



Cranberry Lake Biological Station
Handbook

Welcome to the Cranberry Lake Biological Station

We hope your stay at CLBS will be as rewarding to you as it has been to so many attendees over the last 100+ years. CLBS served as the principal site of field training for students at the State University College of Forestry at Syracuse University (now SUNY ESF) between 1915 and 1970. As a forestry summer camp, the site provided unique experiences for a generation of conservationists, including Robert “Bob” Marshall, one of the founders of the Wilderness movement in the United States. Today, CLBS continues to provide undergraduate and graduate students with education and research in field biology. The station hosts an academic program each summer (i.e., formal courses) and is also home to many research projects led by scientists both internal and external to ESF. We are a community of scholars who share a desire to learn and do science in a truly special place, and we look forward to having you join us.

Setting & Biota

Cranberry Lake, the third largest lake in the Adirondacks, is an ideal site for biological study and research. Most of the shoreline is state-owned and undeveloped. The station is surrounded by remote forests classified as Wild Forests or Wilderness by the Adirondack Park Agency. Despite its location on the mainland, CLBS can be accessed only by boat. The isolation makes it easier to leave markers and equipment unattended, and it also provides an opportunity for immersive, place-based research and education with minimal distraction, which helps us focus our attention on experiencing and understanding the local environment.

Adirondack Park, with an area of 6 million acres (as large as the state of Vermont), is the largest state park in the United States and is the largest area devoted to wilderness values in eastern North America. However, 60% of the parklands are in private ownership and are largely managed for timber products. The close juxtaposition of logged private tracts and wild forests in public ownership enhances the ecological diversity within the park and around CLBS.

Numerous local habitat types are represented, either on CLBS property or within short hikes or boat rides. These include spruce-tamarack bogs, beaver meadows, marshes, streams, ponds, and lakes of various sizes and types. Of course, the primary habitat type in the area is northern mixed hardwood forest. Representative patches in every conceivable stage of succession from new second growth to old virgin stands are accessible to station residents for research or recreation. In addition, there are a number of accessible old fields in the area. Aquatic scientists can enjoy easy access to Cranberry Lake and various ponds and streams in surrounding public lands. The lower reaches of Sucker Brook, a small stream, are contained within the CLBS boundary.

The Adirondack region is a meeting ground for boreal species of the far north and temperate species from farther south. At CLBS, the presence of paper birch, balsam fir, gray jay, and snowshoe hare testify to the boreal influence of cold winters and deep snow. Yet, here too, are species such as white-tailed deer, barn swallow, basswood, and white ash, representing more temperate climates to the south. Other mammal species at CLBS include the fisher, otter, marten, porcupine, beaver, and black bear, and many small rodents. Amphibians are diverse and abundant, with large breeding populations of American toad, pickerel, mink, leopard, wood, bull, and green frogs, as well as spring peepers and tree frogs. Smallmouth bass are regularly caught in Cranberry Lake and brook trout are common in the numerous streams and

ponds. Aesthetically, the station has few rivals with a combination of a sunset over Cranberry Lake and the call of loons contributing to an unforgettable experience.

The history of early settlement and economic exploitation around Cranberry Lake is reflected in a mosaic of forest age classes and vegetation types. Around 1890, logging for white pine and red spruce was widespread in the area. Logs of these conifer species could easily be floated to market via streams and lakes. The railroad arrived at Wanakena on the west end of Cranberry Lake in 1903. Its primary function was to move hardwood and softwood logs to market. The wood of hardwood species such as yellow birch, sugar maple, and white ash is very dense and does not readily float; hence, these species escaped the saw and axe in the first logging operations of the 1800s.

Logging in the Adirondacks reached a peak in 1905 when over 700 million board feet of timber was cut for construction lumber and paper pulp. Around 1904, approximately 200,000 logs were tallied along the Hudson. Logging of such intensity devastated Adirondack forests and the woods were strewn with slash, including much conifer slash. This slash fueled the severe fires of 1908 and 1915 that burned thousands of acres in the Cranberry Lake region. The “Plains” area south of the station is one of those burned areas that still show an arrested forest development due to fire. To the southwest, the Five Ponds Wilderness Area escaped logging and serves today as an invaluable location to study undisturbed forest communities, complete with majestic white pines and red spruces.

The Academic Program

The immersive learning experience at CLBS creates both an intensive experience and one that is far elevated in comparison to standard campus-based courses. Common to all courses offered at CLBS is the significant portion of time spent *in-situ* while identifying biota, learning sampling methodology, metrics, deploying equipment and recording data. The field activities are punctuated by shorter classroom lectures and in-depth discussions with instructors in their areas of expertise. All classes require some data analysis and the writing of reports and papers, or presentations of scientific findings. For a list of current course offerings, please see the Courses webpage at the CLBS site here: <https://www.esf.edu/clbs/courses.php>.

Although we work to adjust instruction to student accommodations when needed, all students should expect to be physically active and engaged since the courses are inherently field based. Students experience long class days and class activities on some nights and weekends and should be prepared to be outdoors in all weather conditions. Hikes, boat trips and field trips are common, while an occasional overnight trip, or more rigorous hike, could be required in the field elective courses. As such, students are expected to be self-reliant, responsible, and resilient. For further assistance regarding courses reach out to Kit Sheehan, CLBS Academic Program Coordinator (ksheeh02@esf.edu).

Lectures, seminars and discussions, presented or led by resident faculty, visiting scientists, writers, and graduate students, are scheduled regularly in Sanderson Lodge. These presentations and discussions concern current biological topics and are designed to stimulate thought and broaden the horizons of CLBS residents.

An important benefit of the CLBS experience is the opportunity for informal conversation between students and instructors during class hours and leisure time. Because of our isolation, we not only work, but also eat and relax together at the station. You, the student, are not just a number at CLBS, but rather, an active member of a purposeful community. During your stay at CLBS, you will have the opportunity

to directly observe scientists at work. We hope that this experience will help you shape your plans and goals and that you end up joining their ranks. We know that in the past, the interest and enthusiasm of students has helped the faculty and other researchers in their endeavors.

Study

Though student cabins can be used for study, classrooms are probably the best location for serious study and should be always kept quiet. Classrooms are left open for use of equipment to identify specimens, conduct student projects, etc. Our principal mission at CLBS is to afford students facilities for serious study in pleasant and congenial surroundings. We take our mission seriously. Any student who is inconsiderate and noisy, disturbing others who wish to study, is jeopardizing the function of CLBS and will be dealt with promptly. We ask your cooperation in keeping CLBS a quiet and pleasant place to learn, think, wonder, and study. Be thoughtful and considerate!

Facilities & Equipment

CLBS is located on Barber Point, part of a 1,000 acre tract of the Charles Lathrop Pack Demonstration Forest. This forest property is one of several operated by ESF. The tract was acquired by the college in 1915 and served as a forestry summer camp during its early history. In keeping with the station's present role, logging is no longer being conducted. A series of marked trails traverse the property, serving for class field trips and informal hikes. The original platform tents of the forestry camp have been replaced by a comfortable camp of 35 buildings with over 37,000 ft² of floor space.

The station may be reached by phone at 315-313-6951. If there is an emergency and these numbers fail, we can be reached through the Ranger School at Wanakena (315-848-2566) during business hours.

In general, cell service is available to most providers with the exception of T-Mobile.

The station mailing address is:

*Cranberry Lake Biological Station
P.O. Box 689
Cranberry Lake, NY 12927*

FedEx and UPS packages should be sent to the CLBS Marina at the following address:

*Cranberry Lake Biological Station
437D Columbian Rd.
Cranberry Lake, NY 12927*

Every weekday morning, a mail and supply boat leaves CLBS, usually by mid-morning. Any letters deposited in the letterbox in the office by 10:00 AM or before will be taken to the Cranberry Lake Post Office. Mail picked up for CLBS residents will be brought back on that boat in early afternoon. The office staff will leave your letters or packages at the mailboxes in the dining hall.

Since CLBS is accessible only by boat, we maintain a fleet of ~15 boats to move equipment and people across the 5 mi of open water between the marina and CLBS. Students, faculty, and station personnel leave their private vehicles at the college-operated marina on Columbian Road on the west side of

Cranberry Lake. The marina is about 2 mi south of Route 3, which is the only highway through the region.

Student cabins are simple, *unpartitioned* and *unheated*. Each cabin is equipped with a bunk and mattress for each student as well as assorted desks, bureaus, chairs, closets. Usually, students study either in the classrooms, which are left open in the evening, or in the dining hall. Each student cabin houses –8-10 students. At present, we have no facilities for married students. The washhouse is divided into male and female sides. Each side has four toilets and stalls, several wash basins, and four showers. Hot water is plentiful. A quarter-operated laundry facility is located near the washroom and is available to students during designated hours.

There are **four classroom buildings**, equipped as biology labs with electricity, water, microscopes and supplies for the particular courses taught in each lab. Sanderson Lodge, a comfortable log cabin with a large fireplace, is the site of evening lectures and seminars. It also serves as an informal gathering place for students.

The **main office** is the base of operations for staff and faculty. It contains a stockroom for research projects as well as a modest library. The station is equipped with amenities needed to do sophisticated fieldwork. We have dissecting and compound microscopes, electronic balances, pH, O₂, and conductivity meters, GPS units, traps, insect night-lighting equipment, and more. The office is open from 7:45 AM until 5:15 PM and from 6:00 PM to 6:30 PM.

We all eat in a **dining hall** capable of comfortably seating about 120 people, with each table seating roughly 8. A large bell at the entrance calls everyone to meals, a tradition at field stations. Meals are prepared by dining hall staff, who are able to accommodate dietary restrictions. Other facilities at CLBS include the TA lodge, several faculty cabins, the cook's quarters, caretaker's cottage, a research lab, boat houses, a workshop, an emergency power generating plant, numerous boat docks, and utility buildings.

A fleet of canoes is available to students and station residents for official projects or personal enjoyment. Paddles and life jackets are checked out at the boathouse. All canoes and equipment are signed back in before dark. Staff check canoe sign-out sheets each evening to ensure that all parties have returned. A volleyball court is heavily used, while the open lawn area in the center of the station campus is used for Field Day activities, soccer, and ultimate frisbee. On the first weekend after arrival of each EFB 202 session, there is a Field Day with various events and competitions.

Staff and Contact Information

If you have an academic concern, please first reach out to the instructor of that module/course, if after, your concern has not been resolved please reach out to the Academic Program Coordinator, Kit Sheehan (ksheeh02@esf.edu). If you identify a broader concern, or one related to facilities, please contact the Director, Dr. Arsenault (emarsena@esf.edu) or the Assistant Director, Terrance Caviness (tcaviness@esf.edu).

Other key staff members at CLBS include the Facilities Supervisor and facilities staff, headquartered in the boathouse workshop. Facilities staff oversee facility operations, maintenance, and construction. They are assisted by other members of the physical plant, work-study students, and our boat pilots. The Food Service Manager, who oversees operation of the kitchen and plans the weekly meals, is assisted by a team of food service workers and cooks who ensure all students are fed and dietary restrictions are met.

Boat Travel & Water Safety

The Marina serving CLBS is located on Columbian Road on the west shore of Cranberry Lake, about 2 mi south of Route 3. The Marina provides parking space for about 30 cars. If you bring your own vehicle, you can leave it at the Marina and pick it up when you leave. Please follow the posted parking regulations about where you may park.

The CLBS fleet of boats includes several boats used for moving faculty, graduate students, supplies, and equipment. These boats are not to be operated by students at any time.

Students can use canoes for recreational or academic use. Powered boats are never to be used by students for recreation. Life jackets and paddles for canoes are signed out at the boathouse and must be returned/signed in before dark. Any student intending to operate a motorized boat must have completed a boating safety course, filed documentation with the CLBS Assistant Director, and completed a practical boating test with CLBS boat pilot staff. Students wishing to sign out canoes and paddles should be good swimmers capable of swimming several hundred yards without flotation. Properly adjusted life jackets are required for all passengers and operators of canoes or motorized boats. If you sign out a paddle, you are responsible for its undamaged return; if a paddle is broken, you must reimburse the station for its cost. You can bring and use your own paddle if you wish. Anyone found in violation of any safety rules will lose boat privileges.

Students attending a course session (EFB 202 or elective) should plan to arrive on the Sunday before their first class begins. Arrival times will be specified in advance. Parking is tight and to promote sustainable practices, we encourage students to carpool to and from CLBS. Boats will be shuttling between the marina and CLBS during this time. If you arrive at the marina and a boat is not there, just wait for the next trip. If you are unable to arrive at the marina by your specified time, phone the CLBS Office (315-313-6951) to alert us to your delay as there may be a later boat run that can bring you to CLBS. Alternatively, you may need to spend the night in town and arrive the next day.

Community Rules

Given below, under appropriate headings, are details you need to know to live, study, and enjoy your stay at CLBS. Rules and regulations under each category are bulleted and we emphasize that ***anyone can be asked to leave the station for any infractions.***

As we are isolated with limited power to the station, there is an emphasis on conserving energy (e.g., turn unused lights off, no blow dryers, heaters, electric blankets, etc.). Water for all our needs is pumped from an underground well and is chlorinated before distribution. This water is of excellent quality but is not an endless supply so care should be taken to turn all water sources off when not in use. There are a number of fireplaces on campus that are quite useful on cool or rainy days. The wood used in these fireplaces is the result of much work-study labor and the loss of many trees. Please conserve that wood (e.g., do not keep a fire going during the warmth of the day just so you will not have to start a new fire when it gets cooler at night).

CLBS is a self-contained and essentially isolated community. We all live together in close quarters: eating, working, and enjoying nature with people of all ages and backgrounds. At any given time, individuals will be engaged in various activities that may overlap in shared spaces. To ensure that our community works and plays in harmony, and that all are safe at CLBS, we all live and work by a set shared community rules. These have evolved over a period of 100+ years of summer programs. We have found they usually work to everyone's benefit.

Campus Spaces

- Please do not enter the Station Office when it is officially closed or when staff have stepped away temporarily, even if the door is open.
- *Campfires*: Prohibited anywhere on the station grounds, except for small bonfires permitted in the fire pit on the beach.
- Although you may notice signs of previous campfires near student cabins, new fire regulations mean that such fires are strictly prohibited.
- The following areas are off-limits to all except Station personnel and maintenance staff: powerhouse, workshop and maintenance areas adjacent to the boathouse, workshop and maintenance areas under Sanderson Lodge, basement of Classroom 1, and the kitchen; living quarters in the T.A. Lodge and all faculty cabins. If you need tools or assistance, please go to the CLBS office. The research lab is locked and accessible only to authorized personnel.
- Remember, we have neighbors living on Buck Island and other nearby areas. Good neighbors do not disturb others and, as representatives of the college, we expect you to be considerate of others at all times. Remember that noise carries especially well over water, so please be cognizant of this if you are by the shore in the evening.
- Electrically amplified musical instruments are strictly forbidden and use of stereos/speakers is strongly discouraged.

Living Quarters

- In the absence of private rooms, and to help ensure everyone's privacy, other student's cabins are off limits after 10:00 PM.
- Student cabins are bunking facilities with little room for socializing, which is best done elsewhere on campus.
- Please keep your cabin and living area clean and neat. Food crumbs will keep all of the local rodents fat and happy and they will enjoy chewing on your belongings. We do not advise bringing any food with you, unless it is secured in air-tight plastic containers. Even then, we cannot guarantee the mice won't find it!
- Laundry machines may be used from just after breakfast until 9:00 PM.
- If you have a musical instrument such as a guitar, please use it judiciously, without disturbing your cabin mates. Indeed, playing of such instruments and/ or singing on campus is encouraged, if others nearby are not trying to sleep.
- Quiet hours: Start at 10:00 PM each night. Students are welcome to continue using classrooms, the dining hall, and other facilities for study or recreation as late as they wish, provided they do not disturb the study and sleep of others.
- Fire/flames/any heat generating apparatus using flammable fluids or electricity is prohibited in living quarters.

Boat Safety Rules

- A personal floatation device (PFD) is required to be worn whenever a student is in a canoe, kayak, or rowboat. PFDs are provided to each visitor.
- The boat channel between the dock and the main body of Cranberry Lake is off-limits except for boat passage. Swimming is not allowed in this area and canoeists should traverse this passage rapidly, after checking that the passage will be clear of fast-moving powerboats.
- Arriving and departing boats always have the right-of-way in the docking area; canoeists and

boaters must vacate the maneuvering area near the dock when a boat arrives. Large boats need a wider maneuvering area.

- Passengers should remain seated when a boat is underway, until the boat has reached its destination and come to a full stop.
- Before using a motorized boat, students must complete the New York State Boater Safety course and secure permission from boat pilots. **Each time they sign out a boat for class, students must take a radio, notify the office staff, and obtain permission from a boat pilot.**

Campus Safety Rules

- Firearms or other weapons (including knives >3 in long) are *not* permitted on the CLBS campus.
- Alcohol consumption and drug use at Cranberry Lake Biological station is strictly prohibited.
- Camping: *No camping is permitted on CLBS grounds.* Students and weekend visitors will find designated campsites along the Cranberry Lake shoreline on state land.
- Smoking: Smoking is not permitted in any building, on any motorboat or in the vicinity of the Power House fuel sheds or boat slips. Smoking is only permitted at the barbeque pit on the west end of the quad.
- Collecting of plants or animals: *Collecting of plants or animals on station grounds is prohibited,* except as a part of instructor-led course activities.
- Pets: Students' pets are not permitted at CLBS. Staff, instructors, or visitors should obtain permission from CLBS staff before bringing a pet. Pets must be supervised at all times to minimize disturbance to guests, wildlife, and property.
- Buddy system: Excursions with a peer(s) is strongly encouraged. If you are going off to hike around the station, fish, or paddle alone, make sure someone on station knows where you are going and your anticipated return time.
- Leaving CLBS: Before making plans to leave the station (an overnight camping trip, day hikes off station, etc.), students must obtain permission from CLBS staff and should arrange to bring a radio.

Food Service

The fee you pay includes all of your meals while sessions are in progress, beginning on the Sunday evening you arrive. (*Lunch will not be available the day you arrive, so please plan accordingly!) Breakfast and dinner are served cafeteria style. On class days, you will need to pack a bag lunch for yourself between 7:15 and 8:00 AM – **you must bring an insulated lunch bag** (please be sure to put your name on it!). The menu at CLBS includes meat, vegetarian and vegan entrees at all meals. We are happy to accommodate other dietary needs, so please be sure to let the Assistant Director know if your dietary needs have changed since you filled out your registration.

Meals are served promptly according to the following schedule:

	Breakfast	Lunch	Dinner
Class Days	7:15am	Bagged	5:30pm
Non-Class Weekends	11:00am		5:30pm

Because of our isolated location, with all supplies ferried across the lake, food service keeps a

close tally on the number of meals served every given day. Food Service requests you let the Assistant Director know as soon as possible if you will be needing a special accommodation. Please note that you will not be reimbursed for meals missed for personal reasons. Food or supplies are not to be removed from the kitchen or dining hall by anyone, without the permission of the Food Service Supervisor.

The Dining Hall is also left open at all times with snacks and coffee and other drinks available. Please keep things neat and clean to maintain this privilege.

Recreation

One of the great assets of CLBS is the many opportunities it affords for recreation by individuals and small informal groups. Opportunities include quiet hikes or jogging along the trails, canoe trips, bird watching, fishing, swimming, and sunbathing. Team sports, particularly volleyball, are a major activity every evening on the lawn and volleyball court. On weekends, small and large groups of students canoe around Cranberry Lake or hike along trails leading in every direction, including the Cranberry 50 — a 50 mi loop around the lake.

After the first week of courses in each session on EFB 202, CLBS staff coordinate a Field Day of sporting events and activities, including canoe races, volleyball tournaments, karaoke, and more.

Medical Facilities

CLBS is a minimum of 45 min by boat and car from the Clifton-Fine Hospital in Star Lake off of Route 3. If necessary, transportation is readily provided to students in need of care or emergency help, but all members of the CLBS community should be aware of our remote wilderness setting. The Cranberry Lake Fire Department maintains a rescue boat that can bring emergency equipment and personnel to the station in short period of time.

Students requiring regular and/or special medication should make sure to bring along enough of a supply to last for the session. Alternatively, the Clifton-Fine Hospital can be contacted in advance to provide a supply.

A special note to anyone who needs an EpiPen for allergies or who receives regular injections from a doctor (such as allergy vaccination series), EpiPen's are not available on the station and there is no one at CLBS who can administer injections. You will need to be transported to the Star Lake hospital.

Regular injections involve a good deal of scheduling and we suggest you make arrangements prior to your arrival to visit the doctor's office on weekends, by contacting the Medical Center before you arrive (315-848-3351). Several doctors have their offices in the clinic next to the Star Lake hospital. Faculty, staff, and students must fill out an accident report after any accident.

IN CASE OF EMERGENCY:

- **Call 911** for life-threatening emergencies.
- Report accident, injury, or other mental and physical wellness concerns to CLBS Wellness Manager, available in TA Lodge room #1 (quad side) or on-call at [REDACTED] 24/7. The CLBS Wellness Manager on-call will triage additional support as needed and has immediate access to the CLBS Director and other CLBS staff.

CRANBERRY LAKE BIOLOGICAL STATION

WHAT SHOULD I BRING?

There are some things you do not want to forget if you want to be safe and comfortable in the field and make the most out of your stay in the wilderness... and remember, there is no such thing as bad weather in the Adirondacks - only inappropriate clothing, so with this in mind, simplicity is elegance. Besides blankets, sheets and pillowcases (for twin beds), you should bring a sleeping bag for the colder nights. Many people make due with only a sleeping bag. Be sure that your sleeping bag is stored properly. If it is left in a compression bag the insulating material within the bag will clump up. This clumping leads to an inhibited ability to insulate your body during cold weather.

Besides the usual toiletry items, you should bring a range of clothing suitable for ANY occasion and very VARIABLE weather. You will need a good rain jacket or poncho (rain pants are recommended) and some winter gear. When dressing for cold conditions, following the three layer system will keep you warm during the coldest parts of the day. Your outer layer should protect you from wind, rain and snow. This outer layer can be thought of as a shell and a poncho or rain jacket and pants will provide sufficient protection. Moving closer to your body, the second layer's job is insulation (i.e., to keep yourself warm). Dress in materials such as wool, fleece, synthetic down, or other synthetics for the second layer. The third layer, which is closest to your body and against your skin, should wick sweat away from your skin. Good materials for this layer are wool and synthetic materials. Cotton is a terrible layer for cold and wet weather, cotton kills! Cotton takes forever to dry and retains moisture. This leads to evaporative cooling of your body and a greater likelihood of hypothermia. Good wool clothes and especially wool socks are always excellent in the field. Synthetic materials are also great at dealing with field conditions. A good pair of hiking boots, with sturdy uppers and lug soles (like Vibram) are essential for your comfort and safety when doing field work in rocky and wet areas.

A solid pair of water shoes, e.g., Keens are a good bet with their protective toe, or an old pair of tennis shoes that can get wet/muddy are good for accessing wetlands and streams. Shoes do not dry quickly, and so a separate pair of shoes that can get wet is strongly recommended. Finally, bring a hat to repel rain and insects. Insect repellent is important and a bug head net is a good idea, especially early in the season and even more so if you are sensitive to biting insects. You will need a headlamp or small flashlight (with extra batteries) and a camera to fully enjoy your stay. A good compass, whistle, and topographic maps of the CLBS region are useful if you plan to go backpacking (some maps are available in the office). If you enjoy fishing, be sure to bring your tackle and a valid fishing license. A good pair of working binoculars (at least 7x) is recommended; again, some are available in the office. Snorkels, masks, and fins can be fun. A good magnifying hand lenses (10x) will be useful for seeing small structures on plants and insects. Students should bring their own calculator and

office supplies (a ruler, notebook, graph paper, pens, pencils, and thumb drive). A laptop computer will be useful, but we cannot be responsible for its security.

The quad area at CLBS and many of the buildings on campus are wireless, so it will be possible to contact family and friends if you own a laptop.

Mobile service: All major carriers are generally supported with the exception of T-Mobile.

Finally, everyone should plan to bring their own over-the-counter medicines (aspirin, cold tablets, allergy pills, sunscreen, band aids, ace bandages, etc.). Limited additional medical supplies are available in the headquarters.

ESSENTIALS

Bedding:

- Twin Sheets
- Pillow with pillowcases
- Blankets and/or sleeping bag

Toiletry Items:

- Toothbrush/paste
- Razors/shaving equipment
- Soap/Shampoo
- Towels
- Body/hand wash
- Over the counter medications

*Clothing: attire for both **winter & summer***

Shell Layer: protection from the elements

- Waterproof outer shell (poncho or rain jacket and pants)

Insulation Layer: holds onto warmth

- Sweaters (wool/synthetic/down; **no cotton**)

Next to Skin Layer: wicks moisture

- Long underwear and long sleeved (wool/synthetic)
- Wool/synthetic socks (3 pairs at least)

Bring Backups!

Other

- Boots: hiking, waterproof and *broken in*
- Sneakers (that can get dirty)

- Shoes that can get wet (old sneakers or water shoes – Keens are great!)
- Sandals or sneakers (for camp)
- Flip-flops for showers
- Gloves
- Hat to repel sun and rain
- Flannel shirt
- Insect repellent
- Sunscreen
- Small flashlight or headlamp
- Batteries
- Compass
- Whistle
- Calculator
- Medicines/Medical Supplies
- Personal computer

Office supplies:

- Ruler, notebooks, graph paper, pens, pencils and thumb drive
- Unlined Field Journal (at least 8”x5” and unlined, plus coloring supplies) – for EFB 202. Can also be purchased at office.

OPTIONAL

- Acoustic instruments
- Wilderness medical kit
- Bug head net
- Fishing pole, tackle box, and valid fishing license
- Snorkel, goggles and fins
- Binoculars
- Hand lens
- Backpacking gear
- Slackline/hammock
- Bathing suit
- Camera
- Backpack for day trips (school book bag works)

Need Gear? Check out these links to browse discounted outdoor clothing:

<https://theclymb.com/>

<https://www.steepandcheap.com/>

<https://www.gearx.com/>

Many outdoor clothing companies (Patagonia, EMS, REI, Arcteryx, etc) also sell gently used clothing at discounted prices (e.g., Worn Wear at Patagonia).