

Local Flora - BOT 3151C - Fall 2014
Meeting time: Fridays, periods 4 – 9 (10:40 am – 4:55 pm)
3 credits

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Description:

Local flora is a fun, field intensive course in which you'll be introduced to local Florida plant communities and ecosystems and learn to identify the plants within them. Get ready for immersion! The course has no official academic prerequisites, so students may come to the class having had no previous botany background. Local flora requires students to master some basic botanical concepts in order to do well. If you are a beginner, don't worry! All the botany you need to know will be taught as we go along. If you are more advanced, you will still find the course challenging. We make every effort to make the course valuable to everyone.

Learning outcomes: by the end of this course, you will be able to:

- 1) Identify ~150 – 180 species of local plants using morphological and habitat clues.
- 2) Identify unknown plants using a dichotomous key along with text and web resources.
- 3) Develop a systematic approach to identifying an unknown plant using knowledge about plant diversity, habitat, and vegetative and reproductive morphology.
- 4) Describe connections between plant species and the local ecosystems in which they are found.
- 5) Compare and contrast fire regime and hydroperiod of major local ecosystems.
- 6) Distinguish between these terms: native, endemic, introduced, and invasive.
- 7) Outline the geographical, geological, and historical influences on local plant communities.

Required Textbook:

Wunderlin, R. P. and Hansen, B.F. 2011. Guide to the Vascular Plants of Florida, 3rd Edition. University Press of Florida, Gainesville (available at UF Bookstore).

Recommended book:

Myers, R.L., and J.J. Ewel, eds. 1990. Ecosystems of Florida. University of Central Florida Press, Orlando (available from online booksellers ~\$30).

Required equipment:

A 10x or 15x hand lens (available at UF Bookstore or online sources)
A pair of pruning shears (available at hardware and gardening stores)

Your course grades will be determined based on:

1) 8 regular plant quizzes @ 60 points each	480 points (~ 47%)	Grading scale:
2) 2 Exams based on other material @ 100 points each	200 (~ 20%)	≥ 90 – 100 = A
3) 4 Key exercises @ 15 points each	60 (~ 6%)	≥ 80 – < 90 = B
4) 4 Graded homework activities @ 25 points each	100 (~ 10%)	≥ 70 – < 80 = C
5) 1 Final group field project	60 (~ 6%)	≥ 60 – < 70 = D
6) 1 Final plant quiz @ 120 points	<u>120 (~ 12%)</u>	< 60 = E
TOTAL	1020	

Description of the components of your grade:

- 1) Plant quizzes.** These quizzes test your knowledge of the plant species we've learned on field trips. You'll be expected to identify the species using freshly cut specimens or living specimens in the field. For each plant species, you should also know whether it is native to Florida or introduced, and what use or importance it has (if any) to humans.
Each plant quiz is cumulative. Only Latin binomial plant names will be accepted: Correct genus name = 2 pts. Correct species (genus name plus specific epithet) = 3pts. No credit will be given for common names.
- 2) Exams.** Your **first exam on September 12** will cover everything presented in lecture and lab on August 29 and December 5. This exam is closed notes.
Your **second exam on December 5** will cover everything examined in the graded homework activities and the lectures presented on September 26 and October 10 (endemism, morphology of Asteraceae and Poaceae, phylogenetics). This exam is **open notes**.
- 3) Key exercises.** We'll use our course textbook and other sources to identify unknown plants. **On the days we are doing key exercises please be sure to bring your book!!** See the schedule at the end of the syllabus.
- 4) Graded homework activities.** For these, you'll be given resources and asked to complete a homework assignment. Your participation in these activities is essential for you to understand plant communities, and will form the basis of your notes you can access to take the open notes Exam 2. See the schedule at the end of the syllabus for assignments and due dates.
- 5) Final group field project.** The class will divide into small groups to complete an exercise in basic floristic sampling. Each group will summarize their findings in a report to be given orally in class and submitted on paper. It will take place on **November 21 at the Natural Areas Teaching Lab**.
- 6) Final plant quiz.** This is the cumulative quiz testing your identification skills for all plant species learned in the course. It will be given on **December 5**.

Field trips:

We will take eight field trips to visit many different types of plant communities. We will be studying the local plant life right in the places where the plants grow, and you will be learning basic techniques of field botany. On these field trips, you'll collect and learn to identify the plants upon which you'll be quizzed. You'll also get a chance to look at the plant communities we've been learning about, and have a lot of fun seeing other creatures, too.

Bring to the field trips: clippers, bags for collecting plants, clipboard or notebook, water to drink, and snacks/lunch. (Cameras can be very helpful, too.)

Dress appropriately. Wear long pants and old shoes. Sandals are not recommended. Be prepared for normal Florida conditions (i.e. heat, sun, mosquitoes, poison ivy, rattlesnakes, ticks, rain, alligators, etc.) and expect sometimes to get your feet wet.

Field trips will not be cancelled due to weather.

Specimen collection – On our field trips, each student will be encouraged to collect a small specimen of each plant species we cover for the course. You will be shown how to press and dry your specimens so that they will remain in good condition for the duration of the semester. These specimens will be your most important study aid. You should bring clippers or scissors and a bag for specimens (a plastic grocery bag will do) with you on every field trip.

Attendance policy:

Attendance is required for success in this course. It is intensive and cumulative – skipping class will leave you with a big chunk of missing information in your notes and collections. Don't miss class.

Make up policy:

Field trips and graded homework activities **CANNOT** be made up. Quizzes, exams, and key exercises may be made up **ONLY** if you miss for a valid reason (e.g., sickness, accident, death in family, etc.) We will work with you to determine if your reason is valid. A makeup field quiz may be given at the end of the semester for those who need it.

Academic honesty policy:

All students registered at the University of Florida have agreed to comply with the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:

<https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx>

University grade policies:

For additional important information regarding UF's grade policies, please see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Students with disabilities:

Students requesting classroom accommodation must first register with the Dean of Students Office. This office will provide documentation to the student, who must then provide this documentation to the instructor when requesting accommodation.

Some Additional Resources (we'll be using many of these during the course):

<http://www.plantatlas.usf.edu/> - this is an excellent resource for photographs and ranges of Florida plants.

<http://plants.usda.gov/> - type a plant name in the search box for more plant info and images.

<http://www.fnai.org/> - a great source of data, maps and info on plant communities, rare species and conservation lands in Florida.

<http://www.fs.fed.us/database/feis/plants/index.html> - Lots of general info on species we cover in class. Easy to look up.

<http://www.flmnh.ufl.edu/natsci/herbarium/> - all kinds of info on Florida plants and collecting.

<http://www.virtualherbarium.org/> - click on the Florida Flora Picture Gallery.

*Duncan, W.H., and Duncan, M.B. 1988. *Trees of the Southeastern United States*. University of Georgia Press, Athens, GA.

*Godfrey, R.K..1988. *Trees, Shrubs, and Woody Vines of Northern Florida and Adjacent Georgia and Alabama*. University of Georgia Press, Athens, GA.

*Godfrey, R.K. and J.W. Wooten. 1979. *Aquatic and Wetland Plants of Southeastern United States: Monocotyledons*. University of Georgia Press, Athens, GA.

*Godfrey, R.K. and J.W. Wooten. 1981. *Aquatic and Wetland Plants of Southeastern United States: Dicotyledons*. University of Georgia Press, Athens, GA.

*Harris, J.G., and Harris, M.W. 2001. *Plant Identification Terminology: an Illustrated Glossary*. Spring Lake Publishing, Spring Lake, UT.

*Taylor, W. K. 1998. *Florida Wildflowers in their Natural Communities*. University Press of Florida, Gainesville.

*Tobe, J.D. et al. 1998. *Florida Wetland Plants: An Identification Manual*. Fla. Dept. of Enviro. Protection, Tallahassee.

Meeting	Agenda	Meeting place	Homework assigned:
Aug. 29	Introduction and syllabus Lecture 1: Plant diversity and taxonomy Laboratory exercise: Vegetative characters Practice field trip on campus and plant press demo	Rolfs 315	
Sept. 5	Lecture 2: Determining factors of local flora Laboratory exercise: Floral and fruit characters	Rolfs 315	Study for Exam 1: All material from Aug. 29 and Sept. 5
Sept. 12	Exam 1 Key exercise 1 Field trip 1: UF Campus	Rolfs 315	Study for Quiz 1 on trip 1 Graded activity: Pine dominated communities (<u>due Sept. 19</u>)
Sept. 19	Quiz 1 Field trip 2: Ocala National Forest	Behind Bartram-Carr	Study for Quiz 2 on trips 1 – 2 Graded activity: Freshwater wetlands (<u>due Sept. 26</u>)
Sept. 26	Quiz 2 Lecture 3: Endemism Field trip 3: Paynes Prairie	Rolfs 315	Study for Quiz 3 on trips 1 – 3 Graded activity: Hardwood communities (<u>due Oct. 3</u>)
Oct. 3	Quiz 3 Key exercise 2 Field trip 4: San Felasco Hammock Preserve State Park	Behind Bartram-Carr	Study for Quiz 4 on trips 1 – 4
Oct. 10	Quiz 4 Lecture 4: Introduction to Asteraceae and Poaceae Key exercise 3 Lecture 5: Phylogenetics	Rolfs 315	Study for Quiz 5 on trips 1 - 4
Oct. 17	NO CLASS - HOMECOMING		
Oct. 24	Quiz 5 Field trip 5: Morningside Nature Center	Behind Bartram-Carr	Study for Quiz 6 on trips 1 – 5 Graded activity: Coastal communities (<u>due Oct. 31</u>)
Oct. 31	Quiz 6 In class activity: Comparison charts Key exercise 4 Field trip 6: Alfred J. Ring Park	Rolfs 315	Study for Quiz 7 on trips 1 - 6
Nov. 7	Quiz 7 Field trip 7: Anastasia State Park	Behind Bartram-Carr	Study for Quiz 8 on trips 1 - 7
Nov. 14	Quiz 8 Field trip 8: Cedar Key	Behind Bartram-Carr	
Nov. 21	Group field project at NATL	Behind Bartram-Carr	Study for quiz on trips 1 – 8 (Final quiz)
Nov. 28	NO CLASS - THANKSGIVING		
Dec. 5	Final quiz Exam 2 – open notes on plant communities and endemism	Rolfs 315	