Course Syllabus

Fundamentals of Twig Identification

Instructor: Levi O'Brien
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Location: Tree School Virtual

Mondays
6:00-8:00pm EST
Nov 2nd–Nov 23rd

Course Description: This course will develop a solid foundational understanding of all the necessary characteristics that are used for twig identification. As a class, we will spend four weeks discussing twig characteristics and practical application, and students will be provided with numerous interactive aids to their learning.

Each week, students will:

- Attend a live online class (60–90 minutes), followed by a 30-minute discussion and Q&A. All lectures are recorded and available to rewatch during the duration of the course.
- Complete suggested readings before class to prepare for the week's topic.
- Take a short, self-assessment quiz after each lecture to reinforce key concepts and identify areas for review.
- Complete a field-based assignment that applies the week's material through direct observation of trees.
- Study optional flashcards and review materials to strengthen familiarity with important terms, concepts, and characteristics.
- Participate in the online discussion board to ask questions, discuss observations, and work through challenging concepts with classmates and the instructor.

While no prior experience is required, this is an active course that rewards curiosity, consistent participation, and regular practice. The more time you spend applying and reviewing the material, the more you will get out of this class.

Course outline

Lecture 1: Twig Growth, Anatomy, Buds
- How and why to look at twigs
- Apical growth
- Types of growth: Monopodial vs Sympodial
- Anatomy of a twig
- Bud types, arrangement, and organization
- Bud characteristics: Size, shape, scales, etc.

Lecture 2: Twigs Anatomy Continued
- Prickles, Thorns, and spines
- Scars: Branch, stipule, leaf, and trace
- Pith: Color, texture, shape, and size
- Lenticels and more
- Conifer twigs

Lectures 3 & 4: Important Groups of Trees
(subject to minor changes—We'll likely add some taxa!)
This will be a cursory survey of key features of and within each taxon.
- Ashes (*Fraxinus* spp.)
- Maples (*Acer* spp.)
- Walnuts (*Juglans* spp.)
- Hickories (*Carya* spp.)
- Oaks (*Quercus* spp.)
- Lindens (*Tilia* spp.)
- Mulberries (*Morus* spp.)
- Poplars (*Populus* spp.)
- Willows (*Salix* spp.)
- Birches (*Betula* spp.)
- Black tupelo (*Nyssa sylvatica*)
- Magnolias (*Magnolia* spp.)
- Elms (*Ulmus* spp.)
- Hackberries (*Celtis* spp.)
- Catalpas (*Catalpa* spp.)
- Cherries (*Prunus* spp.)
- Tulip tree (*Liriodendron tulipifera*)
- Sumacs (*Rhus* spp.)
- Buckeyes/horse chestnuts (*Aesculus* spp.)
- Honeylocust (*Gleditsia triacanthos*)
- Black locust (*Robinia pseudoacacia*)
- Redbud (*Cercis canadensis*)
- Pines (*Pinus* spp.)
- Spruces (*Picea* spp.)
- Larches (*Larix* spp.)
- Firs (*Abies* spp.)
- Eastern red-cedar (*Juniperus virginiana*)
- Arborvitae (*Thuja spp.*)
- False cypress (*Chamaecyparis* spp.)

Calendar

Day	Date	
Mon	11/2	Lecture 1: Twig Growth, Anatomy, Buds
Mon	11/9	Lecture 2: Twigs Anatomy Continued
Mon	11/16	Lecture 3: Important Groups of Trees, Part 1
Mon	11/23	Lecture 4: Important Groups of Trees, Part 2