

1-2009

RSCN 273.01: Wilderness and Civilization - Field Studies

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Wilderness & Civilization Field Studies

RSCN 273, Spring 2009, 2 credits

Course meets Mondays or Tuesdays (9:10 – 10:40 am), most Fridays, and occasional additional days, please see schedule.

Instructors

Nicky Phear — 243-6932; Sarah Potenza— 243-6956; Paul Alaback—243-2913

Course Description

Resource Conservation 273 is an experiential course designed to develop your capacity to observe, describe, and interpret the natural world and human/land interactions. The course takes place outdoors during weekly naturalist walks, field trips around Montana, your phenology study, and a ten-day wilderness river expedition. Field journals are used as a forum to describe observations and interpret relationships between human and ecological systems. The goal of this course is to develop observation skills that will assist you in reading the landscape not only in Montana, but wherever you call home or go from here. Each student on this course will:

- sharpen field observations skills of ecosystems across Montana;
- build knowledge of Montana's plant and animal species;
- document natural history events and seasonal ecological changes;
- describe and interpret the connections between people and local ecosystems;
- develop new skills in field journaling; and
- teach an environmental education lesson.

Course Requirements

Evaluation

Participation	5%
Field Journals (Due March 11 and May 11) (80% of total grade)	
Friday Trips (5)	15%
Weekly Walks (9)	30%
Phenology Notes (8)	25%
Species List	10%
Environmental Education Lesson (Due on the Missouri River)	15%

Students will receive an N (course in progress) grade at the end of Spring semester. Final course grades will be submitted after the Missouri River trip.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at <http://www.umt.edu/SA/VPSA/index.cfm?page?1321>.

Participation (5%)

Participation is a critical component of field studies. Attending the weekly walks, field trips, and Missouri River trip provides the forum for learning about the natural world and human/land interactions. Your participation will be evaluated on showing up, your full engagement (listening, asking questions, providing comments), and on your timeliness and preparedness.

Absence: You are allowed one excused absence from a field trip (except the Yellowstone trip) and one excused absence from a weekly walk. Your absence must be excused by Nicky or Sarah before the trip. If you miss one weekly walk, you will still be able to complete the assigned field journal assignment, which includes nine weekly walks. If you miss a field trip that has an assigned field note, you will need to choose an alternate field trip for which to do a field note. Additional absences result in no points for that field note or weekly walk.

Field Journals (80% of RSCN 273 grade)

Due dates: Wednesday, March 11 and Wednesday, May 11

Why keep a field journal?

There are many reasons to keep a field journal that range from recording scientific facts for research to finding inspiration for a piece of art or literature. In general, a field journal is an important tool that will help you to better see and understand the natural world. Below are a few more reasons why field journaling is important:

- Sharpens your observational skills
- Helps you build knowledge of the land (i.e. ecological literacy)
- Documents natural history events
- Slows you down so you can appreciate nature's detail, beauty, and complexity
- Helps you rediscover and/or develop all your senses by engaging with nature
- Transforms you into a better naturalist, artist, poet, writer, scientist, and neighbor
- Make connections between places, critters, and your reflections on them
- Develops your eye--you will never see the world in the same way
- Develops your skills as a naturalist that you can build on for the rest of your life
- Helps you be present in the moment

Field Journal Requirements

Your Field Journal counts for a total of 80% of your RSCN 273 grade. During the Spring semester you will be required to do four types of entries in your field journals. We suggest that you divide your journal into four sections:

1. **General Field Notes (5)**
2. **Weekly Walks Naturalist Field Notes (9)**
3. **Phenology Study (8)**
4. **Semester Species List**

We will often facilitate field notes in some way, shape or form, in order to help focus your entries as we encounter different environments throughout the year. We provide you with a general outline of what to include in a good field note (see below), however, you are strongly encouraged to add other questions, observations, etc. that interest you and help make your journal more meaningful.

Field Journal Orienting Information

Each Field Note needs to include the following ***Orienting Information***, be consistent and specific in how you report this information.

Date: Write the date and time out in the following format: "10 January 2008, 10:00 am " in the left hand margin.

Location/ route: Be as concise as possible without sacrificing accuracy. Order the information so that it goes from the most specific to general, or from local to landscape level. If you are in the same place two or more days running the location information can just be "as previous". Ex:

Location: Rattlesnake Creek, 2 miles north of River Corridor Trail, 'South Zone' of Rattlesnake Recreation Area, 4 miles north of Missoula, Missoula County, western Montana¹.

Distances should be straight-line distances, not route distances. The DATE and LOCATION should be underlined. Start the underlining under the date and continue straight across the page.

Elevation: Approximate elevation in meters or feet above sea level. (get from topo maps or altimeter)

Environmental/ Additional information: Give a description of the landscape and vegetation type, including dominant or important species where possible. Refer to NOTES ON KEEPING A NATURAL HISTORY FIELD JOURNAL for habitat descriptions. When traveling, give a synopsis of the vegetation types passed through during the day. Such as second growth lodgepole pine forest, young clearcut, mixed large-ponderosa pine mature forest. In addition, please include information such as land ownership, watershed, mountain range, basin/valley, habitat, aspect, elevation, roads, towns, and any other creative way you want to demonstrate location.

Example- Additional info: East bank of Rattlesnake Creek, riparian habitat, heavy trail use. Rattlesnake Creek is a municipal watershed for the city of Missoula. The Rattlesnake flows into the Clark Fork which flows into the Columbia River and to the Pacific Ocean.

Time: Recording time is important for special events, or for describing how long was spent in a particular location or at a particular activity. If you have two or more entries on the same day and location, write a new entry immediately under the previous one, with an updated time.

What was happening: species seen, behaviors, lecture notes, etc.

1. General Field Note (5)

Our Friday and weekend field trips will take us around Montana to explore a range of conservation issues and ecosystems. You will meet with people who will describe the local ecology and tell you about the political, historic, and cultural influences that shape the ecology and conservation efforts of that particular region. *See Schedule of Spring Field trips for assigned 273 field note days.*

Document your observations and interpretations from these trips using your own creative style. Be sure to capture what you found to be significant points made by the speakers, however, **a field note is not direct notes from a presentation; it is your own personal observation and interpretation.** Use creative drawings, diagrams, color, words, and other techniques to explore the days issues and topics. In order to encourage you to diversify your field journal and be creative, you are required to include (in addition to orienting information) at least one of the following assignments in each of your field journal entries:

1. An event map
2. A series of Contour Sketches or Modified Contour Sketches
3. A full page drawing and text spread (a journal entry that takes up both sides of your journal)
4. An original poem or creative writing inspired by being in the field
5. Species Observations--An entry of **two species** (plant or critter) according to the outline below

We encourage you to try all of the above at some point during the semester.

Species Observations Guidelines

Plants/trees/shrubs/grasses/etc. — observations include:

- Common name(s) and Scientific name
- Describe three distinguishing characteristics
- A field sketch of some distinguishing part (cones/fruit/needles/etc.) or the whole plant and label parts if necessary; include the scale that the plant (or part of plant) is drawn at (i.e. 1/2 life size), and reference any guide book used in helping your field sketch
- Describe habitat plant was found growing in (what are the other plants growing with it, wet or dry site, aspect, canopy cover, soil, etc.)
- Explain why you choose these particular plants
- Include any interesting facts, observations, or questions (e.g. plant is native or invasive, Latin name comes from Lewis and Clark, plant has been browsed on by elk or is a favorite food for grizzly bears, etc.)
- Remember to cite any books used in your observation (ie, *Plants of the Rockies*, etc.)

Critters that you see/hear or find signs of— observations include:

- Common name and Scientific name (or general description if name unknown)
- Describe distinguishing characteristics if you saw critter, or describe signs that indicated the critters presence
- Sketch critter or some sign of critter that is relevant and meaningful to the encounter. If you actually saw critter try and draw from memory or use field guides to fill in the blanks. If you saw a track or scat, then sketch that.
- Give a habitat description and include what the animal was doing there, or why you think it was found in particular habitat
- Remember to cite any books used in your observation (ie, *Tracks and Scat*, etc.)

2. Weekly Walks Naturalist Field Note (9 walks, Mondays or Tuesdays 9:10 am- 10:40am)

Weekly Walks provide an opportunity for us to explore the natural world right here in Missoula each week. Consistent observation of what composes our home is something many of us may aspire to but rarely take the opportunity to do; now is your chance... This is a good time to practice field sketching and other field journaling skills if you get inspired.

You are required to complete nine *Naturalist Field Notes*.

For each entry, include:

- Detailed orienting information and
- Detailed notes on the assignment or topic of the week.

3. Phenology Study (8 records)

This is a study of change over time in the natural world. You must choose a specific place to study over the semester. This will be your corner of western Montana to notice the subtle, detailed changes and shifts in season – when a tree leafs out, when birds are active, when ice melts and creeks swell. This will be a detailed record of the site-specific

changes you observe as the seasons progress. Visit your site once a week, for at least a half-hour. Make sure you select a spot that you can visit easily and regularly. It should be somewhere with some natural biological diversity (i.e. not your backyard or a playground). The Clark Fork River trails, Greenough Park, Mt. Sentinel, Mt Jumbo, or any of the other Missoula trails or parks are wonderful locations close by. **You are required to complete eight phenology notes, no more than one per week (i.e. spread out the study over the semester).**

For each record include:

- A. **Detailed and/or Updated Orienting information**
- B. **Detailed observations:** notes, sketches, description of what is going on at your site. Describe what you see or hear. Describe bird calls, songs, and/or activity. Notice if there are tracks in your area, sketch the trees and buds. Note especially changes at your site. When do you first notice snow melt? New leaves? Different birds? Bud burst or new leaves? Be as specific as possible to the minute changes you observe over the semester.
- C. **Sketch of observations**
- D. **Question and research:** Ask questions about what you see and record them. What tracks are nearby? Is the river frozen solid or thawing? Are other trees/shrubs in the area leafing out before yours? **Why? Ask questions with each visit!** Look, listen, and question why things are the way they are. Then later **research the answer** to your question. This can be as simple as finding the average date of the annual thaw of Clark Fork River, or average date of a particular plant to leaf out. Use the internet, books, etc and **remember to cite your source.**

4. Semester Species List

By the end of the semester, create an alphabetized species list; with the species first, then where **you** saw it, and the date. Either one list or sub-divided into species types is fine (i.e. trees, shrubs, flower, lichen, critters). Then, if you see it again somewhere else, just add the place and date to the entry. That way you get an idea of the distribution, etc of the species. Remember to include a key for abbreviations of place names. Example: Douglas fir, *Pseudotsuga menziesii*; NCNP, 9/1-9/8; Lolo Peak, 9/28, etc.

- Alphabetize the species list and either print it or post it on the Wiki.
- Remember to add in any animals you see!
- Check spelling on plants and animals

Environmental Education Lesson (15%)

You will be required to design and lead a 15-minute environmental education lesson on the Missouri River trip. This lesson needs to relate to the natural or cultural history of the Missouri River. The format of the lesson is up to you. The Wilderness Institute has resources on the Missouri River that might be helpful.

Possible topics include aspects of the Lewis and Clark journey, cottonwood ecosystems and floods, sagebrush, geology of the white cliffs area, geology of the badlands area, Native American history, early trapper history, ethnobotany, beaver ecology, Canada geese, white pelicans, big horn sheep, pallid sturgeon, steamboat history, early white settlement, the Big Open, meadowlarks, the Wild and Scenic River designation, National Monument designation, wilderness study areas and their status, the Charles M. Russell National Wildlife Refuge, dams and agricultural irrigation, and much more.

You will need to be prepared to give your lesson at any time during the trip; research and other preparation must therefore be done while in Missoula. Please feel free to ask for ideas regarding sources of information and presentation/teaching methods. The leaders on the Missouri River will evaluate your presentation based on accuracy, relevance to the region and program topics, your ability to make connections between your topic and what we've studied this year, and the creativity of your presentation. Due on the Missouri River Trip, see further guidelines on the assignment sheet.

Journal Grading and Evaluation

You will not be marked down for things like artistic ability, but we will be looking for improvement and evidence that you are challenging yourself. Here is a list of the specific categories you will be graded on:

- Completeness (followed the full assignment)
- Observation skills (paid attention to the land, species composition, ecological processes, and trip speakers)
- Organization (entries organized with clear and thorough Orienting Information)
- Thoughtfulness
- Making connections (exploring the relationships among place, ecology, people, history, etc.)
- **Getting your journal in on time.** Late journals will be marked down a ½ grade.

Please Note: We always try to give you some time on the Monday walks and Friday/weekend field trips to start your field notes. However, there is not enough time on the trips, and so it is expected that you will finish your journal entries as homework.

Field journals are part of the experiential component of the program and are graded on your demonstrated attention to the natural world, completeness, thoughtfulness, effort, organization, and presence. You will not be marked down for things like artistic ability, but we will be looking for things like improvement and evidence of challenging yourselves.

Wilderness & Civilization Field Studies
Schedule of Field Trips (meeting times/places subject to change)
Spring 2009

January 30	Missoula's Waste System –Allied Waste, Wastewater Treatment Plant, Pacific Recycling, Home Resource (373 Reflection) <i>9:00 AM Depart from Motor Pool (9:00-5:00)</i>
February 6	Green Building and Alternative Energy (373 Reflection) <i>9:00 AM Depart from Motor Pool (9:00-5:00)</i>
February 13-16	Yellowstone Field Studies (373 Reflection and 273 Field Note) <i>7:30 AM Depart from Motor Pool; return by 7:00 PM on Monday.</i>
February 20	No Field Trip
February 27	Winter Field Studies (273 Field Note) <i>9:00 AM Depart from Motor Pool (9:00-5:00)</i>
March 6	Helena Legislature (373 Reflection) <i>8:00 AM Depart from Motor Pool (8:00-6:00)</i>
March 13	No Field Trip
March 20-21	Snow Geese Migration – Freezeout Lake (273 Field Note) <i>2:00 PM Depart from Motor Pool (return 8:00 PM Saturday)</i>
March 27	No Field trip – Friday before spring break
April 3	Spring Break
April 10	Watershed Restoration – Clark Fork River (373 Reflection) <i>8:00 AM Depart from Motor Pool (8:00-7:00)</i>
April 13 (Monday)	Watershed Restoration – Milltown Dam Removal (273 Field Note for Clark Fork Watershed)
April 17-18	Traditional Skills (Owl Ecology – Mission Valley) (373 Reflection) <i>9:00 AM Depart from Motor Pool (return 5:00 PM Saturday)</i>
April 24	Farming and Local Food Systems (373 Reflection) <i>9:00 AM Depart from the Motor Pool (9:00-5:00)</i>
May 1-3	No Field Trip – Montana Wilderness Association Annual Convention
May 8	Riparian Field Trip with Paul (273 Field Note) <i>9:00 AM Depart from the Motor Pool (9:00-5:00)</i>
May 17-26	Missouri River (Coal Banks Landing to James Kipp State Park) <i>7:00 AM Depart from the Motor Pool. Return late on the 23rd.</i>