

Tree and Shrub Insects

ENY 3541C/ ENY6934

3 credit hours
Fall 2014

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Office Hours: Because this is a web-based course, please use email or office phone for questions. My office hours are held in Room 219 in the Davie West Building at the Ft. Lauderdale Research and Education Center, Davie, FL, but call for an appointment.

Course Website: Lectures can be accessed in Sakai, by downloading and opening the current version of Mozilla Firefox, and going to <https://iss.at.ufl.edu>. Students should view 2 narrated lectures each week to keep up with the schedule of topics, unless otherwise indicated. The student's UF Gatorlink username and password are necessary to log into the system. Tutorials are available in Sakai under "Help," if needed.

Recommended References:

Warren T. Johnson and Howard H. Lyon. 1991. Insects that Feed on Trees and Shrubs. Comstock Publishing Associates; Second revised edition. 560 pages. ISBN-10: 0801426022 , ISBN-13: 978-0801426025

Whitney Cranshaw. 2004 Garden Insects of North America: The Ultimate Guide to Backyard Bugs. (Princeton Field Guides)[Paperback] Princeton University Press; First Printing edition. Paperback: 672 pages. ISBN-10: 0691095612 , ISBN-13: 978-0691095615

For European Insect Fauna

David V. Alford. 2012. Pests of Ornamental Trees, Shrubs and Flowers; A color handbook. Academic Press; 2 edition. 480 pages \$175.00 SRP
ISBN-10: 0123985153 , ISBN-13: 978-0123985156

Additional Resources:

Included in the Resources section for this course in Sakai

Distance students are required to purchase their own insect collection kits, but on-campus students may check out supplies from Nick Hostettler, located in the supply room/loading dock area of Steinmetz Hall. See the separate set of instructions for the collection for more information.

Students choosing to do the 30 species PowerPoint alternative to the insect collection will need to have macro photography capability to obtain the required photos. Cameras with macro photography capability are not supplied by the instructor or the Entomology and Nematology Department.

Course Description: Identification, biology, and management of common arthropod families and species inhabiting ornamental trees, palms, lianas, and shrubs in the urban environment (emphasis on the Southeastern U.S.) are discussed. This includes both pest and beneficial arthropods. Integrated pest management (IPM) (e.g., Monitoring, safe handling and use of insecticides, biological and cultural control, plant resistance, etc.) is discussed for the diverse pest guilds.

Prerequisite Knowledge and Skills:

- At least one semester of a college-level Biology course is strongly encouraged, but not required.
- Students should be self-motivated, and avoid procrastinating.
- Students must have basic computer skills to navigate the course on Sakai.

Purpose of Course: This semester-long course was created to help current and/or future ornamental plant, and tree managers learn to monitor, correctly identify, and then determine the best integrated pest management practices for use in their unique situations. It is a practical source of information that students can use in undergraduate or graduate degree programs, certificate programs, or in preparing for pesticide applicator licensing tests.

Course Goals and/or Objectives:

By the end of this course, students will be able to:

- Recognize arthropods in different horticulturally-important orders and families by sight and written description.
- Differentiate arthropod signs and symptoms, and deduce the problem in various situations like woodlots, nurseries, and home landscapes.
- Explain the rationale for IPM and be able to apply tactics in ornamental and arboriculture integrated pest management.

Test Policy:

- Tests are closed-book (i.e., working with others or phone/web/textbook/note use during quizzes and tests, and copying and/or sharing test questions/answers with others, are prohibited). You are bound by the UF Honor Policy.
- Tests will be open for 60 minutes after they have been started.
- If the test is not finished within the time period, it will be automatically submitted. DO NOT try to reopen it or start a new test – it will cause Sakai problems.
- Save your answers frequently, in case of power failure or software glitches. Caution: if you login to a test/quiz and then logout, Sakai will not let you back in and the test will be graded on the work that was done.
- A grade shown in Sakai upon submission of a test/quiz is **only** a partial score. Sakai doesn't grade short answer or essay questions. Please allow the instructor a week for grading.
- Concerns about grades can be discussed privately after the assessment period has closed.

Make-up Policy: No make-up tests or quizzes will be given, unless the student made previous arrangements with the instructor or has an excused absence. Unexcused absences will receive a zero.

Assignment Policy: Late assignments will not be accepted without proper documentation of an emergency or technological problem. All written assignments must be submitted through TurnItIn so both the student and instructor will see the report generated.

Netiquette: Communication Courtesy: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. See <http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>.

Course Technology: A computer that can view PowerPoint and pdf files, has adequate memory and speed, and meets the minimum standards for UF computer use is needed. The following website explains the University of Florida computer hardware and software policy: http://dell.techhub.ufl.edu/computer_requirement.html. The current version of Firefox (Mozilla) must be downloaded from the internet to access the course materials: <http://www.mozilla.com/en-US/firefox/ie.html>. Contact the UF Computing Help Desk (352-392-4357; helpdesk@ufl.edu) with any technological problems. You will be issued a ticket number – print and save this!

Getting Help:

For issues with technical difficulties for E-learning in Sakai, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2

- <https://lss.at.ufl.edu/help.shtml>

** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Course Schedule

Tree and Shrub Insects ENY 3541C/ ENY6934

Module	Lesson	Reading	Assignment	Assessment
1	Introduction: Major Taxa of Arthropods as Pests of Trees and Shrubs			
2	Introduction; What are Trees, Shrubs, Palms, and Lianas?			
3	Conifers – cone-bearing plants			
4 A&B	Hardwoods- Flowering trees and shrubs			TEST 1
5	Introduction to Phytophagous insects that feed on vascular plants- An Overview			
6 A&B	Hardwood Defoliators			
7	Conifer Defoliators			
8	Hardwood Borers			
9	Conifer Borers			
10	Hardwood Suckers – Hemiptera and Thysanoptera			
11	Hardwood Suckers – Scales and Whiteflies			
12	Conifer Suckers			TEST 2
13	Palm Insects			
14	Gall Formers			
15	Insects that Benefit Trees and Shrubs			
				TEST 3

Final Exam: *No comprehensive final is given for this course.*

Disclaimer: This syllabus represents my current plans and objectives. As the semester progresses, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

Grade Determination:

The requirements are 1) a properly curated collection of either pest or beneficial insect or 2) a thirty species PowerPoint presentation of tree and shrub insects you have photographed (macrophotography in required) and 3) three Exams spaced throughout the semester 4) a preapproved Feature Creature Article required of graduate students in ENY6934.

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A properly curated collection of either pest or beneficial insect or a thirty slide PowerPoint presentation	40 %	25%
3 Semester examinations	20% each 60 %	60%
A preapproved Feature Creature article		15%

Insect Collection: If you choose to prepare the modest, 30 specimen collection, it must be properly curated and labeled. Instructions on the acceptable orders and families, how to prepare specimens, the due date, etc., will be posted in a separate file under Assignments. To achieve the best score on the collection, follow the instructions, read the chapter on “Collecting and preserving insects” by D. J. Borror and R. E. White. I highly recommend collecting extra specimens, practicing your pinning technique on damaged or duplicate specimens, and using the best insects in your final collection. DO NOT mail vials inside a specimen box that also has pinned insects, or the collection will be destroyed in transit. Instead, place the vials (in a sealable bag) and specimen box inside another box, surround them with paper, bubblewrap, or other padding, and write FRAGILE around the outside of the box. All larvae should be fixed in boiling water prior to being preserved in 70-85% ethanol.

PowerPoint Presentation: Option 2. You may create a thirty species PowerPoint presentation of tree and shrub insects you have photographed. Macrophotography is required in order to see enough detail for identification Try to limit yourself to 60 slides. Each species should include Family, *Genus species*, common name, host in picture, host range, characteristic damage, and recommended control options. Place an identification marker in each photo for confirming its originality as your work.

Your Name
DDMonth 2013

Featured Creature Article: Graduate students must write a new Featured Creature article (for examples, see: <http://entomology.ifas.ufl.edu/creatures>). You may select either a pests or beneficial arthropods provided by the instructor or suggest a topic and obtain approval. The format for each article must conform to the headings and type of information found in most of these Featured Creature articles (a separate file with instructions and due dates will be posted under Assignments).

After I approve your topic, you will upload a first draft through Assignments and TurnItIn

to determine its originality. I will edit and grade the draft, return it, and you must submit a final draft through Sakai in Assignments. Students must request permission for use of any illustrations. You may pursue publishing a high quality Featured Creature online, if the article is reviewed again by an entomology faculty member, and submitted with a resume or CV. This would likely occur after this class is completed and is the student's responsibility.

Grading scale:

A = 93-100 %	A- = 90-92 %	B+ = 87-89 %	B = 83-86 %
B- = 80-82 %	C+ = 77-79 %	C = 73-76 %	C- = 70-72 %
D+ = 67-69 %	D = 63-66 %	D- = 60-62 %	E < 60 %

The UF Grading Policy is at:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>.

Plagiarism

Plagiarism is a serious problem in academia today, especially with the ease of obtaining information from the World Wide Web. Plagiarism is defined as representing the words or ideas of another person as one's own, without attribution to the source. All words and ideas must be attributed to a source unless they are considered common knowledge (i.e., widely known by many people and found in many different sources). There are many kinds of plagiarism, as you will read on the Guide to Plagiarism website referenced below.

Plagiarism is unethical, unacceptable in science, and prohibited by the UF Student Honor Code (<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>). The consequences for plagiarism while at the University of Florida range from receiving a grade of zero for the plagiarized assignment or a failing grade for the course, to, for repeated offenses, expulsion from the university. Plagiarism after graduate training calls into question one's scientific integrity and can lead to banning of publication in journals and the loss of jobs/careers.

In some countries, it is an acceptable practice to write in a manner that faculty members at the University of Florida consider to be plagiarism. Students studying in our university and with plans to publish their research in the English language need to know what plagiarism is and how to avoid it.

Students who plagiarize will be caught and consequences will be applied. Many faculty in our department check all written assignments using an anti-plagiarism software called Turnitin® (<http://www.at.ufl.edu/~turnitin/about.html>).

For further information and examples of plagiarism, I strongly suggest that you please read the George Smathers' Library Guide to Plagiarism at http://www.uflib.ufl.edu/msl/services/tutorials/plagiarism/student_intro.html

Please understand that our purpose in bringing to your attention the matter of

plagiarism is to help train you to be ethical scientists, not to impugn your character.

University Policy on Academic Misconduct: In 1995 the UF student body enacted an honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: "**On my honor, I have neither given nor received unauthorized aid in doing this assignment.**"

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court. (Source: 2012-2013 Undergraduate Catalog)

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor. This policy will be vigorously upheld at all times in this course.

Copyrighted Materials and Software Use: All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are against University policies and rules, disciplinary action will be taken, as appropriate.

University Policy on Accommodating Students with Disabilities: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation before submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. Other resources are available at <http://www.distance.ufl.edu/getting-help>

UF Counseling Services: Resources are available on campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources include:

1. University Counseling Center, & Wellness Center, 3190 Radio Road, 352-392-1575, (<http://www.counseling.ufl.edu/cwc/>).

- Counseling Services
- Groups and Workshops
- Outreach and Consultation
- Self-Help Library
- Training Programs
- Community Provider Database

2. Career Resource Center, First Floor JWRU, 352-392-1601 (<http://www.crc.ufl.edu/>) for career development assistance and counseling.

Should you have any complaints with your experience in this course, please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

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