

Welcome to Cranberry Lake Biological Station

This handbook will give you an overview of the program and help you to plan ahead. 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 is intended to provide undergraduate and graduate students with field experience in biology. We feel the ideal field experience includes at least an introduction to the joys and difficulties associated with actually doing field research. Practically, this means the station hosts both an academic program each summer (i.e., formal courses) and a number of independent research projects by teaching and non-teaching scientists each year. The station has a long history of providing field experience to students. The property served as the principal site of field training for the State University College of Forestry at Syracuse University (now ESF) forestry students between 1915 and 1970. As a forestry summer camp, the site provided unique experiences for a generation of eastern conservationists, including Robert "Bob" Marshall, one of the founders of the Wilderness movement in the United States.

Since the early 1970s, CLBS has focused on the biological sciences; the courses and research at the station reflect this shift. We currently see ourselves as a community of scholars, interacting on a daily basis as we go about the business of learning and doing science.

Setting & Biota

Cranberry Lake, the third largest lake in the Adirondacks, serves as an ideal site for biological study and research. Most of the shoreline is state-owned and is 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. It helps focus everyone's attention on experiencing and understanding the local environment, both physical and intellectual.

Adirondack Park, with an area of 6 million acres (as large as the states of Vermont or Massachusetts), 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 station 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.

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 have 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 climes to the south. Other mammal species at CLBS include the fisher, otter, marten, porcupine, beaver, and black bear, as well as numerous 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 the 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 learning experience at CLBS is intensive. Students participate in classes all day and often into the night and on weekends. With independent study, seminars, and informal study sessions, 50 hr. weeks are not considered unusual. Formal classes include lecture and discussion sessions and field trips of varying lengths. On occasion, overnight backpacking field trips are scheduled to the Five Ponds Wilderness Area, southwest of CLBS. Most of the courses require significant hiking (from a few to as many as 10 mi over rough terrain in a single day). All classes require some data analysis and the writing of reports and papers. Computers and printers are available, but students may bring their own calculators, laptops, and graph paper if they are interested in using them to avoid end-of-course congestion in the computer room.

Please see the CLBS site at www.esf.edu/clbs for a list of current courses. Graduate students, including primary and secondary school teachers who wish to continue their education, can arrange to enroll for graduate credit in any course offered for undergraduate credit. Additional work is required for graduate credit. Problems courses (EFB 498 or EFB 798) offer opportunities for individual study and research for undergraduate and graduate students. Such opportunities are designed for advanced students who have ideas about a research project they might wish to initiate at the station. In addition, ongoing research projects based at the station can provide research-for-credit opportunities for some students. Many of the ongoing projects have annual searches for research assistants who do not wish to enroll in a problems course for academic credit. Some of those positions are paid and some are "volunteer". The latter often include provisions for payment of the volunteer's room and board costs. If students have particular interests in such research opportunities, they should contact the appropriate faculty or graduate student directly. (Students who have a research interest but are not certain who the appropriate contact might be should reach out to Kit Sheehan, CLBS Academic Program Coordinator (ksheeh02@esf.edu).

Lectures, seminars and discussions, presented or led by resident faculty, visiting scientists 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 close and informal contact that occurs between student and instructor. This contact occurs during class hours as well as during leisure time. Because of our isolation, we not only work, but also eat and play together at the station. You, the student, are not just a number at CLBS. You are a unique individual, and hopefully, 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. Current research conducted by resident faculty members, their undergraduate and graduate student colleagues and by independent researchers is funded by a variety of private sponsors, public agencies and foundations. Over the past 10 years more than 60 undergraduates have gained their first experience in organized research at the station. We are proud of the fact that many of them are now earning graduate degrees in a variety of institutions or have jobs that make direct use of their CLBS experience.

Facilities & Equipment

The station 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 315-848-3444.

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

Since the station is accessible only by boat, we maintain a fleet of ~15 boats and motorized watercraft to move equipment and people across the 5 mi of open water between the marina and CLBS. Students make the trip in larger vessels. 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. Route 3 skirts the north end of the lake, passing through the village of Cranberry Lake. The village is 70 mi east of Watertown and 30 mi west of Tupper Lake, the latter being the largest village in Adirondack Park.

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 6 - 8 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 laundry facility is located near the washroom and is available to students during designated hours.

There are four classroom buildings. There is a computer lab in Classroom 1 for class use. The other classrooms are 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.

The station 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

Cranberry Lake Biological Station: This is a generalized handbook and is subject to COVID restrictions.*

compound microscopes, electronic balances, pH, O₂, and conductivity meters, GPS units, traps, insect night-lighting equipment, and more. You are encouraged to bring your laptop; however, please understand the potential for damage during transport across the lake.

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 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, 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. 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 Sunday after arrival of each EFB 202 session, there is a Field Day with various events and competitions.

Course Schedule & Expenses

Please see the CLBS website: www.esf.edu/clbs for a current listing of courses. Please contact CLBS Director Dr. Emily Arsenault (emarsena@esf.edu), CLBS Assistant Director Terrance Caviness (tcaviness@esf.edu), or CLBS Academic Program Coordinator (ksheeh02@esf.edu) if you have any additional questions about the academic program or station facilities.

Rules & Regulations

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*.

The Cranberry Lake Biological Station is a self-contained and essentially isolated community. We all live together in close quarters: eating, working, and playing with people of all ages and backgrounds. At any given time, individuals will be engaged in various activities that may overlap in shared spaces. For example, on any given day (including weekends), some individuals may be getting up before dawn in order to attend a class or engage in a research project. They will often be interested in getting to sleep by 10:00 PM, just when others on campus are ready to begin a political discussion or enjoy a campfire. At times it might be difficult to reconcile these different interests. At the same time, our isolation and the wildness of our local environment makes CLBS a potentially dangerous place. 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 of rules and regulations. These rules and regulations have evolved over a period of >60 years of summer programs. We have found they usually work to everyone's benefit. Many rules would be followed without even thinking about them, if everyone is thoughtful, respectful, and considerate of other people, whoever they may be.

- 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.
- In an emergency, when the office is closed, contact the Director or another faculty or staff member at their residence.
- The boathouse workshop is off-limits unless there is a specific need, and permission is first obtained from the CLBS Director or a Physical Plant employee.

Headquarters & Administration

The Station Office is where you buy books, contact individual faculty members, and sign out academic or recreational equipment and library books. The station Asst. Dir. and work study assistants will help you to meet these needs quickly and efficiently.

The office is open from 7:45 AM until 7:00 PM, except when closed for dinner from 5:15 PM to 6:30 PM. If you have a problem that requires attention or if you wish to discuss a personal matter, feel free to contact the Director, Dr. Arsenault (emarsena@esf.edu) or the Assistant Director, Terrance Caviness (tcaviness@esf.edu)

The supervisor for the Physical Plant staff is headquartered in the boathouse workshop. They are in charge of facility

The supervisor for the Physical Plant staff is headquartered in the boathouse workshop. They are in charge of facility operations, maintenance, and construction. They are assisted by other members of the physical plant, work-study students, and our boat pilots.

Boat Travel & Water Safety

The marina serving the station 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 private 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. For reasons of fairness and liability, 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 and filed documentation with the Asst. Dir. Anyone found in violation of any safety rules will lose his or her boat privileges.

Students attending either session 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 Cranberry. Two 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 (315-848-3444) to alert us of 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. Students wishing to sign out canoes and paddles should be good swimmers capable of swimming several hundred yards without flotation. 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.

- Apersonal floatation device (PFD) is required to be worn whenever a student is in a canoe, kayak, or rowboat. PFDs are provided by the station.
- 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

Living Accommodations

& Facilities

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.

Student cabins are essentially bunking facilities with little room for socializing, which is best done elsewhere on campus. Again, on a rainy or cold day, Sanderson Lodge can be a pleasant place to meet.

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!

There are laundry machines for your use near the washroom. These 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.

Rules & Regulations

- 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.
- <u>Camping</u>: No camping ispermitted on the Station grounds. Students and weekend visitors will find designated campsites along the Cranberry Lake shoreline on state land.
- <u>Smoking:</u> 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.
- <u>Campfires</u>: Prohibited anywhere on the station grounds, except for small bonfires permitted in the fire pit on the beach and at the fire pit south of Sucker Brook bridge. Although you may notice signs of previous campfires near student cabins, new fire regulations mean that such fires are strictly prohibited.
- <u>Collecting of plants or animals:</u> Collecting of plants or animals on station grounds are prohibited, except as a part of instructor-led course activities.
- Pets: Students' pets are not permitted at CLBS.
- <u>Buddy system:</u> 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.
- <u>Leaving the Station</u>: Before making plans to leave the station (an overnight camping trip, day hikes off station, etc.), students must notify the office staff and should arrange to bring a radio.
- 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.

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.
- In the absence of private rooms, and to help ensure everyone's privacy, other student's cabins are off limits after 10 PM
- Fire/flames/any heat generating apparatus using flammable fluids or electricity is prohibited in living quarters.
- 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, Classroom 1, and the Dining Hall; living quarters in the T.A. Lodge and all faculty cabins. If you need tools or assistance, please go to the CLBS office.

Personal Equipment

Besides warm bedding (a sleeping bag is a must!), and all those items you feel you will need for your stay at CLBS, please make sure you bring warm clothes. Wool clothes are never out of style at CLBS. There are days when the temperature is in the 40s or 50s (F) and freezing temperatures can occur during every month of the year at night. Thermal underwear is often useful, but so are summer clothes (i.e. shorts and bathing suits). Make sure that you have a good pair of well broken in hiking shoes or boots and some kind of field hat. Bring insect repellent to ward off black flies and other biting flies, which can be a nuisance. Bring a compass, map, and survival kit if you plan extended hikes. If you like to fish, the fishing is good, so bring *fishing gear* and a *valid license*. A *headlamp* or small flashlight is very important and sometimes necessary (for night hikes and owl-calling trips). Waders are desirable for students registered in aquatics electives or if you are an angler (we do have some available in the office). Bring binoculars and field guides, if you have them. Field guides can also be purchased at the station. There is a wealth of nature and wildlife to be seen in and around the station area, so we recommend everyone bring a camera. A backpack or day pack is important for everyday classes around the station. A tent is useful if overnight camping is desired. Additionally, do not forget to bring a swimming suit, a thumb drive (if you will not be bringing your personal computer), and enough *money* for the entire session (sketchbooks cost ~\$15, t-shirt ~20, sweatshirts ~40, merchandise costs are usually around \$50). Finally, a water bottle is necessary as you will spend a good deal of time in the field and you will need to carry water from the CLBS system.

Food Service

The fee you pay includes all of your meals while sessions are in progress, beginning on the Sunday evening you arrive. (*Lunch may not be available the day you arrive, so please plan accordingly!) Breakfast and dinner are served cafeteria style. On Monday through Friday, 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 Asst. Dir. 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. At the same time, they realize students need options, such as a bag lunch on the weekend despite our service of prepared lunches on those days. So, to make sure we can accommodate your needs, Food Service requests you let the Asst. Dir. know a few days ahead of time that 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 Food Service Supervisors.

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

Phone Service & Mail

The phone number of CLBS to be used for general calling is: 315-848-3444. 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. Any messages received in the office during business hours are left as notes in student mailboxes in the Dining Hall. Students will not be called out of classes to receive a phone call during the day, except in an emergency. Every weekday morning, a mail and supply boat leaves the Station, 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.

Study

Though student cabins can be used for study, classrooms are probably the best location for serious study and should be kept quiet at all times. 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!

Recreation

One of the great assets of CLBS are 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. On the first Sunday after arrival of each session, we have a Field Day of sporting events and activities, including woodsmen's events, tug-of-war, war canoe races, volleyball tournament, scavenger hunt, or any other event we can dream up (we have a few doozeys!).

Medical Facilities

The Station is a minimum of 45 min by boat and car from the Clifton-Fine Hospital at Star Lake off Route 3. If

necessary, transportation is readily provided to students in need of care or emergency help. 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 (315-848-3436). 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 an accident or injury, contact the Director.

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 (MAKE SURE YOUR BOOTS ARE BROKEN IN BEFORE YOU ARRIVE AT THE STATION).

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. 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.

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

Clothing: attire for both winter & summer

• NO COTTON for winter attire!

Shell Layer: protection from the elements

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

Insulation Laver: 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)
- 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
- Sketchbook (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
- Topographical maps

- Fishing pole, tackle box, and valid fishing license
- Waders
- Snorkel, goggles and fins
- Binoculars
- Hand lens
- Backpacking gear
- Slackline
- Bathing suit
- Camera
- Backpack for day trips (school book bag works)

Need Gear? Check out these links to 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.

DIRECTIONS TO CRANBERRY LAKE BIOLOGICAL STATION

DIRECTIONS FROM SYRACUSE AND POINTS WEST/SOUTHWEST TO THE CLBS MARINA:

(From the Buffalo, Rochester, NY area, take Rte. 90 East to Rte. 81 North)

Take 81 North to exit #48 (Rte. 342/Black River).

Continue on Rte. 342 until you reach Rte. 3

Head east on Rte. 3 until you reach Rte. 3A.

Turn left onto Rte. 3A until you reach Rte. 3 again.

Turn left on Rte. 3 and continue east until you reach Columbian Road, just before the Village of Cranberry Lake.

Turn right onto Columbian Road, watch for the CLBS Marina sign on the left (~2 mi from Route 3)

Park in the lot immediately to your right – please pay attention to how you part so that a maximum number of vehicles can fit (*be sure to not park anyone in*!).

DIRECTIONS FROM POINTS EAST/SOUTH EAST TO CLBS MARINA:

Take I-87 North towards Albany/Montreal.

Exit at US-9/Rte. 73 (exit #30) towards Keene Valley/Keene.

Turn left onto Rte. 9.

Turn left onto Rte. 73 North and continue for approximately 25 miles.

Turn left onto "Old Military Rad" – CR 35.

Turn left onto Rte. 86, which becomes George H. Lapan Memorial Highway.

The Lapan Memorial Highway will become Rte. 3.

Continue on Rte. 3 through the village of Cranberry Lake until you reach Columbian Rd.

Turn left onto Columbian Rd., watch for the CLBS Marina sign on the left, approximately 2 mi from Rte. 3.

Park in the lot on your right.