed an examination or assignment on days when the university is officially closed.
5. A student will not be penalized for an excused absence and will be allowed to take an examination or complete an assignment from which the student is excused within a reasonable period after the absence.
6. A student needing assistance verifying absences due to illness or extenuating circumstances for all courses should contact the Dean of Students office. The Dean of Students office will verify the student's documentation and advocate on the student's behalf, as appropriate, to instructors for excused absences.

Late turn in policy for any missed field trip or in lab workday

For missed field trips or in-lab workday, schedule a meeting with TA within 7 days to have a 'virtual make up'.

We will walk you thru what we did on the field trip and the data you missed.

If a meeting occurs within 7 days, 20 pts will be given. If a meeting does not occur within 7 days, you will receive a zero for participation points.

UNT Policy click here

Our Ethics

*As members of the **UNT Community**, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact.*

UNT does not tolerate identity-based discrimination, harassment, and retaliation.

In addition, sometimes in Ecology Laboratory we may not agree on certain issues. However, we must refrain from using insulting, degrading, disrespectful, or offensive terms and language when discussing topics or ideas either in-person, in written assignments, or in group work settings. This includes time outside of lab while working with your group. Failure to do so may result in a point deduction due to lack of effective participation.

Blue Jay (*Cyanocitta cristata*)

UNT ‘Rules of Engagement’

- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from personal experiences. Use “I” statements to share thoughts.
- Use your critical thinking skills to challenge other people’s ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as “YELLING!”
- Avoid making assumptions, ask for clarification.
- Proofread and fact-check your sources.
- See these Engagement Guidelines

Typical Orbweavers (Araneinae)

Scholastic Dishonesty

The Ecological Action Studio has a zero-tolerance policy for scholastic dishonesty including:

- copying from another student's work
- uploading pictures on iNat that you did not take
- groups plagiarizing previous semester projects or literature from sources (not citing)

Penalty is a reduction in points, a zero for the assignment, and/or be reported to the Dean of Students.

The term 'plagiarism' includes, but is not limited to:

- the knowing or negligent use by paraphrase or direct quotation of the work of another person without full and clear acknowledgment

If we suspect you of cheating, an email will be sent to you to begin an investigation that could lead to penalties.

Feral Pigeon
(*Columba livia var. domestica)*

How can I discuss my grades with Slye or my TA?

The Family Educational Rights and Privacy Act (FERPA, 1974) does not permit faculty or staff to report grades by phone or email. In addition, per University policy, grades cannot be posted publicly. Do not request any information from your TA about grades unless it is virtually or in-person.

You can:

- go to office hours
- make an appointment in-person or virtual
- request to speak to your us before or after class

Black Vulture (*Coragyps atratus*)

ODA Information

Students seeking reasonable accommodations must first register with the Office of Disability (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course.

You may request reasonable accommodations at any time.

Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class.

For additional information, refer to the Office of Disability Access website at https://studentaffairs.unt.edu/office-disability-access. You may also contact ODA by phone at (940) 565-4323.

Great Blue Heron (*Ardea herodias*)

UNT Services

Academic Support & Student Services

Student Support Services
Mental Health

Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)

Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)

UNT Care Team (https://studentaffairs.unt.edu/care)

UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)

Individual Counseling (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Survivor Advocacy
UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-5652648.