Dear EEBer,

The Department of Ecology and Evolutionary Biology is really just beginning to hit its stride following the impact of Hurricane Katrina, as evidenced by the level of activity described in this newsletter. This may seem strange to say given the time that has elapsed since the storm. But replacing and reestablishing the large number of faculty we lost has taken time. Three of the untenured faculty hired soon after Katrina have had successful third-year reviews and are headed for their tenure reviews next academic year. We have two other more recently hired and untenured faculty who are progressing toward their third-year reviews. And, of course, the tenured members of the faculty “keep on keep’n on,” as they say.

We also have our first ever Koch-Richardson Postdoctoral Teaching Fellow in Botany with us this year. John Schenk came to us from Florida State University where he completed a post-doctorate, having received his PhD from Washington State University. John has quickly gotten involved in teaching and research with both undergraduates and graduate students.

We all look forward to the next several years as we reach full stride in the School of Science and Engineering, of which we are part. And the School itself continues to move forward with new initiatives under its excellent leadership. If you visit New Orleans, please stop by to see what’s happening in EEB.

David C. Heins, Professor & Chair

DEPARTMENT AWARDS

UNDERGRADUATE AWARDS

The Fred R. Cagle Memorial Prize
Kyle Edward Coblentz    The Fred R. Cagle Memorial Prize was awarded to Kyle Coblentz for his extraordinary achievement in EE Biology, based on his remarkable academic record, the rigor of the curriculum he undertook and the likelihood that Kyle will make a substantial contribution to scholarship in the biological sciences going forward. For information on Kyle’s pursuits after EEB, see the Recent Alums article in this newsletter.

The Newcomb Zoology Prize
Hannah Greer Williams    The Newcomb Zoology Prize is awarded to a Newcomb Senior with outstanding achievement in Ecology and Evolutionary Biology. Hannah’s stellar GPA and her commitment to her studies contributed to her selection for this award. After graduation, Hannah moved to Florida for veterinary school.

The Gerald E. Gunning Memorial Award, for two recipients
Mitchell Garrett Hinton   Mitch was awarded the Gerald E. Gunning Award because he was a bright, well-rounded, eager undergraduate majoring in EE Biology. Please see the Recent Alums article in this newsletter for details of Mitch’s career after graduation.

Meredith Leigh Kurz  Meredith was awarded the Gunning Award because she was an exceptional undergraduate major in EE Biology, impressing her professors with hard work and dedication to her studies. Meredith entered the TeachNOLA program this summer and is teaching at Helen Cox High School in Harvey, La. Read about Meredith’s Honors Thesis in the Southwestern Association of Naturalists article in this newsletter.

The Phi Beta Phi Award
Hannah Greer Williams    The Phi Beta Phi Award is given to a Junior or Senior for the best paper based on experimental work in biological sciences. Nominated papers are reviewed by members of Physics, Chemistry, Ecology and Evolutionary Biology and Cell and Molecular Biology, and the recipient is determined by a consensus between these departments. Hannah’s winning paper was on the relationship of environmental factors to the development of blue crabs.

The Senior Scholars Award
Kyle Coblentz    Kyle was awarded the Senior Scholars Award because he demonstrated all-around academic excellence. He was a member in the honors program and had a GPA of 3.6 or higher. For information on Kyle’s pursuits after EEB, see the Recent Alums article in this newsletter.

Stuart S. Bamforth Prize for Excellence in Environmental Studies
Victoria Jane Troeger    The Stuart S. Bamforth Prize is awarded to a deserving senior in the field of Environmental Sciences. Tori impressed her instructors with her commitment to excellence as a major in Environmental Science - Biology track. Tori plans to attend graduate school, but is spending this year working in a hospital lab and preparing her Honors research into several papers for publication with help from her advisors and coauthors, Dr. Samarco of LUMCON and Dr. Caruso of Tulane.

The Fred R. Cagle Memorial Prize was awarded to Kyle Coblentz. The Newcomb Zoology Prize is awarded to Hannah Greer Williams. The Gerald E. Gunning Memorial Award was given to Mitchell Garrett Hinton. The Phi Beta Phi Award was given to Hannah Greer Williams.

GRADUATE AWARDS

The George Henry Penn Award
Nicole L. Michel    Awarded to doctoral students who have completed their degree in EE Biology and who demonstrated outstanding graduate research along the way. A student of Dr. Tom Sherry, Dr. Michel successfully defended her thesis entitled “Mechanisms and consequences of understory insectivorous bird population decline in fragmented Neotropical rainforest.” Dr. Michel entered a postdoc in the School of Environment and Sustainability at the University of Saskatchewan.

The Stuart S. Bamforth Prize is awarded to Victoria Jane Troeger. The George Henry Penn Award is awarded to Nicole L. Michel.

Teaching Assistant Awards, for two recipients
Charlotte Grace Sprehn    Grace was awarded a Teaching Assistant Award because of her exceptional work administering an intro-level lab, Diversity of Life. Grace graduated with a BS in EEB from Tulane in 2011, and is still with the department working on her Masters Thesis.

The Senior Scholars Award was given to Kyle Coblentz. The George Henry Penn Award was awarded to Nicole L. Michel. Charlotte Grace Sprehn received the Teaching Assistant Award.
Listening to the Ever-changing song of the White-crowned Sparrow

By Sarah Lipshtuz

This summer, members of Dr. Elizabeth Derryberry’s lab drove across the country to California to study song evolution of the white-crowned sparrow, Zonotrichia leucophrys. The white-crowned sparrow song is one of the best studied of all species because of its distinct dialects, which are song types unique to geographic locations. The Derryberry lab is characterizing the vocal and genetic structure of a hybrid zone between two subspecies of white-crowned sparrows, as well as investigating urban-dependent selection of bird song in San Francisco.

Undergraduate senior Catherine Rochefort recorded the songs of nearly 150 males in populations from the Point Reyes Bird Observatory to the Historic Victorian Village of Ferndale, and recorded many distinct dialects. Ph.D. student Sara Lipshtuz is pursuing a dissertation on behavioral mechanisms of reproductive isolation, using hybrid zones as natural laboratories to study speciation and sexual selection. The California coast features a putative contact zone between the southern Nuttall’s and northern Puget Sound subspecies. Sara and Catherine visited multiple populations across the coast and conducted behavioral playback experiments to assess male responses to songs from local and distant populations. Song divergence may contribute to reproductive isolation for these subspecies.

Urban white-crowned sparrows in the Presidio of San Francisco must contend with anthropogenic noise pollution. Like other species of urban birds, white-crowned sparrows have adapted by shifting the frequency - or pitch - of their songs higher over generations. This summer the Derryberry lab also found that even within a population, individuals on territories with louder ambient noise sing higher-pitched songs than males in quieter spots. To examine the functional implications of higher song frequencies for social communication, they conducted behavioral playback experiments comparing male responses to current songs and songs that had been shifted either up or down in frequency. They discovered that the strength of a male’s response is contextual and may depend on the frequency of his own song.

SPARROW continued on the next page
When alumni, parents and friends make donations to the Department of Ecology and Evolutionary Biology, they help to enhance the outstanding educational experiences for undergraduate and graduate students. EEB strives to integrate its scientific and educational missions in ecology and evolutionary biology by discovering new knowledge through programmatic research and by providing an academically rich learning environment for both undergraduate and graduate students. Direct donations contribute to teaching, research and service by funding educational programs.

There are two options when choosing to give directly to EEB: unrestricted gifts and restricted gifts.

Unrestricted gifts are credited directly to the General Endowed Fund of the EEB Department, unless otherwise specified. The General Endowed Fund was established in 2007 with a generous gift from Katherine S. Giffin (BA, 1925). The Fund is used to support a variety of programs including the Undergraduate Fellows. Contributions may be sent in the care of the Chair of the Department. Checks should be made out to “Tulane University” with the note “EEB General Endowed Fund, #050195” in the memo line.

Restricted gifts may be given to support the department in a more specific way. For example, restricted gifts have been used to initiate fellowships to support undergraduate or graduate research in the summer, graduate fellowships to support completion of dissertations during the academic year, or undergraduate awards for research or achievement. Please contact the Chair of the Department to discuss restricted giving by calling the EEB office at (504) 865-5191.

Thank you for considering a gift to EE Biology in support of the educational programs of the department.

**Support Great Science, Donate Directly to EEB**

SPARROW from the previous page

Males respond less to songs with frequencies higher than their own but equally to songs of the same or lower frequency. Adapting to urban environments by singing higher frequency songs may have drawbacks when communicating with other males.

Catherine is interested in understanding how songs degrade in different environments. She and Sara conducted sound transmission experiments across a range of urban and rural habitats. The two are measuring other factors that can affect song degradation, such as vegetation density and weather conditions. These data will help in understanding the environmental selective pressures that maintain acoustic variation within a population.

Catherine and Sara also visited the California Academy of Sciences in Golden Gate Park to photograph and measure potential changes in beak morphology and plumage of white-crowned sparrows over time. They worked with museum specimens, some of them over 100 years old, and others collected by the famous local ornithologist Luis Bapista. Thanks to his research and the legacy of many other ornithologists, scientists can continue studying the ever-changing song of the white-crowned sparrow.

**Natural History of Louisiana**

**Students Love to Learn in the Great Outdoors of the Bayou State**

Students enjoy getting out into the field and observing flora and fauna up close in Natural History of Louisiana. Each spring the class explores diverse communities, from bottomland hardwood forests to barrier islands.

PHOTOS BY DR. DONATA HENRY
Alumnae Make Splashes with EEB Degrees a Decade after Tulane

Compiled by EEB Staff

EEB is always delighted to hear from every generation of alumni: recent graduates, those who are several years out the door - and even those with grandchildren at Tulane! We recently caught up with alumnae Joanie Kenney and Patricia Warner, who have been putting their EEB degrees to good use a decade after graduation.

Joanie Kenney ('01) discovered an interest in pathogen evolution as an undergraduate at Tulane. After graduation she entered a Masters of Public Health program at the Yale School of Public Health, where she studied the potential of two tick-borne pathogens, *Anaplasma phagocytophilum* and *Babesia microti*, to alter the transmission potential of one another following co-infection of natural hosts and vectors.

After receiving her masters, Joanie accepted an Emerging Infectious Diseases Fellowship with the Centers for Disease Control (CDC) / Association of Public Health Laboratories (APHL). She worked in the New Mexico state public laboratory performing a number of field surveillance projects for multiple vector-borne pathogens as well as agents of bioterrorism.

Joanie then went on to pursue a PhD at the University of Texas-Medical Branch (UTMB) in Galveston. Her dissertation examined the genetic and anatomic determinants of infection of a primary enzootic mosquito vector of Venezuelan equine encephalitis virus (VEEV). During her time at UTMB, she was involved in many projects that focused on understanding the selective pressures placed on vector-borne viruses and how this knowledge can be used for vaccine development.

Upon successfully defending her dissertation in 2011, Joanie accepted an American Society for Microbiology (ASM) Postdoctoral Fellowship at the arboviral disease branch of the CDC in Fort Collins, Colorado. She continues to study the determinants that make arboviruses successful in a dual-host cycle and hopes to elucidate factors that might aid safe vaccine development. Most recently, Joanie accepted an associate fellowship position at the Fort Collins CDC initiated following completion of her ASM fellowship in November 2013.

Patricia Warner ('04) has had a love of the marine realm since childhood, but her decision to study science professionally was sparked by an Honors freshman biology course taught by Professor Bruce Fleury. She did well at Tulane majoring in EEOB and Environmental Studies and completing an Honors thesis on Biogeochemistry of the Mississippi River Plume while working in the lab of Professor Tom Bianchi (now at Texas A&M).

Two days after graduation, Patricia moved to the Florida Keys and started working as a Marine Science Instructor at SeaCamp / Newfound Harbor Marine Institute. The next year she moved back home to Stuart, Florida and worked as a biologist for an environmental consulting firm, participating in projects that included everything from identifying and counting plankton under a microscope to conducting sea turtle nesting surveys along the beach.

In 2007, Patricia got her Masters and then her PhD from James Cook University (JCU) in Townsville, Australia. She was extremely fortunate to conduct her doctoral studies in coral biology on the Great Barrier Reef, under the supervision of Professor Bette Willis (JCU) and Dr. Madeleine van Oppen (Australian Institute of Marine Science). Her project studied reproduction and population genetics of the reef coral genus *Seriatopora*. In her thesis, Patricia identified new species and genetic diversity in *Seriatopora*.

Ecuador Summer: Tropical Field Biology with Dr. Jordan Karubian

Dr. Jordan Karubian led an International Service Learning course in Ecuador this summer, where students got hands-on experience doing field work in lush Amazonian Ecuador. Students also engaged in conservation efforts, educating local populations on the importance of maintaining this extremely biodiverse region. Here are some photographs of their adventures!
Saving the Wetlands by Understanding Plant Fungal and Bacterial Endophytes

By Stephen Suchy and Sunshine Van Bael

Michael Blum, Sunshine Van Bael and Demetra Kandalepas are collaborating to study the bacterial and fungal endophyte communities within smooth cord grass (Spartina alterniflora), an important salt marsh species in Louisiana. The fungi and bacteria associated with this plant are important because they contribute to below-ground plant growth, soil formation and possibly even disease resistance.

They are characterizing the fungi and bacteria that live in association with the roots and above-ground plant parts of Spartina alterniflora, and are comparing the microbial communities in natural, degraded and restored wetlands. This will provide baseline information on how the microbial community changes in this essential plant under various levels of stress, and may lead to using endophytes as marsh restoration tools in the future.

A ubiquitous species throughout the region, smooth cord grass is often used for restoration projects in degraded wetlands. The plant’s tolerance to low oxygen and high salinity concentrations allow it to dominate coastal areas. These salt marshes are among the most productive communities in the world, with considerable ecological and economic importance.

Utilizing sites across Louisiana, including Bayou Sauvage, Fourchon, and Big Branch National Park, the project will compare the composition of fungal and bacterial species present across communities with varying degrees of health. Portions of sites are classified as being ‘healthy’, ‘degraded’, or ‘restored’, based on vegetative quality, soil characteristics, and elevation.

Assisting with the project are Stephen Suchy, a recent Tulane graduate currently enrolled in the EEB 4+1 Master’s program, and Jack Anjier, a New Orleans native and rising senior from Sewanee University. Both joined the project hoping to gain experience working with wetlands communities, along with developing practical lab skills.

The Urban Ecology of New Orleans

By EEB Staff

Summer in New Orleans is hot, sticky and wet. Just like you would expect for a city built near - and occasionally atop - swampland. And not surprisingly, wetland vegetation thrives in the city.

This summer, Dr. Michael Blum and his team of graduate students braved the heat to study the vegetation around New Orleans.

It’s part of a collaboration with the US Forest Service to develop New Orleans as a site for long term urban ecological studies. Urban Ecology is still a relatively young field of science. But with global temperatures rising making natural disasters more prevalent, and with society becoming more urbanized, scientists are increasingly interested in cities’ influence on, and relationship with, the environment.

New Orleans provides an interesting lens through which to study urban ecology. Dr. Blum and his counterparts at the USFS want to put together a compilation of ecological and socioeconomic data for the city before and after Hurricane Katrina to better understand post-catastrophe recovery of socio-ecological systems. The data they are gathering can provide a foundation for examining a suite of issues ranging from public health to water sustainability and climate.

Over several summers, Dr. Blum’s team has helped collect data by surveying trees and vegetation across a network of 300 study plots distributed throughout the city. This summer they re-surveyed those existing plots and they conducted a focused survey of the Lower 9th Ward neighborhood.

The Lower 9th is still struggling to recover from the infamous flood following Katrina. The neighborhood is a checkerboard of lots – some are occupied by homeowners determined to rebuild their lives and others are abandoned properties being swallowed up by resurgent wilderness.

Dr. Blum and his colleagues are working to establish New Orleans as an epicenter of urban ecology so they can further the study of the relationship between urban areas and nature.

Dr. Henry Wins Outstanding Faculty Award for Work with Graduate Students

By EEB Staff

Professor of the Practice Donata Henry was awarded the Outstanding Faculty Award for the School of Science and Engineering (SSE) presented by the Graduate Studies Student Association (GSSA) for the 2012-13 Academic Year. GSSA is a student-government based organization made up of representatives from graduate programs from each school (School of Liberal Arts and SSE). The group selects one faculty member from each school that best exemplifies excellence in graduate teaching and graduate student professional development.

Dr. Henry’s nomination was supported by SSE graduate students, many of whom work closely with her as Teaching Assistants in her courses, including the Diversity of Life and Ecology Laboratories, Natural History of Louisiana, and Theory and Methods in EEB. Dr. Henry has the opportunity to work with graduate students in other SSE departments through Girls in STEM at Tulane (GiST), an outreach program she developed to provide positive role models for middle-school girls. The success of the program has been driven by the effort and enthusiasm of over 100 student and faculty volunteers in SSE.

Dr. Henry also leads a scientific teaching seminar each spring as part of Tulane’s Center for Engaged Learning and Teaching graduate student workshops.

The EEB department now has two faculty members who have been recently honored by our graduate students. Dr. Caz Taylor was the recipient of the GSSA award in 2011-2012.

ALUMNAE from the previous page

four cryptic species within a single morphospecies, Seriatopora hystrix, evaluated local-scale gene flow within two cryptic species at both Lizard and Orpheus Islands, and conducted a novel parentage analysis of coral larvae to determine the distance of sperm dispersal in the internally fertilizing coral.

She submitted her thesis in February 2013 and immediately started working as a post-doctoral researcher with Prof. Steve Palumbi at Hopkins Marine Station of Stanford University, while awaiting her external examination results. Patricia’s PhD was awarded this September. Her current work at Stanford continues to address evolutionary and ecological questions in reef-building corals, with a new foray into next generation sequencing and genomics.

Thanks to Joanie and Patricia for taking the time to tell us about their lives after Ecology and Evolutionary Biology. We want to hear from you! Please contact us at eebalums@tulane.edu and tell us how you use your degree from EEB.

Dr. Henry (top row, second from left) with faculty, graduate and undergrad GiST volunteers.

Dr. Henry (top row, second from left) with faculty, graduate and undergrad GiST volunteers.

PHOTO COURTESY OF SUNSHINE VAN BAEL

PHOTO COURTESY OF DONATA HENRY

From left: Grad student Stephen Suchy, postdoc Dr. Kandalepas and Asst. Professor Dr. Van Bael standing amid the Spartina of Bayou Savage in New Orleans.
Recent Graduates Impress with post-EEB Efforts

Compiled By Dr. Donata Henry

Kaitlin Tasker (’12) spent a year after graduation working for The Green Project, a New Orleans non-profit dedicated to recycling. She designed and implemented an Environmental Education Program to teach citizens how to improve the environmental health of New Orleans.

Meanwhile, she also worked as an unpaid Co-Director of Humanure Power, a recent startup that works to improve sanitation and bio-gas in rural India. Kaitlin and the Humanure Power team took second place in the Tulane Business Plan Competition in the spring of 2013.

In August 2013, she began a Fulbright Student Fellowship in Ecology working with the local environmental agencies in Cordillera Azul National Park in northeastern Peru. Kaitlin is completing biodiversity inventories of the herpetofauna in previously unstudied sections of the park. The baseline data will help future researchers with long-term studies. Another aspect of her Fulbright Fellowship is conservation: she is helping to lead capacity-building workshops for park guards and local communities in the park’s buffer zone.

After her Fulbright, Kaitlin plans to continue her education by working on adaptive conservation planning to account for changes in climate and land use.

Mitchell Hinton (’13) was awarded an NSF Graduate Fellowship to attend the University of California-Davis for a Masters degree. He got a head start over the summer working in his advisor’s lab and spending time starting to collect data for his thesis.

His project is studying West Nile Virus transmission in the American Crows in Northern California. The virus is typically transmitted via bird-phageous mosquito vectors, however infection cases have been documented during the winter when mosquito populations are at an annual low. A possible reason for WNV persistence is direct bird-to-bird transmission. Mitch says that experimental evidence suggests that this is possible, however there have been no observations in natural populations.

The crows form massive roosts during the winter (up to 10,000 in Davis!) when migrants fly down to join the residents. So Mitch’s day-to-day involves quite a bit of time collecting fecal swabs for analysis, trapping and identifying mosquitoes, conducting regular density counts at the roost, and collecting crow carcasses.

Within the next few months, his lab will be catching, banding, and radio/satellite tagging adult crows. They will hold individuals for 48 hours in an aviary on campus and are trying to figure out which types of behavioral assays to run (social interaction, problem solving, neophobia, etc.)

Daniel Lenger (’13) spent the summer in Panama collecting data with former classmate Julia Berkey, where they witnessed a predation event of a poison dart frog that has never been documented. Daniel quickly worked up a draft of the event, which he hopes to have published as a natural history note in Herpetological Review soon!

In August, Daniel joined on as a Research Assistant for John Cook University in Kosciuszko National Park in Australia. The transition from the warmth of the equatorial rainforest to the mountains during the Southern Hemisphere’s winter was not easy. He and former EEBer Laura Brannelly (’12), who is a graduate student at JCU, have been conducting their field work during the chilly nights.

Their work involves surveying the Alpine Tree Frog for Bd prevalence. The species is known to be susceptible to chytrid and has experienced serious declines. Several months ago, Laura released a bunch of pit tagged animals, and now the duo are recovering and swabbing them to track their Bd loads over the breeding season.

Daniel says they are also surveying local crawfish populations (or “yabbies” as they’re known Down Under) for Bd in order to see if...
Sherry Lab Studies Birds and their Predators in Costa Rica

By Dr. Thomas Sherry

Tom Sherry’s lab was active in Costa Rica this summer! Tom spent the month of June there helping Ph.D. student Deborah Visco with her project on tropical forest fragmentation impacts on a tropical understory bird, including helping find nests, video taping them for parental care and nest predators. Debbie has spectacular videos of a specialist nest predator, the bird-eating snake (Pseustes spp.), raptors, and an ocelot; and her study has documented important differences in nesting success, abundance, and nest predators of her study species (chestnut-backed antbird) in forest fragments compared to large, intact forest.

Tom also spent several days and nights out in the rainforest helping

Students Present Research on Fish to the Southwestern Association of Naturalists

By EEB Staff with Dr. Heins and Dr. Blum

Last Spring PhD candidate Travis Haas and undergraduate senior Meredith Kurz presented their research at the annual meeting of Southwestern Association of Naturalists (SWAN) at McNeese State University in Lake Charles, Louisiana. The focus of the society is to support the study and conservation of flora and fauna, especially of Mexico, Central America and the Southwestern United States.

Meredith presented her Honors Thesis, entitled “Early Life History Changes in Invading Population of Threespine Stickleback,” which she completed under the direction of Dr. Heins. Meredith’s research provides the first insight into life-history transitions of the marine and anadromous threespine stickleback after invading a freshwater lake. Invasions of freshwater by the marine ancestor occurred in many lakes of the Northern Hemisphere which were formed after deglaciation. Meredith’s research will serve as a model for life-history changes that occurred soon after these invasions as the stickleback populations adapted to the fresh-water environments.

Travis has been conducting research for his PhD on stream fish with Dr. Heins and Dr. Blum. His presentation, entitled “Twenty Four Years of Impoundment-related Morphological Change in the Blacktail Shiner Cyprinella venusta,” described changes in body shape of a stream fish population over several decades at the site of a dam on the Alabama River. The species exhibited a gradual change from a streamlined riverine form to a stouter lake-like form over the course of the two and half decade study period. The study was conducted by examining a long series of historical collections from the Tulane Museum of Natural History.

By Maxime Aliaga

Graduate student Debbie Visco (above) and undergraduate student Briana O’Malley (left) from Dr. Sherry’s lab were in Costa Rica this summer studying snakes and their impact on understory birds.

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they could be a reservoir host.

The countryside is breathtakingly beautiful, and Daniel is able to hike and fish almost every day. Says Daniel, “life could definitely be worse!”

Kyle Coblenz (’13) submitted his Honors Thesis titled “Relative influence of habitat characteristics on the composition and diversity of soft-sediment intertidal invertebrate communities” for publication in Marine Ecology Progress Series after graduating in May. It is in review; fingers crossed!

As an NSF Graduate Fellow, Kyle enrolled in the PhD program at Oregon State University. He spent most of the summer doing field work for his advisor, Mark Novak. They set up some experiments in the intertidal off of the Oregon coast. The first was to look at succession dynamics going from bare rock to mussel beds. To do that, they scraped up sixteen different 1.5x1.5m quadrats using just crowbars and raw muscle power! They also set up some caging experiments where they placed different densities of whelks in the cages to look for interference competition.

Despite the grueling work this summer, Kyle says it’s worth it when your job is located somewhere people choose as a place to vacation!

Kyle was able to get in a little vacation time himself. He was able to visit with fellow recent graduate Cindy Crowley, who was in Seattle preparing for a job with the North Pacific Groundfish Observers that started recently in Alaska.

And what would a summer be without a little bird watching? He took advantage of his new locale spotting several species he’d never seen before.

Graduate student Travis Haas presented a paper on the blacktail shiner, which he has been researching with advisors Dr. David Heins and Dr. Mike Blum.