

Systematic Leaf Morphology

Spring 2022 Bot 6935/4935

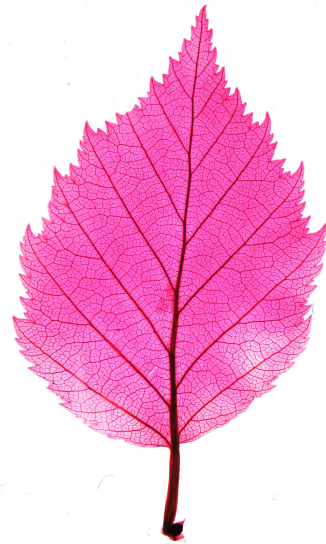
Instructor: Steven R. Manchester steven@flmnh.ufl.edu

What: 2 Credits

Where: Carr 221

When: Tuesdays (two successive periods): 12:50-2:45

Why: To provide experience in the recognition and identification of angiosperm families and genera by their morphological and epidermal leaf characters; to examine the patterns established in different clades of flowering plants; and assess the extent of convergence that occurs in the morphology of unrelated clades. At the same time, we will consider the evolutionary and ecological significance of different leaf adaptive syndromes. Both extant and fossil leaves representing a range of angiosperm families will be included. We will consider the orders of angiosperms as currently recognized from collective molecular and morphological evidence.



Course Format: Meets 2 hours per week. Combination of lectures, discussion of assigned reading (journal articles), and observation of demonstration specimens and images in class. Each student will be asked to prepare one (undergrad students) or two (graduate students) 15-minute presentations for the class on a relevant topic. Images of cleared leaves and epidermal anatomy will be made available as study aids and for discussion in presentations.

Textbook: B. Ellis et al. 2009. Manual of leaf architecture. Cornell Univ. Press. Available free online.

Grading: Based on participation and quality of presentations.

Tentative Schedule:

Week	Date	Topic
1	Jan 10	Overview of leaves—what functions do they serve; how do they vary according to climate and geography? How do they form in ontogeny?
2	Jan 17	How do angiosperm leaves differ from those of other seed plants? Terminology of leaf architecture. Introduction to ANITA grade angiosperms. <i>Amborella</i> , Nymphaeales
3	Jan 24	Terminology of epidermal anatomy Austrobaileyales, Chloranthales Magnoliids I. Canellales, Piperales, Laurales
4	Jan 31	Magnoliids II. Magnoliales

5	Feb 7	Monocots
6	Feb 17	Leaf tooth types. Proteales Buxales, Gunnerales, Trochodendrales
7	Feb 21	Dilleniaceae, Zygophyllaceae Saxifragales (e.g <i>Cercidiphyllum</i> , Hamamelidaceae)
8	Feb 28	Local field trip
9	Mar 7	Vitaceae, intro to Rosids Proteales
	Spring Break	
10	Mar 21	Fabids: Cucurbitales, Fagales Celastrales, Malpighiales
11	Mar 28	Fabids: Rosales, Urticales, Fabales Malvids: Geraniales, Brassicales, Huerteales
12	Apr 4	Malvids: Sapindales, Malvales Ecologically significant convergence patterns
13	Apr 11	Asterids: Ericales 1
14	Apr 18	Ericales 2, Lamiids: Garryales, Lamiales,
15	Apr 25	Solanales, Borag. Campanulids: Aquifoliales

In response to COVID-19, the following practices are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of ourselves, our neighbors, and our loved ones.

- If you are not vaccinated, get vaccinated. Vaccines are readily available at no cost and have been demonstrated to be safe and effective against the COVID-19 virus. Visit this link for details on where to get your shot, including options that do not require an appointment: <https://coronavirus.uflhealth.org/vaccinations/vaccine-availability/>. Students who receive the first dose of the vaccine somewhere off-campus and/or outside of Gainesville can still receive their second dose on campus.
- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated. Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Hand sanitizing stations will be located in every classroom.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.

- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- Continue to regularly visit coronavirus.UFHealth.org and coronavirus.ufl.edu for up-to-date information about COVID-19 and vaccination.