FIELD BOTANY (BIOLOGY 2355)—2019

GENERAL INFORMATION

PERSONNEL

Instructor: John Sperry, office phone: 801 585 0379, cell: 801 243 9937, e-mail: j.sperry@utah.edu, office: 227 SBiol

TIME AND PLACE

W F, 12:55-5:00 pm. Lectures start PROMPTLY at 12:55 pm, and are in 230 James Talmadge Building (JTB). Please be on time. Late arrivals miss important information and disrupt class. Field trips depart either after lecture (Wednesdays), or at 12:55 pm if there is no lecture for the day (most Fridays). All field trips depart from the vicinity of the big Ash tree along the west side of the parking lot just south (towards the stadium) of the bookstore. We leave promptly, so don't be late!

PURPOSE OF COURSE

The objective is to learn more about nature around you by studying the local flora. After the class, we hope you will "see" plants in a more meaningful way. You will develop skills in using technical botanical floras for identifying plants. Lectures provide the biological context of the habitats visited and plants observed.

TEXT


Rental copies are available at $15 rent plus a $35 deposit refundable on return of the book in satisfactory condition at the end of the course (Cash, or checks payable to "U of U Biology Dept."). Please fill out the sign-out sheet if you are renting.

You may also purchase a new copy for $50.00 (includes sales tax; make checks payable to "U of U Biology Dept."). If you rent a book, but decide you want to buy one later, you can forfeit your 35$ rental deposit in exchange for your own new book at any time before the end of class.

WASATCH FLORA "APP"

For you smartphone folks there's a potentially useful App that can help you ID local plants. It's the "Flora of the Wasatch" marketed by High Country Apps. You can buy it for 8$ from the apple store (https://itunes.apple.com/us/app/id533910732&mt=8). It's written by local botanist Steve Hegji. I've not used it, but I've heard it is quite useful.
Warning: if you ID a plant with this App, you should double check it against your text to make sure!

CLASS WEBSITE

Syllabus and schedule, handouts and various course materials will be posted on the CANVAS site for the class (accessible via the University of Utah website). This is where you should go to download any materials you may have lost or were unable to get during class.

OTHER RESOURCES

We encourage you to use the classroom on your own time for identifying homework plants and the plants in your independent collection. For that purpose you will have ID card access to the room 7 days a week. Resources available include:

Wasatch Flora (your text)

Utah Valley University "Virtual Herbarium"

Visit the following website to view and search the specimens housed in the Utah Valley University Herbarium. http://herbarium.uvu.edu/virtual/. This is a useful way to check your ID's. It is also possible to inspect real specimens at the Garret Herbarium located in the Utah Museum of Natural History (see below).

Utah Flora

Your text only covers plants from Salt Lake and Davis Counties. If you want to identify plants from other areas in Utah we also have the book: “A Utah Flora” by S.L. Welsh, N.D. Atwood, L.C. Higgins, and S. Goodrich.

“Plant Identification Terminology; an Illustrated Glossary” by J.G. Harris and M.W. Harris 1997. Spring Lake Publications. A copy of this useful text will be in the classroom. If you are floundering in an ocean of terminology, this book will help.

"Wasatch wildflowers" by App author Steve Hegji is a useful guide to the more charismatic wildflowers we will see.

Dissecting scopes

There will be some dissecting scopes available in the classroom for use in keying out plants. You will find these useful for plant identification.
OTHER COURSE MATERIALS

It is essential that you buy a **10X hand lens**. A few are available at the bookstore, but they are not the optimal design. No need to buy the illuminating models or anything more than 10X…just a simple flip-out 10X lens that can hang around your neck. A few brands, and their prices on Amazon.com are listed below. Order one today or buy one locally.

Aiernuo Jeweler's Loupe 10X (8$)
HTS202AO 10X (5$)
Bausch and Lomb Coddington 10X Magnifier ($20)*a good high-end model

A **field notebook** is necessary for writing down the plants we see, and information about their morphology and habitat. A pocket-sized loose-leaf type is recommended.

FIELD TRIPS

There are 8 scheduled field trips during the Wednesday and Friday “lab” sessions. Wednesday trips will be shorter and will follow a 50 minute lecture in the classroom. Fridays there is no lecture—just a field trip. All trips will take at least until 5 pm. The last two trips we will be a little later in returning, approximately 5:30 pm. Transport will be provided (university vans). On bad weather days we will key out plants in the laboratory.

Come prepared with the following:

* **hand lens** and notebook and pencil
* sturdy boots or shoes for off-trail walking and snake protection.
* sun hat
* sunscreen, lip balm
* pocket knife is useful
* raingear or shell if it’s threatening
* water
* plastic bags (ziplocks are very handy) for collecting plants (optional)
* daypack

These trips come with the usual risks of travel and outdoor activities. Sunburn, snake bites, insect bites, poison ivy (rare), dehydration, etc. Because of these risks, the university requires that each student **sign a waiver form** indicating you understand the situation and will not sue the university if something happens to you.

INDEPENDENT PLANT COLLECTION

You will also compile an independent plant collection from one or more field trips taken on your own time. Visit areas that we have not walked during class trips and collect a total of 15 species of plants that are in flower and/or fruit. You will identify the plants and prepare an herbarium label for each one. More details are forthcoming.
The collection is due before the last field tri- 

The collection is due before the last field trip. Late collections are accepted until the day of the final exam at substantial penalty. Collections turned in after the day of the final do not count for any points.

GARRETT HERBARIUM AT THE NATURAL HISTORY MUSEUM

An “herbarium” is a library of pressed and identified plants. We will tour the Garrett Herbarium, which is located in the University of Utah Natural History Museum. It can be a useful resource for confirming your plant identifications.

TEST, QUIZZES, AND HOMEWORK

Each field trip will include a quiz. For most of these we will simply ask you to identify plants we have already learned.

Weekly homework will consist of unknown plants that you attempt to key out with your text. You can use classroom resources or the Wasatch Flora App to help. Your student ID will be activated for you to access the building and classroom 7 am – 10 pm seven days a week.

There will be a final “open-book” exam covering material learned during the class. The exam will consist of two parts: 1) a “practicum” asking you to identify various plants, or answer questions about them (open note, handout, book); 2) a section covering the biology of these plants as discussed in lecture and on field trips (open note, handout).

GRADING

Point assignments: Quizzes + Homeworks, 100 points. Final Exam, 100 points. Independent collection, 75 points. The lowest 2 quiz + homework scores will be dropped. Grades will be assigned using the 10-point scale as a guideline: 90-100% A, 80-90% B, etc. This scale may be lowered, but it will not be raised.

IMPORTANT: You must take the final exam at the scheduled time. There are no make-ups or special arrangements. If you can't be at the final exam, drop the class. Exceptions only for medical/personal emergencies where the instructor has been promptly notified of the situation.

The Americans with Disabilities Act. The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 801-581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.
**Addressing Sexual Misconduct.** Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran’s status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

**Campus Safety.** The University of Utah values the safety of all campus community members. To report suspicious activity, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.
### FIELD BOTANY 2355—SCHEDULE 2019

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<th>Date</th>
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| Aug 21 | **Lecture:** Plant classification and vegetative morphology  
**Lab:** Campus walk: vegetative morphology and using dichotomous keys                                                                                     |
| Aug 23 | **Lecture:** Floral morphology, characteristics of prominent plant families  
**Lab:** Reproductive morphology and use of keys. Using the Wasatch Flora.                                                                                      |
| Aug 28 | **Lecture:** How to make your plant collection. Tour of UMNH Garrett Herbarium.  
**Field trip:** Red Butte Canyon—woody plants of riparian and foothill zones.                                                                                 |
| Aug 30 | **Field trip:** Wildflowers of Albion Basin, Little Cottonwood Canyon                                                                               |
| Sept 4 | **Lecture:** Great basin habitats, plant adaptations to drought  
**Field trip:** City Creek Canyon—urban-foothill interface                                                                                              |
| Sept 6 | **Field trip:** Cardiff fork, Big Cottonwood Canyon—upper montane zone                                                                                                                                         |
| Sept 11| **Lecture:** Halophytes and salt stress, montane vegetation zones.  
**Field trip:** Jordan River Parkway                                                                                                                          |
| Sept 13| **Field trip:** Skull Valley and Big Spring: Plants of the Great Basin Desert.                                                                                                                                     |
| Sept 18| **Lecture:** Impact of humans on vegetation change in the Great Basin  
**Field trip:** Mill Creek Canyon—midmontane forests and flowers.  
**Late return ca. 5:30 pm**                                                                                                                                     |
| Sept 20| **Field trip:** Uinta Mountains. **Late return ca. 5:30 pm**  
*PLANT COLLECTIONS DUE BEFORE FIELD TRIP*                                                                                                                       |
| Sept 25| **Final exam (regular time in classroom)**                                                                                                                                                                    |

**NOTES:** Lectures begin at 12:55 pm in the classroom (230 JTB). Please be prompt, latecomers miss important information and disrupt class. Field trips depart from the parking lot just south of the Bookstore (towards the stadium); gather along the west side under the big Ash tree. On Fridays with no lecture, meet at the parking lot at 12:55 instead of the classroom. Don’t be late or you'll miss the trip! You may drive yourself if you wish, but we reserve the right to change destinations at the last minute depending on local weather patterns (only a problem for “iffy” weather days). If the weather is really bad we will meet in the classroom and practice keying out plants inside.