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Office Hours (Andreu): Wed. 11:00 – 12:00 & Thurs.: 10:00 – 11:00 or email for appointment.  
Smith (study sessions-by appointment)

Course TA’s: Ross Barreto & Natalia Medina-Irizarry

Field Assistants:

Tues:

Weds:

Class Schedule: Mon, Wed. 9:35 – 10:25 (Period 3), Room: MCCD G001

Lab Schedule: Section 1137 – Tues. 8:30 – 12:35 (Periods 2 – 5) (Meet in NZ Breezeway)

Section 1141 – Wed. 12:50 – 4:55 (Periods 6 – 9) (Meet in NZ Breezeway)

**If one intends to manage, conserve, or protect a forest, it is necessary to know the species of which it is composed.**

**Catalog Course Description:** Provides a basic understanding of the classification, nomenclature, morphology, ecological relationships, associations and uses of the major forest tree and shrub species of North America.

**Instructor’s Course Narrative:** Plants are the foundation of an ecosystem and through the process of photosynthesis they generate nutrient resources for all living entities. In this class we learn to identify trees and plants in a variety of habitats found in Florida as well as other parts of the country and world. We will study how to use different characteristics such as leaf shape, arrangement, bark texture, and habitat to identify trees and plant species. We will also learn to use a dichotomous key to assist in the identification of plant species.

**Learning Objectives:** Upon completing the course, students will be able to:

- identify major tree, shrub and herbaceous species in the forests of the southeastern United States from living specimens as well as from samples of flowers, twigs, leaves and fruits
- use rules of scientific nomenclature to correctly present the common name and binomial
- employ dichotomous plant keys to identify unknown species in the future
- state major and minor economic and ecological attributes of each species
- describe physical and biological features associated with the major tree species and their associated forest types in other regions of North America and the world

**Teaching Methods:** Lecture, discussion, demonstrations, assigned readings and hands-on laboratory sessions and field study.

**Required Texts:**

Godfrey, R. K. 1988. Trees, Shrubs and Woody Vines of Northern Florida and Adjacent Georgia and Alabama. The University of Georgia Press, Athens. 734 p.

**Recommended Texts:**

Harris, J.G. and Harris, M. W. 2000. Plant Identification Terminology: An Illustrated Glossary Spring Lake Publishing, Spring Lake UT. 206 p.

Taylor, W. K. 2013. Florida Wildflowers: A Comprehensive Guide. University Press of Florida, Gainesville. 576 p.

Miller H. J. and Miller K. V. 1999. Forest Plants of the Southeast and Their Wildlife Uses. University of Georgia Press. 454 p.

**Tree & Plant Online Resources:**

Plant databases:

<http://plants.usda.gov/> - list of plants and characteristics

<http://www.floridata.com/> - database of Florida trees and plants

<http://oregonstate.edu/trees> -Trees of the Pacific Northwest

<http://www.sfrc.ufl.edu/Extension/ffws/tof.htm> - Trees of Florida

<http://dendro.cnre.vt.edu/dendrology/factsheets.cfm> - Virginia Tech dendrology page

<http://www.fleppc.org/> - Florida Exotic Pest Plant Council

<http://edis.ifas.ufl.edu/index.jsp> - EDIS Documents

[http://www.sfrc.ufl.edu/Extension/florida\\_forestry\\_information/forest\\_resources/](http://www.sfrc.ufl.edu/Extension/florida_forestry_information/forest_resources/) - FL

<http://www.fs.fed.us/database/feis/> - fire effects on plants

<http://davesgarden.com/guides/botanary/> - botanical terminology

Apps:

Pl@ntNet – Plant ID

IveGot1 – Invasive Plants & Animals

iNaturalist – Plant ID

Many other valuable online resources are available. A Google search can help you find endless amounts of information.

### Things you will need for this class in general:

- 1) A pocket knife (any little knife will do - nothing fancy), a pair of hand pruners are also good to have but not required.
- 2) A 10X hand lens. This tool is useful for examining morphology under higher magnification in the field. We will make these available during the first lab and you will be expected to keep these with you when in the field for use when looking at samples.
- 3) Bug Spray, I personally use some kind of mosquito spray to put on exposed skin AND Repel Permanone for ticks and chiggers to put on clothes. (Wal-Mart, Target etc. should have all the selection you need). NOTE: Permanone is extremely lethal to cats. It stays on your clothes for up to 6+ washes. Do NOT apply Permanone to your skin.
- 4) Snake Chaps: If walking in the woods concerns you then these can be a source of peace of mind. They are available from FFGS. See Randy Edwards.
- 5) **A way to take notes in the woods (so a small clipboard or pocket notebook), a pack to carry supplies, pencils (work at odd angles even when wet).** Examples of waterproof field notebooks:  
[https://www.amazon.com/dp/B01ACHNK6G/ref=cm\\_sw\\_em\\_r\\_mt\\_dp\\_6Z129TQR0WCZF0A2DC4E](https://www.amazon.com/dp/B01ACHNK6G/ref=cm_sw_em_r_mt_dp_6Z129TQR0WCZF0A2DC4E)
- 6) Footwear and raingear. It is up to you to decide what you deem necessary to function in the woods, but we will likely encounter briars and precipitation.
- 7) A water bottle filled with water - for field sessions.
- 8) Because we are still in the grips of the COVID-19 pandemic, we ask that you respectfully follow UF's current expectations of vaccinations and mask wearing (for more information, see here: <https://coronavirus.ufl.edu>). By following these simple steps, we can ensure that we are able to enjoy a normal "in-person" semester and help save lives.
- 9) A **POSITIVE ATTITUDE** sure makes learning about trees and plants a whole lot more fun.

If you are allergic to insect bites, or if you have other medical conditions for which emergency treatment may be required, **it is your responsibility to inform the instructor before the course starts, about:** (1) your specific condition, (2) where you keep your medicine, and (3) how to administer emergency treatment should the situation arise. Field labs are long and tedious (oops, I mean energizing); therefore, if you have a medical condition (e.g. diabetes) it is your responsibility to maintain your personal supply of required food or liquids, should you need them, in order to continue the laboratory.

The following is important information you need to know when working outdoors:

- Chiggers: <http://edis.ifas.ufl.edu/pdffiles/IG/IG08500.pdf>
- Ticks & Lyme Disease: <http://edis.ifas.ufl.edu/pdffiles/MG/MG20400.pdf>
- West Nile Virus: <https://www.cdc.gov/westnile/index.html>
- Dengue Fever: <https://www.cdc.gov/dengue/index.html>
- Heat: <https://www.cdc.gov/niosh/topics/heatstress/default.html>
- Dehydration: <https://www.webmd.com/a-to-z-guides/dehydration-adults#1>

## Class and Laboratory Attendance:

As a natural resource professional, **you are expected to assume the responsibility of choosing when absence from class or lab is to your personal or professional advantage.** For whatever reason may justify your absence, **you are entirely responsible for obtaining the information missed from someone other than the instructors/TA.** In general, **NO make-up tests will be given for absence from the exams or quizzes** (of course some situations merit exceptions (hurricanes, death in the family, **serious** illness). Also, because we are limited for space in the vans you will need to get permission from the instructor ahead of time if you wish to attend a lab section other than the one you signed up for. University policies can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> .

## Course Activities

**Lectures:** Directed discussions, explanations, and question/answers from the material that you have been assigned to read. They will also contain additional information that is not in the text or on the slides. I may make lecture slides available electronically for you to access but not until after class.

**Lecture Exam:** Will be comprehensive, covering all material presented in lecture (~50%), and reading assignments (~50%) from the beginning of the course. The format of the exam may include definitions, compare/contrast, short-answer, fill in the blanks, multiple choice, true/false, list/explain, construction of plant identification keys and maybe short essay questions and possibly an actual plant specimen to identify. The exam will be given in class during normal class time.

**In-class Lecture Quizzes:** During the second part of the semester we will be learning about forests in other regions of the country and throughout the world. At the beginning of the class following each of these lectures a short in-class quiz will be given about the previous lecture (~ 5 questions). You will be expected to respond to these questions rapidly so that we can move on to the next lecture. These quizzes are in lieu of a final lecture exam.

## Laboratory Activities

**Homework:** After most labs you will need to complete one of the following assignments (this is designated on the syllabus) The intention of these assignments is to improve your understanding of key characteristics that help identify the plant. As such, these assignments should be completed individually.

**1. “Key 2”:** After each designated weeks’ lab you will write **all** the steps to key out **two** of the plants, we learned previously You will be randomly assigned two species You will use the Godfrey manual as your dichotomous key. The “Key 2” assignments are turned in via CANVAS.

**2. “Create Your Own Key” or Key All:** After each designated weeks’ lab you will develop your own dichotomous key for **all** the plants that you learned in that week’s lab. The key you develop should take each of the plants correctly to its species. **To be clear, you do not use Godfrey for this exercise. You must use the format that I demonstrate in the lecture on *Build a Dichotomous Key* (Sept. 20). Any other format will not be graded.** For the “Create Your Own Key” or Key All, you must turn in a physical copy; no submissions on CANVAS or through email will be accepted.

**Field (Lab) Quizzes:** A quiz will be given at the beginning of **most** field lab sessions. In general, for each plant **on each quiz**, you will be expected to **print, correctly and legibly, the family, genus and species of the plant and answer questions** regarding the plant from information that was presented in lecture, lab, or the text and readings.

Correct spelling and presentation of scientific nomenclature (family and binomial) is essential! Regardless of the weights of laboratory or lecture quizzes, **full credit will be deducted** from each word of scientific nomenclature that is **not spelled or presented correctly!**

There is an expectation that all students can identify the plant in 30 seconds or less. I will be providing you with 2 minutes time initially and that time will be reduced over the course of the semester.

Some of the quizzes will have keying exercises, where you will identify a tree species (known or unknown) using the Godfrey Manual. You will write the steps taken to identify the plant and full credit will only be given when all steps are listed. These quizzes will be listed on Canvas, letting you know to bring your Godfrey text. You **MUST BRING YOUR OWN COPY**. If you do not, you must borrow one from us for a loss of 2 points. However, we do not guarantee availability. You may also borrow one from a fellow student once they finish but we cannot provide extra time for completion as we must move on to field portion of the lab.

Barring cancellations due to hurricanes or other odd events (e.g. Nazi's on campus as we had one year) there will be a total of 12 lab quizzes. You can drop your two (2) lowest lab quiz grades. If you are absent and miss a quiz (regardless if **Excused or Unexcused**), this will count as a dropped quiz. For example, if you are participating in a conference (e.g. SAF, Wildlife Society Meeting), and you can drop the zero, and thus you are not penalized for participating in a professional development opportunity.

The remainder of the lab typically will involve learning 12 – 15 new plants and review of plants we learned in earlier labs.

There will be a field trip which will last the entire day on **Friday Oct. 20 OR Saturday Oct 21**(you select one). **You will be expected to know the plants on the field final that we learn on this trip so like any other class/lab, it is up to you to decide if you want to attend.** You will be required to sign up for **one** of these dates, the sign-up form will be on CANVAS under the **Discussions tab**. Space is limited for each day and it will be on a first come first served basis. You will be responsible for bringing lunch, snacks, water, and appropriate field gear.

### **Assigned Readings:**

You will be given assigned readings most weeks. These readings are listed on the syllabus. These may be salient articles found in magazines, journals, newspapers, books, or something given by a guest lecturer for you to read prior to their discussion. Material in all reading assignments will be used for the written exams and in-class quizzes. You can find them electronically on CANVAS (under the resources folder, “assigned readings”).

There are additional optional resources also posted in CANVAS. These are for YOUR benefit and are intended to help you learn the species. There are many field guides covering a lot of the species you will be learning. It may be helpful to print some of these out and bring them to lab.

### **Announcements:**

From time-to-time announcements will be posted on the course website on Canvas including but not limited to updates, changes, requests, additional information, jokes, high fives etc. These are official and binding. Therefore, it is your responsibility to continuously check the course site for any announcements.

### **Grading**

Grades will be allocated as follows:

#### **Lab Quizzes (40%)**

12 total, lowest 2 dropped

#### **Lecture Exam (20%)**

#### **Lecture Quizzes (10%)**

#### **Lab Field Final (20%)**

#### **Keying Homework (10%)**

**Policy on Questioning Test Scores:** Questions on quiz or exam scores must be addressed before the end of the next class period after the quizzes or exams are returned.

**Grades** - Grading follows University standards and will be based on the following scale:

100-93.0% = A

90-92% = A-

89-87% = B+

86-83% = B

82-80% = B-

79-77% = C+

76-73% = C

72-70% = C-

69-67% = D+

66-63% = D

62-60% = D-

≤ 59% = E

**I do not round up/down so your score is your grade**

For information on current UF policies for assigning grade points, see

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

**Late Policy:** A zero (0) will be assigned as the grade for any assignments turned in after it is due (without consent of the instructor prior to due date/time).

**Extra Credit:** Each year students fall behind during the semester and ask for an extra credit opportunity. On CANVAS, I will outline the one extra credit opportunity that all students may choose to partake in or not. **Please keep in mind that any extra credit is a favor from me to you. Therefore, it is up to my discretion regarding the acceptance and worth of any extra credit submissions.**

**Lecture Topics: (I reserve the right to adjust this throughout the semester)**

<b>Week</b>	<b>Month</b>	<b>Date</b>	<b>Topic</b>
1	Aug.	23	Course Introduction
2	Aug.	28	Plant Characteristic & Nomenclature I
2	Aug.	30	Plant Characteristic & Nomenclature II
3	Sept.	4	Holiday
3	Sept.	6	Plant Characteristic & Nomenclature III
4	Sept.	11	Plant Characteristic & Nomenclature IV
4	Sept.	13	Tree Biology
5	Sept.	18	Climate and plant communities*
5	Sept.	20	Build a Dichotomous Key
6	Sept.	25	Geology and plant communities*
6	Sept.	27	Soils and plant communities*
7	Oct.	2	Disturbance pt. 1*
7	Oct.	4	Disturbance pt. 2*
8	Oct.	9	FL Community I (Flatwoods)
8	Oct.	11	FL Community II (Sandhill & Scrub)
9	Oct.	16	FL Community III (Forested Wetlands)
9	Oct.	18	FL Community IV (Hardwoods)
10	Oct.	23	Invasive Species (Stone)
10	Oct.	25	Climate change & forests
11	Oct.	30	Review for Exam
11	Nov.	1	Exam I
12	Nov.	6	US Region I
12	Nov.	8	US Region II
13	Nov.	13	Exam Review
13	Nov.	15	US Region III
14	Nov.	20	US Region IV
14	Nov.	22	Holiday
15	Nov.	27	Global I
15	Nov.	29	Global II
16	Dec.	4	Field Final Review
16	Dec.	6	Wrap-up

\* Recorded

**Lab Schedule: (I reserve the right to adjust this throughout the semester)**

Week	Month	Date	Location	Topic	HW Assignment (Due)
1	Aug.	23	NO LAB		
2	Aug.	29	ACF	Introduction	
2	Aug.	30			
3	Sept.	5	NATL	How to Key *	HW0: Key 2- 11 Sept.
3	Sept.	6	Quiz 1	No Vans	
4	Sept.	12	Morningside	Flatwoods *	HW1: Key 2- 18 Sept.
4	Sept.	13	Quiz 2		
5	Sept.	19	San Felasco	Oaks	HW2: Key All – 25 Sept.
5	Sept.	20	Quiz 3		
6	Sept.	26	Morningside	Sandhill	HW3: Key 2 – 2 Oct.
6	Sept.	27	Quiz 4		
7	Oct.	3	Gum Root	Basin, Domes, Alluvial	HW4: Key All – 9 Oct.
7	Oct.	4	Quiz 5		
8	Oct.	10	Bivens Arm	Bottomlands	HW5: Key 2 – 16 Oct.
8	Oct.	11	Quiz 6		
9	Oct.	17	San Felasco	Upland Hardwoods	HW6: Key All – 23 Oct.
9	Oct.	18	Quiz 7		
	Oct.	20	Cedar Key		
	Oct.	21	Cedar Key		
10	Oct.	24	No Lab	SAF in California	
10	Oct.	25	No Lab		
11	Oct.	31	Campus	Invasive*	HW 7: Key 2 – 6 Nov.
11	Nov.	1	Quiz 8	No Vans	
12	Nov.	7	NATL	Upland	HW 8: Key 2 – 13 Nov.
12	Nov.	8	Quiz 9	No Vans	
13	Nov.	14	Campus	Urban	HW9: Key 2 – 20 Nov.
13	Nov.	15	Quiz 10	No Vans	
14	Nov.	21	Holiday	STUDY!	
14	Nov.	22			
15	Nov.	28	FAS	Odds & Ends	HW10: Key 2 – 27 Nov.
15	Nov.	29	Quiz 11 & 12		
16	Dec.	5	TBD	Field Final	
16	Dec.	6			

**\*Godfrey manual required**



**Readings: (I reserve the right to adjust this throughout the semester)**

- Wk 1 How to ID a Tree (Read before Lab 1 & Bring to Lab 1)
- Wk 1 What is Dendrology (Read before Lab 1)
- Wk 1 Nomenclature, Rules, Spelling and Usage
- Wk 1 TD: Nomenclature
- Wk 1 TD: Morphology
- Wk 1 Plant Characteristics Guide
- Wk2 Naming a Plant\_Classification
- Wk 2 [www.youtube.com/watch?v=zznqS846vdE](http://www.youtube.com/watch?v=zznqS846vdE) (Watch before Lab 2)
- Wk 3 FW: Preface and pp. 1-9
- Wk 3 Bark Ecology
- Wk 4 Silvics Manual Vol 2: "The tree and its environment" pp. 45 – 64
- Wk 5 FW: Pine Flatwoods pp. 34-40
- Wk 6 Oaks of North America (Review)
- Wk 6 FW: Upland Hardwood Forests pp. 19-20
- Wk 6 FW: Upland Mixed Woodlands pp. 23-24; Sandhills and  
Upland Pines (Clayhills) pp. 24-28
- Wk 7 FW: Bottomland Forests and Alluvial Systems pp. 73-75
- Wk 7 FW: Hydric Hammocks pp. 71-73
- Wk 8 Botanic Definitions (Native, Endemic, Cultivar, etc.)
- Wk 8 Coevolution between invasive and native plants (Word doc)
- Wk 9 Climate change and forest species (new)
- Wk 9 FW: Scrubs pp. 29-34; Coastal Uplands pp. 42-48;  
Shell Mounds pp. 48-49; Mangrove Swamps pp.77-78  
FNAI: Scrub pp. 44-48; Coastal pp. 70-84; Salt marsh pp. 170-174; Mangrove Swamp  
pp. 175-178
- Wk 10 TBD
- Wk 11 TBD
- Wk 12 TBD
- Wk 14 TBD
- Wk 15 TBD

**Assigned Readings Abbreviations:**

FW – Florida Wildflowers by WK Taylor

TD - Textbook of Dendrology

FNAI - Florida Natural Areas Inventory

## The Legal Stuff

### Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

### Academic Honesty (the instructors take this very seriously)

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following 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."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/scr/process/student-conduct-honor-code>.

### 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 also against university policies and rules, disciplinary action will be taken as appropriate.

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

### Campus Helping Resources

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.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/)*
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Wellness Coaching
- *Career Resource Center, First Floor JWRU, 392-1601, [www.crc.ufl.edu/](http://www.crc.ufl.edu/)*

### Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation 0001 Reid Hall, 352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/).

Concerns that cannot be resolved by communicating with the instructor can be directed to: <https://scr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.

***You are yourself a Sequoia...stop and get acquainted with your brethren.***  
**(John Muir)**

***The Earth laughs with flowers.***  
**(Ralph Waldo Emerson)**