

<b>Course Title:</b>	<b>Canadian Shield Biodiversity</b>	
<b>Instructor(s):</b>	Alex Mills, Department of Biology, York University, 4700 Keele Street, Toronto, ON M3J 1P3 (416) 451-3972 <a href="mailto:ammills@yorku.ca">ammills@yorku.ca</a>	
<b>Dates:</b>	Saturday, July 29 to Friday, August 11	
<b>Location:</b>	Wildlife Research Station (WRS), Lake Sasejewan Algonquin Provincial Park (P.O. Box 49, Whitney, Ontario. Canada K0J 2M0)	
<b>Cost:</b>	Total <b>\$1400</b> . Non-refundable deposit of \$350 to your home university upon enrolment. Balance of \$1050 is payable by cheque to York University by April 30, 2023. Deliver payment to: Dept. of Biology, York University, 4700 Keele St., Toronto, ON M3J 1P3. Fee includes: all accommodations, meals, use of canoes and equipment, and transportation during the course.  Excluded: students are responsible for travel costs to and from the WRS.	
<b>Prerequisites:</b>	A second-year Ecology course.	
<b>Enrolment:</b>	14 (4)	
<b>Course Description (brief):</b>	Algonquin is a large, rugged, world famous park about 240 km north of Toronto. It is celebrated for canoe tripping, wildlife viewing, and research. We will be immersed at the venerable Wildlife Research Station (WRS: <a href="https://www.algonquinwrs.ca/">https://www.algonquinwrs.ca/</a> ) on Lake Sasajewan, a research and teaching facility that is off limits to the public. The WRS has hosted many significant research programs, including influential work on moose-deer relationships, small mammal population dynamics, bird song neighbour recognition, turtle life history, and salamander reproduction, among many others. We will be at the station at the height of summer, when Algonquin’s rich biota is most accessible. The course comprises a number of 1-day and 2-day modules, each focused on sampling, field techniques, and identifying particular terrestrial taxonomic groups (e.g. flowering plants, dragonflies, birds). Students will participate in all modules, but will choose one for developing their own project. The course ends with a Biobash, where students’ new sampling and identification knowledge are put to the test.	
<b>Evaluation:</b>	In-course – Short AV presentation prepared in advance	5%
	In-course – Documentary, photographic or physical collections throughout (8x4)	32%
	In-course – Benchmark mini-quizzes throughout (8x3)	24%
	In-course – Practicums participation	4%
	In-course – Active participation in the culminating BioBash	15%
	After-course – Field research project – annotated submission	20%

## An Average Day – What to Expect

(a) Daily timeline	<p>A couple of days for each student will begin before breakfast with mist-netting and bird-banding, on rotation. After breakfast most days, students will be in the field. Following an orientation with the whole group, the course will work through 8 modules based on taxonomic groups. Some are weather dependent, so the schedule of modules will shift accordingly. Students will work in small groups or pairs. Most locations will be accessible on foot near the station, but we will also taxi students to several nearby sites when required (<i>Old Airfield, Bike Trail, Two Rivers Trail, Bat Lake Trail</i>). Lunch will normally be back at the station. Some days we will also be in the field in the afternoon, and occasionally in the evening – even after sundown once or twice. But there will be a break for personal time each day. Also, most days we will be in the classroom for varying periods. This will be for several purposes: (a) short lectures from the professor, (b) 3-minute presentations by students, (c) collections, (d) identification practice, (e) benchmark quizzes, etc. A course schedule will be provided at the start of the course, but weather will almost certainly require adjustments as we go. Each student will be in a group, also on rotation, that will require after-dinner clean-up duty two or three times during the course.</p>
(b) Work habitat & Physical exertion	<p>Students will be on foot a lot, and will likely be walking at least several kilometers per day. The terrain is rugged and varied, but the change in elevation is not great, so there is not a lot of climbing. Good running shoes or light hiking boots will usually be appropriate. Some landscapes are low and wet underfoot. Once or twice we will be wading, and in such cases old running shoes that can get wet will probably be superior to boots. Once or twice we will be canoeing (with life jackets), although it will involve only relatively short distances. Inevitably, students will occasionally be in the field when rain arrives, so rain gear is highly desirable. Previous spring and summer field courses at the WRS have proved to present no major challenges where students have reasonable physical fitness.</p>
(c) Common activities	<p>More or less daily: Walking on quiet bush roads and trails, walking in wooded and open habitats off-trail, carrying survey equipment, sitting patiently and quietly during fieldwork, searching for and identifying organisms, working in the classroom.</p> <p>Less than daily, but at least once: Collecting vegetation or insect samples, wading in shallow water (small river or marsh), hiking in steep terrain, near-shore canoeing (with life jackets), walking at night, mist-netting and handling birds, monitoring of small mammal traps (live traps).</p> <p>Associated possible inconveniences: long days, getting wet from rain, twisted ankles in uneven terrain, and being annoyed by biting insects (mostly deer flies and mosquitoes; black flies will be finished for the year).</p>
(d) Weather, dehydration, & biting insects	<p>This course is at the height of summer. There will no longer be frost at night, but it can be quite cool at night in August. Don't pack based on the weather you are experiencing in southern Ontario! A warm hat and layers are recommended, but so are lightweight clothes for hot conditions. Most days are not likely to rain, but it will rain during the course at one or more points, so bring rain gear. Providing that you travel with a water bottle and are attentive, dehydration is unlikely. Days are still long at this latitude in August. Even in warm weather, hats and skin-covering clothing will be best suited for most field activities to minimize sunburn and insect bites. To avoid insect bites, repellent is recommended, but you may also wish to bring a "bug jacket" or a head net.</p>
(e) Toxic/poisonous, wildlife/ plants	<p>Some plants and fungi are poisonous to eat. There is no poison ivy or stinging nettle in the area. There are no venomous snakes. Ticks that attach to humans are rare in Algonquin, and to date, Lyme disease has not been recorded, to my knowledge. As is true everywhere, there are stinging bees and wasps, but stings are infrequent. There are black bears and eastern wolves in Algonquin, and we have been lucky enough to see both in the past; they pose little risk providing that students follow protocol.</p>
(f) Sleeping, washroom & laundry facilities	<p>Students sleep in single-sex cabins shared with other students. Beds with mattresses are provided, but students should bring bedding (or sleeping bags) and their own pillow. Some cabins are not impervious to deer mice, but keeping a clean cabin minimizes their presence. Cabins have electricity but are not air-conditioned. The WRS has a utility building that includes single-sex washrooms with hot showers and flush toilets. Elsewhere on the WRS premises (e.g. more distant facilities, such as the classroom), outhouses (pit latrines) are also used. The utility building also has laundry facilities for occasional use.</p>

(g) Meal plans & food allergies	<p>The WRS has a kitchen and dining area that will accommodate the whole course at one sitting. Mostly, all students in the course will eat here three times per day (breakfast, lunch, dinner) at prescribed times. Breakfast is usually self-serve using cereal, toast, etc. but occasionally it is a hot breakfast. Lunches may be hot or cold, but are hearty. Dinners are usually a hot meal. On occasion, we may employ boxed lunches for consumption in the field. The WRS has kitchen staff who prepare the noon and evening meals. Coffee (and tea) is available each morning.</p> <p>Allergies are registered with the head cook, and vegetarian options are available. The facility cannot eliminate all allergens from the site, however. For instance, the site cannot be nut-free. Naturally, students who react to allergens with anaphylaxis should come prepared with an epipen.</p>
(h) Non-academic responsibilities	<p>Students will be on clean-up duty two or three times during the course. This includes evening dish duty and also sweeping / cleaning of the utility building and the dining hall, but not cleaning toilets. Students are expected to be fastidious in their sleeping cabins in consideration of their bunk mates and to minimize attracting deer mice.</p>
(i) Degree of isolation	<p>The WRS is about 1.5 km north of highway 60 and it is accessible by a bush road prohibited to the public (but not to the course). Students are expected to make their own way to and from the WRS. For enrolled students who are interested, we will try to facilitate car-pooling arrangements to and from the course.</p> <p>The station has power, so recharging devices is possible. There is no WIFI and cell service is intermittent. Occasionally but not daily, groups of students will be able to visit the Algonquin Visitor Centre where there is WIFI.</p> <p>The Two Rivers Store on highway 60 is about 2 km from the WRS, and it has fast food and some basic convenience items.</p> <p>There are first aid supplies at the WRS. The Huntsville Hospital is about an hour's drive from the WRS.</p>
(j) Alcohol & drugs	<p>The WRS is not alcohol-free, but there is a no-alcohol, no-marijuana policy during the course. At the end of the course after the Biobash, we plan to have an evening bonfire party where alcohol will be permitted.</p>
(k) Vaccinations/ Insurances	<p>Students are recommended to have all vaccinations up to date.</p>
(l) Social Situations	<p>Students are required to be considerate of those with whom they share sleeping quarters, and to work collaboratively with those with whom they will be working on course activities.</p>
(m) Final comments	<p>One student comment from a past version of one of our Algonquin field courses, about the beautiful landscape: "I feel like I'm living in a postcard".</p>