The Lee-Yaw Lab will be opening its doors at the University of Ottawa this year and is currently recruiting for several positions starting in 2023!

What we do:
Research in the lab focuses on understanding species' geographic distributions and the impacts of global change on range limits. The lab also works closely with different partners on projects that directly support the conservation of at-risk species. We have a particular fondness for amphibians but have worked on a number of different systems. Our work generally makes use of observational field studies, population genomics, and geospatial data. We also engage in synthesis work addressing a range of questions. Most of our work currently takes place along an ecotone in the stunning, Rocky Mountains and surrounding foothills in Alberta but we also have upcoming projects in British Columbia and Ontario.

Our values:
We value curiosity and creativity; collaboration and teamwork within and beyond the lab; and engagement with projects that support the protection of biodiversity. We work hard to maintain an inclusive and supportive environment and value the diverse experiences and perspectives of our members. We are actively looking for more inclusive ways of doing ecology and welcome conscientious thinkers with new ideas in this regard.

Current openings:
The following projects are currently funded. International students who meet the language and visa requirements for study at uOttawa and in Canada are welcome to apply!

1. Population and conservation genomics of peripheral populations (post-doc or other short-term)

This is a co-supervised position with Dr. David Weisrock from the University of Kentucky (https://weisrocklab.uky.edu/). We seek a team member with experience in bioinformatics and population genomic analyses. The successful applicant will be able to develop questions utilizing a large ddRAD dataset for long-toed salamanders (*Ambystoma macrodactylum*) that is available in the lab. The data represent comprehensive sampling of populations at the eastern edge of the species' range and provide an opportunity to explore a variety of questions in evolutionary ecology, landscape genomics, and conservation genomics.

<u>Eligibility and details</u>
This is a one-year position suitable for someone with experience working with ddRADseq data. A PhD degree is not required *per se* but demonstrated bioinformatic and population genomic experience is needed. This position can be held remotely. However, salary must be paid into a Canadian bank account and thus the applicant must be a Canadian citizen or permanent resident or be able to obtain and maintain appropriate immigration status to work in Canada. Salary is $45,000 CAD plus benefits and may be increased depending on additional funding success. There is the possibility of renewing depending on funding, interest, and satisfactory progress.
Ideal start date: January 2023

2. Genomic data to support conservation translocations of Northern Leopard Frogs (PhD)

The student will collaborate with Lea Randall (Wilder Institute/Calgary Zoo) and Dr. David Lesbarrères (Laurentian University and Environment Climate Change Canada) on a project aimed at informing a conservation translocation of the Endangered Rocky Mountain population of the northern leopard frog (*Lithobates pipiens*) in British Columbia. Activities include fieldwork in Alberta and BC and the generation of phylogenomic and population genomic data to evaluate alternative source populations for translocation and genetic rescue of captive breeding populations at the Calgary Zoo, Edmonton Zoo, and Vancouver Aquarium. The successful applicant will also have opportunities to explore other conservation questions using this and other amphibian study systems in the lab.

Eligibility and details

The successful applicant will have experience in a molecular lab and a background in population genetics/genomics, as well as experience with fieldwork or related outdoor experience. Bioinformatics experience or related coursework is strongly preferred. This position requires residency in Ottawa (Ontario, Canada) with spring/summer travel to western Canada for fieldwork.

Ideal start date: May 2023

3. Comparative landscape genomics of peripheral populations of at-risk plants in Ontario (PhD)



This is a co-supervised position with Dr. Jenny McCune from the University of Lethbridge (http://jlmccune.weebly.com/). The student will work alongside others who are establishing new populations of rare and at-risk plants in southern Ontario. Activities involve collecting basic population genomic data to inform these efforts but the student is expected to develop a thesis more generally exploring rarity, the evolutionary ecology of geographic range limits, or other questions in ecology or conservation biology. One of the study systems will be crooked aster (*Symphyotrichum prenanthoides*) but you will have opportunities to collect data from additional species for comparative work.

Eligibility and details

The successful applicant will have experience in a molecular lab and ideally experience working with plants. Preference will be given to students with experience with bioinformatics and basic knowledge of phylogenomic and/or population genomic analyses (STRUCTURE, summary population statistics, etc.). Molecular work and PhD program requirements are to be completed at the University of Ottawa. However, the student has the option to spend time in the McCune lab at the University of Lethbridge in Alberta. We are willing to discuss options for fieldwork in southern Ontario if this is of interest, but fieldwork is not a requirement.

Ideal start date: September 2023

4. Impacts of extreme events on geographic range limits (PhD)

This position involves analyzing ddRAD-seq data from long-toed salamander (*Ambystoma macrodactylum*) tissues collected before and at different time points after an extreme wildfire event at the edge of their range in Waterton Lakes National Park (Alberta). The student should plan to pair this case study with synthesis work, modeling, or other methods for exploring the eco-evolutionary consequences of extreme events on species' distributions.

Eligibility, details, and salary

The successful applicant will have experience with population genomic analyses and strong quantitative skills.

Ideal start date: May or September 2023

Interested in amphibians, the evolutionary ecology of range limits, or understanding the impacts of global change on species distributions but don't see a fit with any of the above projects or have your own ideas? Contact me to discuss other options!

Financial support for PhD students:

The minimum, guaranteed PhD stipend support at the University of Ottawa is $21,672 CAD per year. Available funding allows us to support students above this level, but final top-up amount for each position depends on additional pending grant applications. We also strongly encourage students to apply for external funding to increase total financial support and we can provide guidance and support with these applications.

Deadlines:

Applications will be considered until the positions are filled. However, applicants interested in developing a proposal for external funding (strongly encouraged) should reach out as soon as possible to discuss those opportunities as external funding deadlines are as early as October.

Application details and procedure:

Contact **jleeyaw <at> uottawa.ca** and indicate the program and position of interest (e.g. "post-doc-1" or "PhD-3" or "PhD-other") in the subject line.

In your email include:

- a brief statement of your research interests, relevant experience/how you meet the stated eligibility requirements
- a current CV
- unofficial copies of academic transcripts
- your preferred start date

Additional Information:

The University of Ottawa and Lee-Yaw Lab are located on the unceded, unsurrendered territory of the Anishinaabe Algonquin Nation who have cared for this land since time immemorial. We also conduct fieldwork in Treaty 7 territory, which is the traditional territory of the Blackfoot people, including the Kainai, Piikani, and Siksika Nations, as well as the Métis Nation of Alberta. We honour these Nations and all Indigenous Nations and Peoples and recognize our responsibility to respect the land on which

we live, work, and play, as well as to explore meaningful ways to contribute to decolonization and reconciliation.

The University of Ottawa is the largest bilingual (French-English) university in the world and found in the heart of downtown Ottawa next to many attractions, restaurants, and the famous Rideau Canal. Graduate students in the Department of Biology are part of the Ottawa-Carleton Institute of Biology and have access to courses and mentors from both institutions, as well as to government scientists in the capital region. Ottawa is a vibrant, capital city with several art galleries and museums, year-round events, and a green space network that provides ample opportunity for hiking, snowshoeing, cross-country skiing, and more. Montreal and Toronto are also within easy reach (2 and 5 hours by car respectively).

Lee-Yaw Lab: https://julleeyaw.weebly.com/ (Note: The lab website will be updated once the lab has moved to uOttawa but the current site speaks to general interests in the lab).

Department of Biology at the University Ottawa: https://www2.uottawa.ca/faculty-science/biology

Graduate studies at the University of Ottawa: https://www2.uottawa.ca/study/graduate-studies