Kim Roman was in the residency program 20 years ago. She currently works as a Natural Areas Preservation Specialist for the Illinois Nature Preserve Commission

@ORC

Issue # 51
February 26, 2016

It's a Win-Win

The Natural Heritage Residency Program

By Eric Smith, Division of Natural Heritage

In 1993 the Natural Heritage Residency Internship was born, a program whereby universities in Illinois partner with the Division of Natural Heritage and the Illinois Nature Preserves Commission to allow enrolled graduate students to take part in the program and earn credit towards their graduate degree. It is a 12-month full time employment to qualified graduate students where they participate in the identification, stewardship, and protection of Illinois natural areas.

Students are mentored by field-based or program staff and given the opportunity to apply and expand their education and gain hands-on experience in natural resource management. Specifically, residents conduct stewardship management such as, controlling exotic and invasive species from high quality natural areas and sites that contain state listed species.

They also participate in biological surveys; evaluate natural community quality, based on the Illinois Natural Areas Inventory (INAI); are trained and participate in prescribed burning; and how to use GPS and GIS to collect and analyze data on natural populations and communities. The program gives the graduate student valuable applied experience he/she will need when applying for employment in the natural resources field.

Residents typically love the program. Some have called it the greatest year of their life. For most, it confirms that they want to be natural resource managers. Others that are still undecided in their career soon become hooked the first time they put fire on the ground or pick a mapleleaf mussel from a gravel riffle and run. Another major influence for residents is the passion they get when walking into

Eric Smith was born and raised in Southern Maine. He graduated with a MS degree from Eastern Illinois University. Eric worked with the Illinois Natural History before becoming a Natural Heritage Biologist with IDNR in 1996 and is currently located in Gibson City.

*@ORC is a weekly publication by the IL Department of Natural Resources **O**ffice of **R**esource **C**onservation about exciting and wonderful things ORC staff are doing throughout Illinois.*

Tammy Miller, Editor
tammy.miller@Illinois.gov

Alex Faulkner is obtaining morphological measurements of the state endangered Illinois Mud Turtle. He just completed his residency January 15, 2016 and is seeking gainful employment!

a rare high quality natural community for the very first time. If they grew up in Chicago or the surrounding suburbs, or were raised in the heart of the Illinois' agricultural belt, the first visit to something really extraordinary can be very powerful.

Are there complaints from Residents about the program? Absolutely! The two universal complaints are that they can't believe the amount of paperwork required and the pay is poor. My response as a mentor to those complaints is that, no matter where you work in this field, there will always be paperwork and that the internship should be considered a stepping stone to a better paying job. The internship really isn't a job but instead, a year-long applied field course. For some reason my answer never appears to reassure the Residents.

Many students entering the internship program lack plant identification skills. In the past ten years or so, critical components of botanical education are lacking as universities shift away from traditional botany degrees and course offerings. Students who finish resident internships have been constantly exposed to plants and leave the internship with a valued skill set which they greatly appreciate.

One Heritage Resident summed it up perfectly:

"I couldn't identify plants! My second day on the job was spent in the field with biologists crawling around on their hands and knees, looking at plants through hand lenses, smelling them, maybe even tasting them (I think I recall that correctly). All I could do was follow them around and nod my head while thinking about how my new boots were giving me blisters. This was an important lesson that I learned right off the bat. Most of the time, you are not directly managing wildlife. You are managing plant communities. If you are going to correctly manage these communities you need to be able to identify plants!"

In return for these hands-on experiences, Residents make a wonderful contribution to the Department by assisting IDNR biologists and INPC staff to help accomplish so much additional and needed work. Residents participate in important stewardship activities like exotic/invasive species control and prescribed burning, biological surveys including endangered and threatened, technical writing of proposals, reports, and management plans. Who wouldn't want an extra pair of young and eager hands pulling nodding thistle in the hot summer sun, or spraying 50 acres of black locust re-sprouts after you thought you had killed it the first time?

Laural Wilson and Jared Ruholl, both finished their residency in 2014, are conducting a bee study at Patterson Savanna LWR. Laural is at the North Shore Land Stewardship Assoc. in Minnesota and is the Invasive Team Coordinator. Jared is currently a Land Conservation Specialist for the National Great Rivers Research and Education Center in Vandalia, IL

The Residency program also allows IDNR and INPC staff complete additional tasks that would not be possible without their assistance. In 2010, residents interns assisted with a 5-week survey of the state endangered Blanding's turtle in portions of the Kankakee Sands Conservation Opportunity Area, to update 1974 historic records.

Tyson Dallas assisted with surveys for the state threatened Kirtland's water snake in Central Illinois. He completed his residency September 2014 and is currently a visiting Wildlife/Forestry Biology Specialist for the Department of Natural Resources and Environmental Sciences at the University of Illinois.

Not only were known populations rediscovered and historic records updated, but new populations were found. Another Resident from Northwestern University used his school's library privileges to conduct research to get a better understanding of how ravine streams historically flowed into the coastal plain that makes up Illinois Beach State Park. His study resulted in a comprehensive history

Bridget Henning, 2014 resident, is opening up a prairie at Sand Prairie Scrub Oak Nature Preserve. Bridget is currently a Postdoctoral Research Associate with the IL Natural History Survey

of surface hydrology of Illinois Beach State Park which was used to by the US Army Corps of Engineers to help their study. Finally, nearly all residents write a Nature Preserve or Land and Water Reserve proposal, management goals, and management schedule for a state owned or privately owned site. These proposals can be very time consuming.

Residents often bring with them their own specialized expertise that is put to good use by the Department and the Commission. One resident pursuing a degree in Entomology conducted a preliminary study of Hymenoptera at Bald Bluff and Harry Patterson Savanna LWR (Big River State Forest). The study was designed to compare species composition between sand prairies, hill prairies, and tallgrass prairies. The study revealed that while all three natural communities have species in common to each other, the overall composition was mostly unique to that specific habitat. Also notable, the Resident intern found several species new to Illinois that were only know from west of the Mississippi River. Later, this same study was continued with a more comprehensive and in-depth approach by another interested resident.

And the biologists learn from the Residents as well. While some stuff I don't care to know (music by Adele or Doctor Dog), other stuff is fantastic. John Griesbaum knew how to disable the seat belt buzzer and was an ArcGIS whiz. Tyson Dallas showed me that it's possible to use two computer screens at one time. And Meghan Strange recently taught me to use the clipping tool in Microsoft Word when inserting photos into reports. WHO KNEW!!

By all accounts the program has been a success. Since 1993, eighty-two residents have worked through the program. Eighty-five percent of residents that have completed the program are currently working in a conservation related career. Many past residents have been successful in securing positions within the Illinois DNR. In 1996, when the Division of Natural Heritage and the Illinois Nature Preserves Commission added 13 new field staff, 11 of the new employees were previous Residents, Veterans, or both.

Russ Blogg, above, was a resident in 2008-09. He is an IDNR Natural Heritage Biologist, located in Utica, IL
Diane Tecic, below, completed her residency in 1996. She is currently the Director for the IDNR Coastal Management Program in Chicago IL.

Today, eight former Residents are employed with the Division of Natural Heritage, two more are employed with the Illinois Nature Preserves Commission, and one is a Conservation Police Officer. Six former members of the program are currently employed by the Division of Wildlife and another with the IDNR Coastal Management Program. Additionally, Residents are currently employed by the Illinois Natural History Survey (2), State Departments of Natural Resources (6), County and City Forest Preserve Districts (2), Federal Government (7, including the US Fish and Wildlife Service, US Forest Service, and Midewin National Tallgrass Prairie) and the private environmental consulting sector (8).

Mission Statement

The mission of the IL DNR Natural Heritage Graduate Student Residency Program is to provide graduate students in natural resource and/or conservation disciplines significant and meaningful technical and professional work experience commensurate with their education and level of academic training.

The Natural Heritage Residency program has proven to be an effective way to get needed help on the ground and benefit from Residents' individual areas of expertise. Meanwhile, the program is helping prepare students for their careers. This is a win-win for Natural Heritage and the next generation of natural resource managers.

http://www.dnr.illinois.gov/conservation/NaturalHeritage/Pages/NaturalHeritageGraduateStudentResidencyProgram.aspx