



Research Opportunities

Ecology in Northern Alaska

Summer 2009



We are seeking undergraduates or college graduates interested in ecological research in remote Alaska during summer 2009. We have both paid jobs and paid research fellowships available. The fellowships are for 2nd and 3rd year undergraduates and are through the NSF Research Experience for Undergraduates (REU) program. Both positions offer an excellent opportunity to gain research experience in ecology and meet outstanding research scientists from around the world. The REU and research assistants will work closely with a group of scientists on projects from microbial ecology to the linkage of terrestrial and aquatic ecosystems via the movement of carbon and nitrogen. The broad goals of the projects are to understand the dynamics of ecosystem function in soils, streams, and lakes, and how tundra ecosystems will respond to climate change. Fieldwork will be conducted at the Toolik Lake Long Term Ecological Research (LTER) site, located in the foothills of the Brooks Range in northern Alaska.

Please see the following websites for more information on the Toolik Lake site:

<http://ecosystems.mbl.edu/ARC/> ; <http://www-personal.umich.edu/~gwk/> ; <http://www.uaf.edu/toolik/>

If interested, by March 15th please provide a resume and a 1-page description of your background (courses, field experience), goals, and names of references to Dr. George Kling, gwk@umich.edu or by fax at 734-763-0544. Experience in ecology, chemistry, and microbiology is desirable.

Fieldwork runs from ~ June 5 - August 25, 2009



Frequently Asked Questions

Available positions and research description
Applying for a position with the Kling laboratory
Working at Toolik Field Station
Additional Information

Available Positions and Research Description:

What types of positions are available?

There are summer research assistant positions (RA) as well as educational opportunities through the Research Experiences for Undergrads (REU) program at NSF; these REUs are for students with remaining eligibility in college (i.e., not seniors). The RA positions are open to U.S. and international applicants, but the REU position is only open to U.S. citizens. Both positions are paid and all travel and expenses (food, lodging) are covered. The RA positions involve a variety of field sampling, laboratory analysis of nutrients, computer data entry, and so forth, and involve working in small to medium sized research groups. The REU positions are similar, but students do an individual research project.

Do you have permanent positions available?

Our positions are entry level, temporary (3 month term) and usually filled by undergraduates or recent graduates.

Can you describe your research?

Our field sites are located in Northern Alaska, near Toolik Lake. The Toolik Lake is the site of the National Science Foundation's LTER (Long Term Ecological Research) program, and the Arctic LTER is based at the Marine Biological Laboratory (MBL) at Woods Hole, MA. The main components of the Arctic LTER are the lakes, stream, terrestrial, and land-water groups. Our laboratory directs the "land-water interactions" part of the Arctic LTER and work closely with other Arctic LTER groups at Toolik Field Station. We collect chemistry samples in soils, streams, and lakes and work with microbes and primary producers. We conduct basic monitoring and experiments at our sites that we couple with biogeochemical and isotopic analysis made in camp and at the University of Michigan. We are continuing to work on our NSF-LTREB project investigating the role of microbes in ecosystem function, and we have a newly funded grant to work on the biogeochemical effects of thermokarst (caused usually by permafrost melting). In addition, we have been working on a catchment biogeochemistry project (the "Biocomplexity" project) that involves sampling a small stream plus the soil waters surrounding it and relating below-ground processes to catchment export of carbon and nitrogen. Finally, we will be working closely with other LTER groups (lakes, streams, terrestrial) to investigate an extensive tundra burn site near Toolik Field Station.

Applying for an RA/REU position through the Kling laboratory at the University of Michigan

What is the application deadline?

Our posted deadline for application submission is March 15, 2009.

How do I apply?

Applications consist of a resume and a 1-page description of your background (courses, field experience), goals, and names of references. Send this to Dr. George W. Kling at gwk@umich.edu or by fax to (734) 763-0544.

What are your hiring procedures?

We hire on a rolling basis; our posted deadline for application submission is March 15, 2009. We will notify applicants of our decision by mid-April at the latest.

When will hiring decisions be made? I have a response deadline for another position.

This is a common scenario for many of our applicants and we understand that our deadline and hiring decisions are often made after other internship/fellowship deadlines. We hire on a rolling basis just for this reason and notify applicants of our decision by mid-April at the latest. The REU position(s), however, usually take longer to fill because it is dependent upon NSF funding. We usually notify REU applicants of our decision by late-April.

We ask that you keep us informed of any deadlines and we will do our best to notify you of our decisions in a timely basis.

Can first year students apply for an REU?

We generally do not hire first years (college freshman) for our positions up at Toolik Lake. We have found that additional exposure to science methods and theory in college results in a more successful and rewarding experience for our REU's.

We encourage you to contact us during/after your second year; we post the Toolik Lake REU positions in late January/early February each year.

Can international students/graduates apply?

International students can apply for our Research Assistant (RA) positions. The Research Experience for Undergraduates (REU) program is only open to U.S. citizens.

How does your position(s) compare to the Arctic LTER positions advertised by the Marine Biological Laboratory at Woods Hole?

These are similar positions that all work on the same overall LTER (Long Term Ecological Research) project (you should apply to each position separately if you are interested). Toolik Lake is the site of the National Science Foundation's Arctic LTER program, and the Arctic LTER project is based at MBL. The main components of the Arctic LTER are the lakes, stream, terrestrial, and land-water groups. Our laboratory directs the "land-water interactions" part of the Arctic LTER. We work closely with other Arctic LTER groups at the Toolik Field Station and have similar goals in our research.

Should I also apply through uakjobs?

You do not need to apply on uakjobs. RA's are hired either by the University of Michigan or the Marine Biological Laboratory (MBL) at Woods Hole, MA.

Working at Toolik Field Station

Could you describe the accommodations are available at Toolik Field Station?

The Toolik Lake Research Station is at a remote site on the North Slope of Alaska. As a result, we all eat, sleep, and work on-site. There are several options for living arrangements while at Toolik Field Station. People can choose to live in the dorms, polar tents, or "tent city" (personal tents). The dorms vary from the original ATCO dorms (used for pipeline workers) to the newer ("posh") dorms that have central heating and bathroom facilities. The polar tents, or weatherports, consist of a wooden platform with arched steel supports covered with heavy duty canvas. Both the dorms and the weatherports have beds and dresser(s) and are claimed on a first-come, first-serve basis. In most situations, you will have a roommate if you chose a dorm or weatherport. Finally, many people prefer the privacy a tent offers and bring their own tent and set it up by the lake. All options require that you bring your own sleeping bag.

Is food provided at the Research Station?

Food at the Field Station is prepared by a professional staff (who says you cannot have excellent food in the middle of nowhere) and is absolutely, without a doubt, fantastic. The produce is often better than what you can buy for yourself in the lower states (transportation costs so much that the cost of good food is relatively minor). The staff prepares 3 meals a day (we usually sit down for 2 because we are out in the field for lunch), leftovers are kept in a fridge/freezer, a sandwich bar and snacks are available, baked goodies are available at all times, and a tea/coffee area. The staff is very good at responding to special and not-so-special requests. Both vegetarian, gluten-free (when requested), and carnivorous fares are provided.

Is transportation to the Field Station provided?

Transportation to and from Toolik Lake is provided. We either arrange for or you are reimbursed for any costs associated with travel to and from Toolik Lake (food, lodging in Fairbanks, etc).

Additional Information

Where can I find more information:

In addition to our webpage (<http://www-personal.umich.edu/~gwk>), the webpages maintained by Toolik Field Station (<http://www.uaf.edu/toolik/>) and the Arctic LTER (<http://ecosystems.mbl.edu/ARC/>) also contain information about the camp and the goals of the LTER's research at Toolik.

What is the LTER?

The Long Term Ecological Research (LTER) network was established by the National Science Foundation (NSF) to support investigations of long-term ecological processes in a variety of unique ecosystems. Toolik Field Station is one of 26 LTER sites. More information about the LTER network and other locations can be found on the LTER website (<http://www.lternet.edu/>).