

Ecology and Evolutionary Biology

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Ecology and Evolutionary Biology Newsletter

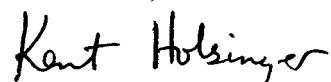
Dear EEB Associates and Friends:

Welcome to another edition of the EEB Newsletter. With the start of this fall semester, the Department is no longer a teenager. It is now twenty years old. In 1985 the Biological Sciences Group, home to all biology in the College of Liberal Arts & Sciences, became the departments of Ecology & Evolutionary Biology (EEB), Molecular & Cell Biology (MCB), and Physiology & Neurobiology (PNB). Since that time, the three departments have prospered, and we cooperate to provide a comprehensive, coordinated introductory curriculum in biology, both for biology majors and for those who major in other disciplines. This fall semester is significant in another way. It marks the first fall in which about half of our faculty are housed in new offices and laboratories in the BioPharm – a new building shared with the School of Pharmacy that also houses research laboratories for faculty in PNB. You may remember that PNB moved to facilities on Horsebarn Hill almost a decade ago. We are pleased that after a decade of separation, biology will be reunited.

The past year has seen two significant additions to the department. Adam Fry joined us in January, 2005. Adam comes to us with a Ph.D. from Brown University after post-doctoral work at the Woods Hole Oceanographic Institution. In addition to teaching in two of the large, introductory courses, Adam coordinates much of the introductory biology curriculum, including the Early College Experience Program that allows high school students in certified biology courses to receive credit for our introductory courses for biology majors. In addition, Andrew Bush officially becomes our newest faculty member at the start of the fall semester. Andy received his Ph.D. this spring from Harvard University and brings a “deep time” perspective to the Department. His research interests focus on changes in diversity patterns through time, especially in the Cambrian. Andy will also join Zoe Cardon and Jean Crespi as active faculty participants in the new Center for Integrative Geosciences – a collaborative effort involving faculty from several departments.

There's one last change you'll notice at the bottom of this page. On the 1st of July Greg Anderson became Interim Vice Provost for Research and Graduate Education, and I became Interim Head of the Department. It's been barely a month since Greg assumed his new duties, and we wish him well. But we also miss him, and hope for his speedy return.

Best wishes,



Kent E. Holsinger

Interim Department Head

Cover Photos (top to bottom):

Hourglass Treefrog, *Hyla ebraccata*; photo by Jason Hill, La Selva Biological Station, Costa Rica.

Solanum dioicum, an Australian eggplant relative; photo by Chris Martine, Keep River National Park, Northern Territory, Australia.

Callipogon Longhorn Beetle, *Callipogon senex*; photo by Kristiina Hurme/Chuck Smith, BFREE - Belize Foundation for Research and Environmental Education Research Center.

Male basilisk lizard, *Basiliscus vittatus*; photo by Kristiina Hurme/Chuck Smith, BFREE - Belize Foundation for Research and Environmental Education Research Center.

Agamia Agami, photo by Kristiina Hurme/Chuck Smith, BFREE - Belize Foundation for Research and Environmental Education Research Center.

ALUMNA'S GIFT SUPPORTS BIOLOGY RESEARCH

What do you get when you add two scientists and a chance encounter in Maryland? A thriving philanthropic relationship that has allowed students to take part in fieldwork around the globe.

Dr. Janine Caira had nearly finished her Ph.D. in parasitology at the University of Nebraska in 1984 and while visiting the National Parasite Collection in Beltsville, MD, struck up a conversation with a woman who was working on a parasitological catalogue.

Caira recalls the woman asking, "What are you going to do in the fall?" She told her that she had just accepted a job teaching parasitology at the University of Connecticut. Caira was taking over a position held by the late Lawrence Penner who coincidentally taught parasitology to Judith H. Shaw, '48, the woman working on the parasitological catalogue.

Both women share a sense of excitement at the discovery of new species of parasites. That interest led, several years after their meeting, to Shaw establishing the Judith Humphrey Shaw Parasitology Fund at UConn. This endowment has enabled Caira to take students all over the tropical belt of the world in search of new species of tapeworms and the sharks and stingrays that host them.

Judith Shaw, who has now retired, and Dr. Caira stay in touch through letters and emails. "Because she knows about parasitology, it's easy to keep her informed" says Caira.

In January, Caira and her research team of six spent two weeks in fishing



Janine Caira and members of her research team study parasites on a beach in Senegal. Photo by Kirsten Jensen

villages on the southern coast of Senegal along with three Senegalese collaborators. Senegal is located on the western bulge of the continent. The northern part of the Senegal coast is made up of dunes and to the south are muddy estuaries.

The group surveyed tapeworms that live inside the sharks and stingrays there. Two of the team, Joseph Mega, a fifth year pre-med Honors student, and Carrie Fyler, a second-year Ph.D. student owed their participation in the field project to the support of the Shaw endowment.

Mega says "Senegal is amazing. It was like a positive culture shock." This was his first scientific fieldwork and his first trip to Africa, where he hopes one day to practice medicine. Although still an undergraduate, Mega has spoken at national and regional research meetings, and has jointly submitted a

research paper with Caira to the *International Journal of Parasitology*. In the three years prior to going Senegal, he had seen parasites and hosts only from the perspective of Caira's laboratory in the Torrey Life Sciences Building.

Carrie Fyler chose UConn for graduate school because of the opportunity to do fieldwork and learn how parasites and their hosts have evolved together. "You get a lot of information about the ecology of the parasite by collecting it yourself" says Fyler.

In Senegal, the research team negotiated with local fishermen to be allowed to gut their fresh-caught sharks and stingrays to obtain live tapeworm parasites. They set up microscopes on the beach to document, describe and fix the tapeworms for DNA sequencing and other studies.

Caira has taken teams to Senegal on four different occasions and hopes to go back. "It's expensive if I want to bring a team. I don't know how else we'd do it" says Caira referring to the financial support from the Judith Humphrey Shaw Endowment Fund. She has an active field program underway in Borneo where her group has identified as many as eight new species of sharks and rays as well as new parasites.

In a recent communication with Shaw, Caira stated, "I know I sound like a broken record, but I would not be able to do this without your fund!"

Excerpted from article by Lucinda Weiss, UCONN Advance

PARTNERS IN FLIGHT

Chris Elphick, EEB assistant professor, was awarded a 2004 Partners in Flight National Investigations Award for his research contributions to bird conservation.

Partners in Flight, a cooperative effort launched in 1990, is a response to growing concerns about the declines in many species of land birds. It partners with federal, state, and local governmental agencies, philanthropic and professional organizations, conservation groups, industry, the academic community, and private individuals. Its stated goal is to "focus resources on improvement of monitoring and inventory, research, management and education programs involving birds and their habitats."

The award was presented at the U.S. Fish and Wildlife Service Director's reception at the North American Wildlife and Resources Conference in Washington, D.C. on March 17, 2005.

Elphick's award-winning study focuses on the conservation and ecology of two Connecticut coastal bird species: the seaside sparrow and the saltmarsh sharp-tailed sparrow which is considered to be globally vulnerable to extinction and identified as one of the highest priorities for bird conservation research in North America.

The study provides a more complete understanding of the basic ecology of the birds and will allow researchers to develop more effective methods for population monitoring, and salt marsh restoration and management.

Dr. Elphick's research has been funded by the U.S. Environmental Protection Agency's Long Island Sound Study, the National Oceanic and Atmospheric Administration through Connecticut Sea Grant, the Connecticut Department of Environmental Protection's Endangered Species Tax Check-Off Fund, the DEP's



Chris Elphick with a saltmarsh sharp-tailed sparrow found at Hammonassett State Park. Elphick was recognized for his work on the conservation and ecology of two species of sparrows. Photo by Carina Gjerdrum

Office of Long Island Sound Programs (through the Long Island Sound License Plate Program), and Audubon Connecticut. The US Fish and Wildlife Service's Stewart B. McKinney National Wildlife Refuge has also provided considerable in-kind support for his work.

Collaborating with Elphick on the study are EEB assistant professor, Margaret Rubega; research associate Carina Gjerdrum; EEB MS/BS Program master's degree student, Erin King '05; and several undergraduates: Ken Henry, Selena Humphreys '05, Moira Ray '04, and Kira Sullivan-Wiley '07. In addition to participating in this study, Humphreys and Sullivan-Wiley conducted independent research as well.

Excerpted from article by Lucinda Weiss, UConn Advance

BOOKS BY EEBers

The following books by EEB alum and faculty have been donated to the Bamford Library by EEB Professor Carl Schaefer:

Baranowski, R.M. (MS, UConn, ~1955) and J.A. Slater (Prof. Emeritus) 2005. The Lygaeidae of Florida. Fla. Agric. Exp. Sta. Bull., 266 pp.

Andreadis, T.G., M.C. Thomas, & J.J. Shepherd 2005. Identification Guide to the Mosquitoes of Connecticut. Conn. Agric. Exp. Sta. Bull. 966: 173 pp. **Illustrations by Gale Ridge.**

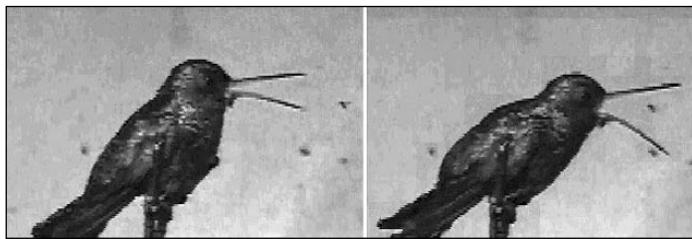
Sikes, D.S., Ph.D. 2004. The Beetle Fauna of Rhode Island. The Biota of Rhode Island, vol. 5: 296 pp.

Raman, A., **C.W. Schaefer, & R.M. Withers** (editors) 2005. Biology, Ecology, and Evolution of Gall-inducing Arthropods. Science Publishers, New Hampshire.

BENDABLE BEAKS

Recent articles in *Natural History* and *Nature* magazines highlight the research and discovery by Ph.D. candidate, Gregor Yanega and Dr. Margaret Rubega, EEB assistant professor of ecology, that hummingbird beaks have a special mechanism that help them catch flies: they bend.

"Hummingbirds are a textbook case of co-evolution, the fit between birds and flowers," says Dr. Rubega. "But a long skinny beak is not the best tool for insect eating." Most insect-eating birds have sort, wide beaks. The hummingbird study, part of the Ph.D. research of Yanega, first author on the paper, began from the question: How do nectar-feeding birds catch insects at all?



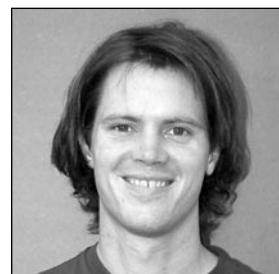
A golden-tailed hummingbird showing the progression of the beak from unflexed to flexed.

Utilizing high-speed video to study three different species of hummingbirds, the researchers observed that the birds are able to bend their lower beak downward by as much as 20 degrees. The movement opens the beak wider, increasing the bird's ability to catch an insect in its mouth rather than the tip of its beak.

Yanega and Rubega found that hummingbirds also flex the lower jaw laterally at the same time widening the area at the base of the beak. "Being able to bend the lower jaw vertically and laterally seems to allow a bird with narrowly set jaws to have an effectively larger mouth," says Yanega. "It's a fascinating morphological solution to the problem."

The findings were the first surprise. The second surprise was that the lower beak doesn't have a joint that would facilitate the bending. While a few other fly-catching birds have a joint in their lower jaw which flexes sideways to make the jaw wider, no other fly-catching bird is known to flex their beaks in two dimensions like hummingbirds.

Rubega says hummingbirds and swifts, their closest living relatives, evolved from a common ancestor that was insectivorous. "The evolutionary novelty about hummingbirds," she says, "is that they switched to nectar capitalizing on another food source. Over evolutionary time, their



Gregor Yanega

beaks dramatically modified to get nectar."

Although nectar is a good energy source, it is deficient in many nutrients, particularly amino acids, and hummingbirds still need protein. The solution was a mixed diet: insects as well as nectar.

It now appears from Yanega and Rubega's work that the ability to flex the lower beak, in addition to their extraordinary flight abilities, enable the birds to derive nutrients from two very different food sources.

To conduct the study, Yanega caught several ruby-throated hummingbirds and kept them in a special flight cage stocked with fruit flies. The birds were released after experimental work was completed. Yanega has also collected data on two other hummingbird species in Arizona: the blue-throated and the magnificent. All three species have long, straight beaks.

Because the birds and the flies move extremely fast, the video camera has to be stationary. It is a matter of careful experimental design and a lot of luck whether a fly-catching episode occurs in front of the camera.

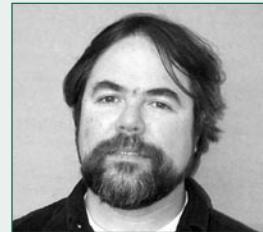
Analyzing the video data is a time-consuming process. For every episode successfully captured – a process lasting only a fraction of a second – there may be 30 minutes of unusable tape. The tapes also have to be reviewed in slow motion.

Rubega says understanding feeding mechanisms is fundamental to comprehending evolution. "Every animal has to eat. We tend to think that sex and achieving reproduction are the bottom line in evolutionary biology, but any animal that can't meet its nutritional requirements is a dead animal," she says. "So the framework within which evolution happens is set, to a large extent, by how an animal meets those needs, and what limits its ability to meet those needs."

Yanega spent part of last summer in Costa Rica conducting research on additional hummingbird species with a variety of bill shapes. The final report of that research has yet to be written.

ALUM WINS CHILEAN TEACHING EXCELLENCE AWARD

The Educational Program (EXPLORA) of the National Science Foundation of Chile (CONICYT) has awarded **Dr. Ricardo Rozzi**, (Ph.D. 2002), University of North Texas, the national prize for excellence in outreach and teaching of science. The prize ceremony took place in Santiago, the capital city of Chile, and was presided over by the ministry of education and the president of Chile, Mr. Ricardo Lagos. The prize recognizes the work of Dr. Rozzi in preparing educational materials, designing curricula for the ministry program, and promoting the value of outdoor education in the everyday environment. The merit is shared with an archaeologist, Dr. Lautaro Navarro, who has also emphasized field experiences with students and teachers.



Dr. Rozzi teaches environmental ethics and the philosophy of ecology at the University of North Texas, which is internationally renowned for its program in environmental ethics.

CAPE HORN BIOSPHERE RESERVE

Since he was a graduate student at UConn, EEB alum **Ricardo Rozzi** (Ph.D., 2002) has been working with a team of scientists and other stakeholders to develop a Global Biosphere Reserve at the southern tip of the Americas. On June 28, 2005 UNESCO-Paris gave approval to the Cape Horn Biosphere. Ricardo recently met with representatives of UNESCO's Man and the Biosphere program in Chile, and organized a conference entitled "Conservation and Tourism in Cape Horn." Participants at this meeting included representatives of national and regional governmental and non-governmental organizations, policy makers, and scientists. At the meeting Ricardo presented a book he edited on the Biosphere Reserve: "The Cape Horn Biosphere Reserve: A Proposal of Conservation and Tourism to Achieve Sustainable Development at the End of the Americas" (Ricardo Rozzi, Francisca Massardo & Christopher Anderson, eds), Ediciones de la Universidad de Magallanes, Punta Arenas, Chile. The book details all of the contributions to planning and designing the Biosphere Reserve by national and international institutions and scientists, including individuals representing the University of Connecticut and the Center for Conservation and Biodiversity. The Cape Horn Biosphere initiative would not have been possible without initial support from the Stuart and Constance Greenfield Foundation.



This past May, Ricardo led a two-week expedition through the Cape Horn Archipelago with an international team of scientists (including EEB Professor John Silander) and students from North and South America and Europe to conduct a biological inventory, and to map the entire region comprising the Biosphere Reserve. The expedition stopped at Douglas Bay, where the first Anglican Mission was established (Stirling House). The expedition then navigated along the Hardy Peninsula of Isla Host to the Cape Horn Archipelago, stopping at Grevy Island, and continuing through Washington Channel between Bayly and Wollaston Islands. Crossing the Franklin Channel, the group stopped at Saint Martin Cove on Hermite Island. This is a well known historical site, having been visited by several 18th and 19th century botanical expeditions and voyages of discovery. At this point, the expedition encountered storms for which the Horn is renowned, with winds in excess of 135 miles per hour and 50-foot seas. The expedition continued on to Martial Bay on Herschel Island before returning to the Biosphere Project's headquarters at Puerto Williams on Navarino Island. This January, Ricardo plans a sailing expedition retracing Darwin's travels on the H.M.S. Beagle through the Magellanic region and around Cape Horn.

CURRENT FACULTY



Robin Chazdon

Robin Chazdon was elected to a lifetime appointment as a Founder of the CR-USA Foundation at a meeting in San Jose, Costa Rica. Other Founders include: Tom Lovejoy (President, H. John Heinz III Center for Science), Dan Martin (Critical Ecosystem Partnership Fund, Conservation International), Ana Sittenfeld (Senior Staff Scientist, Universidad de Costa Rica), and Franklin Chang-Diaz (Director, Advanced Space Propulsion Lab, Johnson Space Center) in addition to other Costa Rican academics, business, and political leaders. The CR-USA Foundation is a bi-national organization whose mission is to grant funds for projects to help Costa Rica and Costa Ricans – nearly \$4 million is available in grant funding annually.

Dr. Chazdon received a 2004 Outstanding Honors Faculty Member Award. This award is determined by students in the Honors Program through a nominations process that involves soliciting nominations from all Honors students. Dr. Chazdon's award recognizes her "enthusiasm and compassion in every aspect of teaching."



Kent Holsinger

about AIBS, please visit them at <http://www.aibs.org>.

In 2004, Dr. Holsinger was elected to an unlimited term as Trustee Emeritus of the Connecticut Chapter of The Nature Conservancy. Dr. Holsinger was recognized at the Conservancy September

Kent Holsinger was recently honored by being elected President of the American Institute of Biological Sciences (AIBS) for 2006. The AIBS is the largest umbrella organization in biological sciences and represents more than 80 professional societies and organizations. It has a combined membership exceeding 240,000 scientists and educators. To learn more

Board meeting as having "supported the Chapter in countless ways, increasing the Chapter's effectiveness exponentially with an extraordinary network of scientists, beginning most notably with himself and extending to a larger academic community."



Carl Schaefer

Carl Schaefer presented an invited paper at a roundtable on Chagas disease vectors at the XX Congresso Brasileiro de Entomologia in September, 2004. He was then asked to publish the paper (on the importance of knowing the phylogenetic relationships of these vectors) in a Brazilian journal, *Entomologia y Vectores*, and to join this journal's editorial board. The meetings were held in the southern Brazilian city of Gramado. Later, in Londrina with his colleague Antonio Panizzi, the two worked on a joint paper describing a neotropical bug's biology. This paper, on the biology of the sapinaceous-plant feeder *Jadera choprai*, is in press with the *Annals of the Entomological Society of America*. The bug itself was named (by a European) for Narinder P. Chopra, a longtime friend of Schaefer, who got his Ph.D. at UConn in 1966.

Dr. Schaefer was elected President of the UConn AAUP (American Association University Professors) for the coming year (July 1, 2005 – June 30, 2006).



Eric Schultz

Eric Schultz attended the American Society of Ichthyology and Herpetology meeting at Norman, OK where he made two presentations, judged student papers, and chaired the Endowment and Finance Committee meeting. Dr. Schultz and **Justin Davis**, a new Ph.D. student, will begin research this spring on the impact striped bass are having

GREG ANDERSON ACCEPTS INTERIM POSITION

Dr. Gregory J. Anderson has agreed to serve as the Interim Vice Provost for Research and Graduate Education for a one year period, effective July 1, 2005. A national search is being conducted to fill the position on a permanent basis.

"Dr. Anderson takes over these responsibilities at a crucial time in the Institution's history," says Provost Peter Nicholls. "As UConn continues to expand its research program and graduate education, it is critical that we continue to expand the service provided to faculty and staff in pursuit of their research goals. Not only that, but UConn needs to continue to keep up with myriad federal and state regulations governing research and dealing with ever more complex compliance issues. Dr. Anderson is well-qualified to lead the University forward in these areas."

Dr. Anderson has served as President of the Botanical Society of America and of the American Institute of Biological Sciences. His research has been supported through grants with the National Science Foundation, and he has published dozens of refereed articles and book chapters in prestigious national outlets. Dr. Anderson began at the University of Connecticut in 1973, becoming a Professor in 1984. He has been Department Head of Ecology and Evolutionary Biology since 1990. In addition to his service to the discipline and his department, Dr. Anderson has significant service to the University Senate, serving as Chair of the Executive Committee in 2000-2001.

on alewife and blueback herring, two species that are collectively referred to as ‘river herring.’ Both river herring species are declining in state waters, coincident with coast-wide increases in striped bass abundance. The study will combine analyses of herring population structure and abundance, striped bass population and abundance, striped bass diet analyses, and bioenergetic modeling, and was funded by a State of Connecticut Wildlife Grant.

Undergraduates in the Schultz lab: **Pat Bukowski, Zachary Grillo, Suzanne Krivda, Adeel Shahid** have been conducting independent study on reproductive morphology of live-bearing fishes in the family Poeciliidae (guppies, swordtails, mosquitofish). **David Steven Brown** and **Justin Wiggins** have been studying the breeding cycle of local stream fishes and coastal fishes (dace, tomcod, alewife). **Steve Struble**, an Honors EEB major working with Schultz, was awarded a Summer Undergraduate Research Fellowship for 2005 to examine an undescribed organ in the head of mosquitofish.



Bernard Goffinet

Bernard Goffinet received the Edward Tuckerman Award for Best Paper in Lichenology and an Honorable Mention for the Best Paper in the “Bryologist.”



Chris Simon

Chris Simon and her lab are still feeling the repercussions of last year’s enormous periodical cicada emergence which is being summarized in a large GIS mapping project headed by **John Cooley** with contributions from researchers in Ohio, Pennsylvania, and Maryland. John, now an Assistant Professor-in-Residence, is also spearheading two behavior/genetics papers on periodical cicadas that summarize Dr. Simon’s lab group’s work for the last several years. In addition, in September the Simon lab started the first year of a three-year NSF grant entitled “Phylogeography of New Zealand Cicadas,” a renewal of a previous NSF grant. During the Southern Hemisphere summer, the Simon lab and collaborators conducted field work in Australia and New Zealand (Dave Marshall, Kathy Hill and Chris Simon). In Australia, Dave and Kathy collected many species of cicadas new to science and discovered an interesting case of aggressive mimicry between katydids and cicadas. In New Zealand, they discovered more interesting contact zones between different cicada species and collected cicadas at the site of the city of Rohan of Lord of the Rings fame. Chris Simon presented a summary of Simon lab molecular systematics research progress at the Annual Meeting of Mathematicians and Phylogeneticists in Whitianga, NZ. Graduate student **Dan Vanderpool** was putting the finishing touches on his large phylogeny of the cicada tribe Cicadettini and creating models of evolution and Bayesian dating. During the

Spring semester, Chris Simon, John Cooley and **Adam Fry** trialed a new “personal response system” in Introductory Biology for Non-Majors with which students were able to answer questions presented as part of a Powerpoint lecture using a remote control device. At the end of the semester, Simon lab research undergrads **Kashiwa Hereford, Kathryn Gannon, and Michael Cordiero** presented posters at the annual Frontiers in Undergraduate Research event. This summer the Simon lab supported five NSF undergraduate research students **Kathryn Gannon, Michael Cordiero, Kashiwa Hereford, Greg Staley** and **Adam Leston**. Each studied some aspect of insect molecular genetics and speciation.



Kurt Schwenk

Kurt Schwenk was elected 2005 Chair-elect for the Division of Vertebrate Morphology in the Society for Integrative and Comparative Biology (SICB).

NEW FACULTY

The EEB Department is delighted to welcome two new faculty members –

Dr. Adam Fry joined the EEB faculty in January, 2005 after finishing a post-doctoral position at the Marine Biological Laboratory in Woods Hole, MA. Dr. Fry earned his Ph.D. from Brown University where he studied evolutionary genetics of host-symbiont interactions with David Rand. Adam’s primary responsibilities include lecturer and coordinator for the biology 100s courses, specifically Bio 102, 107, and 108. He will also be handling the Early College Experience Program and managing the ever-increasing enrollments in the introductory biology courses.

Dr. Andrew Bush was hired for the newly created paleobiologist position. Dr. Bush majored in geology at Virginia Tech. He worked on *Mercenaria* (the quahog) for his master’s thesis, using samples from both modern times and the Pleistocene. Andy completed his Ph.D. at Harvard, looking at ecological aspects of diversity change in the fossil record and studying the Late Devonian mass extinction, which took place about 375 million years ago. He has been on field excursions to New York, China, and Nevada.

GRADUATE STUDENT HIGHLIGHTS

Justin Davis, a graduate student working with Eric Schultz, was awarded the best student paper at the winter meeting of the Southern New England Chapter of the American Fisheries Society. This spring, thanks to a new State Wildlife Grant, Justin will undertake a research project that will focus on the impact striped bass are having on alewife and blueback herring, two species that are collectively referred to as ‘river herring.’ The study will combine analyses of herring population structure and abundance, striped bass population and abundance, striped bass diet analyses, and bioenergetic modeling.

Heather Fried, a graduate student working with Eric Schultz, presented talks about rainbow smelt at the American Fisheries Society Winter Meeting in Auburn, MA, the 2005 New England Evolution and Ecology Conference in College Station, PA and the New England Estuarine Research Society in Eastham, MA. Heather also participated in public outreach talks about threatened and endangered fish species to middle and high school students at Windsor High School and Future Problem Solvers of Connecticut in Wallingford. Presently she is working on two State of Connecticut reports regarding the current status of rainbow smelt and Atlantic tomcod in coastal Connecticut waters.



Lori Hosaka LaPlante

in Queensland, Australia where she completed her final field season in 2004. She will be using the data collected in Australia to make comparisons of nuptial signal characteristics displayed by female pink-belly wrasse in Australian and Japanese populations. Lori was assisted in Australia by **Kimberly Barber**, an Environmental Science undergraduate and 2004 SURF recipient. Lori's research was in large part funded by an East Asia and Pacific Summer Institute (EAPSI) Fellowship received from the National Science Foundation and Australian Academy of Science. Additional funding included awards from National Undersea Research Center, Explorer's Club Exploration Fund, and funding from EEB endowments (John Rankin, Jr., Ralph Wetzel and Walter R. Whitworth funds). Lori gave two oral presentations recently, the first at the Society for Integrative and Comparative Biology Annual

meeting in San Diego, CA and the second at the American Academy of Underwater Scientists Annual Symposium in Mystic, CT. Lori will be completing her dissertation this summer.

Michael McAloon, a graduate student working with Dave Wagner, was recently awarded the Acarological Society of America Outstanding Student Paper Award as well as the Acarological Society of America Student Travel Award. His presentation was entitled: *Leptotrombidium (Trombidulidae)* and scrub typhus: a taxonomic review and preliminary phylogeny of vector and non-vector species.”

Chris Martine, a graduate student working with Greg Anderson, was recently awarded a grant from the Sigma Xi Committee on Grants-in-Aid of Research for his research project entitled “The evolution of separate sexes: using chloroplast DNA to unravel dioecy in flowering plants.” The Sigma Xi Grants-In-Aid of Research is a highly competitive program with only approximately 20% of applicants receiving funding.

Maxi Polihronakis, a graduate student working with Charlie Henry, was invited to present at the SOLA (Sacred Order of the *Hamellate Antennae*) Scarab Workers Symposium.

Jadranka Rota, a graduate student working with Dave Wagner, continues her work on the systematics and behavior of metalmark moths (*Lepidoptera: Choreutidae*). Jadranka won the Harry K. Clench Memorial Award for the best student poster at the annual meeting of the Lepidopterists' Society of America in Washington, DC, last July. Later that summer, using awards from EEB's DeCoursey, Penner, and Slater Endowments, she spent four weeks in Costa Rica, where she combined field work at La Selva Biological Station with museum work at INBio (Instituto Nacional de Biodiversidad). Based on the INBio collection, approximately 30% of 61 currently known choreutid species from Costa Rica are new to science. In November, she won second place in the student competition at the Entomological Society of America's annual meeting in Salt Lake City, UT. In March 2005, Jadranka participated in another ALAS (Arthropods of La Selva Project) expedition in Braulio Carrillo National Park. In January, 2005 her first publication, “Larval and pupal description of the Neotropical choreutid genera *Rhobonda* Walker and *Zodia* Heppner (Lepidoptera: Choreutidae),” was published in the Annals of the Entomological Society of America.

**Uzay Sezen**

Uzay Sezen, a graduate student working with Robin Chazdon, finished his 6-month fieldwork at La Selva biological field station in Costa Rica and is now back in the lab doing genetic analysis. His research was funded by The Garden Club of America's Ecological Restoration Fellowship

and the Organization for Tropical Studies. Uzay's parentage analysis based on molecular genetic markers among mature *Iriartea deltoidea* trees in a Caribbean lowland forest has revealed a high level of reproductive dominance among old growth forest individuals. A high percentage (more than 50%) of founder trees in a 20 ha young secondary forest have been produced by mating events between only 2 mature trees located in an adjacent 10 ha portion of old growth forest. His paper titled "Genetic consequences of tropical second-growth forest regeneration" with Robin Chazdon and Kent Holsinger was published in February 11th 2005 issue of *Science* and received broad international interest. He gave a talk titled "Are you my mommy? Genetic background of a canopy palm in a young tropical second-growth rain forest in Costa Rica" in a student symposium organized by UCONN Center for Latin American Studies on April 15.

Jonathan Richmond, a graduate student working with Elizabeth Jockusch, won the 2005 Ernst Mayr Award for Systematic Biology.

Jon's dissertation work at the University of Connecticut focuses on understanding processes of speciation in western North American scincid lizards of the *Plestiodon skiltonianus* species group. Jon uses a variety of approaches that involve behavioral, physiological, morphological, and molecular studies to answer questions about the role of natural selection in driving the formation of new species.

In addition, Jon has a more general interest in the phenotypic evolution of skinks as a whole, and in the synergistic effects of genes, development, and selection in shaping the evolution of phenotypes. Jon presented work on this topic to win the Ernst Mayr Award that primarily involved systematics and comparative analyses of character evolution in two widespread species complexes of North American skinks. Developmental data for these organisms are lacking and he hopes to further expand this work into the realm of developmental biology in the near future.

NSF FELLOWSHIP RECOGNITION GOES TO FIVE EEB STUDENTS

EEB graduate student **Susan G. Letcher** and undergraduate **Martha Ellis** (B.S. '05), who graduated in May, have recently been awarded prestigious National Science Fellowships. In addition, three graduate students won "honorable mention" in the competition: **Jessica Budke**, **Roberta Engel**, and **Rachel Prunier**.

National Science Foundation (NSF) Graduate Fellowships offer three years of support for advanced study and are a "great honor" and "very difficult" to receive according to Gregory Anderson, professor and department head of Ecology and Evolutionary Biology. "I have been on that panel, and the number of awards is very small for the number of applicants," he says. Approximately 1,000 awards are granted annually: 150 Minority Graduate Fellowships; 850 Graduate Fellowships; and 90 Women in Engineering and Computer and Information Science (WECS) awards.

Martha Ellis, a University Scholar and double major in EEB and Applied Mathematical Sciences was awarded an NSF doctoral fellowship to conduct graduate studies on applied population modeling. Martha has conducted research with Chris Elphick's lab group for more than two years. During this time she worked primarily on introduced mute swans, modeling their population dynamics, quantifying their movement patterns, and estimating their regional impact on the submerged aquatic vegetation on which they graze. She has also contributed her modeling skills to a study of the likely effects of a proposed wind farm on the population dynamics of endangered Caribbean brown pelicans. For her accomplishments she was awarded the Honor's Program award for outstanding accomplishments by a biology student. Before starting graduate school she plans to spend a year broadening her research experience, beginning with an internship at the Archbold Biological Station in Florida.

**Susan Letcher**

Susan G. Letcher, a second-year Ph.D. student in Dr. Robin Chazdon's lab, was awarded a Graduate Research Fellowship. The Chazdon lab focuses on forest regeneration on abandoned pastures in the tropics. A long-term study of secondary succession in the wet tropical forest of Costa Rica has revealed useful insights about the dynamics and species composition of these transitional forests. Like most forest succession studies, this work has centered on the tree community. Susan's research will focus instead on the lianas (woody vines), an important yet understudied component of tropical forest structure. She will survey the tree and liana communities in forests of different ages, and conduct a liana removal experiment to examine the effects of lianas in different stages of forest succession.

UNDERGRADUATE STUDENT HIGHLIGHTS

Junior **Jessica Clopton** was among the few selected this year by the Botanical Society of America (world's largest professional botanical organization) to receive a 'Young Botanist Award'. The award recognizes "outstanding undergraduate seniors who have excelled academically, and who show interest in botany in the broadest sense." For more information about this award, please go to www.botany.org.

Sophomore **Jennifer Sayers** received a People's Community Internship, a \$3000 award funded by People's Bank, in a competition open to students in all majors within the College of Liberal Arts and Sciences. She will work with the Connecticut Forest & Parks Association (CFPA) to design and lead family nature hikes in various Connecticut state parks, design a Junior Trail Blazer's activity book, assist in developing CFPA's archive of historical environmental documents, and create materials for use in the "Summer Institute of Teaching and Learning" sponsored by CFPA.

GRADUATING EEB MAJORS RECEIVE BIOLOGICAL SCIENCE AWARDS

Martha Ellis received the 2005 Honors Award in Life Sciences. This award is given to an outstanding senior graduating with honors who has conducted interdisciplinary research related to the life sciences.

Selena Humphreys received the 2005 Connecticut Museum of Natural History Award. This award is presented to a senior in Biological Sciences who has demonstrated an outstanding level of scholarship as an undergraduate at UConn and who has conducted original research concentrating on the natural history, behavior, or overall biology of a focal organism during his or her undergraduate career.

Phil Nista received the Outstanding Senior in EEB Award. This award is presented to an EEB or Biological Sciences major who has demonstrated exceptional academic and research accomplishment within the EEB department during her or his undergraduate career.

EXPLORING NEW FRONTIERS

Many undergraduates at UConn are currently engaged in research programs under the thoughtful guidance of faculty mentors, but seldom are the students given the opportunity to present their work in a public venue. To provide such opportunities, the University of Connecticut Honors Program has sponsored for the past five years Frontiers in Undergraduate Research, an exhibition in which undergraduates engaged in research from a variety of disciplines can present their work publicly. Eight EEB research undergrads displayed their posters in the 2005 Frontiers in Undergraduate Research Poster Session.

Genetic Characterization of the Photosynthetic Symbionts of the Rare Lichen-Forming Fungus *Lobaria silvae-veteris*

Jessica Clopton, Ecology & Evolutionary Biology
 Bernard Goffinet, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

Tests of Phylogenetic Signal in 18s RNA in Cicadidae (Order Hemiptera)

Michael Cordeiro, Biological Sciences
 Chris Simon, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

Pre-breeding Movement Patterns of Mute Swans, *Cygnus olor*

Martha Ellis, Ecology & Evolutionary Biology, Applied Math
 Chris Elphick, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

Hatching Success in Hybrid Crosses of Periodical Cicadas

Kathryn Gannon, Biomedical Engineering
School of Engineering
 Kashiwa Herford, Molecular & Cell Biology
 Chris Simon, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

What are the Origins and Functions of Domed Nests in Saltmarsh Sharp-Tailed Sparrows?

Selena Humphreys, Ecology & Evolutionary Biology
 Chris Elphick, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

Juvenile Tree Growth in Relation to Light Availability in Second-Growth Tropical Rain Forests

Mary Beth Palomaki, Biological Sciences
 Robin Chazdon, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences

Female Nest Attentiveness in Saltmarsh Sharp-Tailed Sparrows

Kira Sullivan-Wiley, Ecology & Evolutionary Biology
 Chris Elphick, Advisor, Ecology & Evolutionary Biology
College of Liberal Arts and Sciences



SIX EEB UNDERGRADUATE STUDENTS INDUCTED INTO PHI BETA KAPPA

Phi Beta Kappa is the oldest and most prestigious academic honor society, founded in 1776, that recognizes scholarly achievement, good character, and broad cultural interests of students in the Liberal Arts and Sciences.

Claudette Casile is an Honors student majoring in Anthropology and Ecology and Evolutionary Biology. This summer she is assisting with research investigating aspects of plant biology and ecology pertaining to the species *Desmodium cuspidatum*, an endangered north-eastern species belonging to the pea family. She hopes to pursue a Masters or Ph. D. in Archaeobotany - the adoption of agriculture as a way of life, the changes in plants, their communities and ecosystems resulting from human action, and the relationship between these organisms.

Jessica Clopton is a Drotch Scholar and UConn Summer Research Fellow. Her current project focuses on the identity of the three symbiotic partners that define the lichens *Lobaria oregana* and *L. silvae-veteris*. She is currently working on the publication of her analyses of DNA sequences. Jessica has broad interests in botany, and plans on applying to graduate schools following a semester in Costa Rica and her graduation next spring.

Martha M. Ellis is a University Scholar who has been conducting independent research on the population dynamics and movement behavior of mute swans. In addition to her own work, she has helped Chris Elphick with modeling studies that investigate the effect of

grazing mute swans on aquatic vegetation and the potential impact of a wind power facility on endangered brown pelicans in the Caribbean.

Selena Louise Humphreys has worked on a variety of research projects in the Rubega/Elphick lab group, but has focused most recently on the nest construction behavior of Saltmarsh Sharp-tailed Sparrows. She is currently completing a paper that tests alternative explanations for why sparrows build a roof over their nest cup. In June she will begin working for Point Reyes Bird Observatory at Mono Lake, California.

Phil Nista worked in the Carl Schlichting lab on a research project examining an issue related to adaptive landscapes. Phil began an experiment to examine the question of “effective dimensionality” of the targets of selection, by initiating a selection experiment with recombinant inbred lines of the plant *Arabidopsis thaliana*. In the course of this experiment Phil, and **Corie Cann**, a fellow undergrad, discovered an unexpected result -- offspring exhibited transgressive segregation that is they had characteristics that exceeded both of the parental values.

Kira Ann Sullivan-Wiley has conducted independent research on the behavior of nesting Saltmarsh Sharp-tailed Sparrows in Connecticut saltmarshes, focusing on the parental care provided by females, which raise their young alone. She has also worked with Margaret Rubega on the functional morphology of shorebird feeding, and has recently initiated a study of her own, looking at the feeding mechanisms employed by bee-eaters.

ECOLOGY & EVOLUTIONARY BIOLOGY 14TH ANNUAL GRADUATE STUDENT SYMPOSIUM

This year marked the 14th Annual EEB Graduate Students Symposium. This event is designed to provide graduate students with an opportunity to present their research to fellow graduates, prospective students, and faculty to gain valuable feedback on their research. On Saturday Feb. 26th from 9am-4pm in the Biological Sciences and Physics building more than 65 EEB students and faculty met for the event. The morning started with an opening address from Vice Provost of Academic Affairs Suman Singha. Singha spoke of the importance of relaying passion and enthusiasm when presenting research. Singha's address was followed by 19 EEB graduate talks. Students in all stages of their graduate education presented a range of talks from research ideas to nearly completed projects. From spiny bush tomatoes to scincid lizards, from Borneo to Belize, the EEB grads seemed to cover it all. It was a day of scientific collaboration and EEB unity.

ASSOCIATES AND FORMER STUDENTS OF EEB

Charles K. "Chip" Biernbaum (Ph.D., '74) has just retired as professor of biology from The College of Charleston, Charleston, SC. During his 31 years at the school, he was primarily involved in the undergraduate and graduate marine biology programs and received the College's Distinguished Teaching and Distinguished Advising Awards. His research has been on the ecology and biogeography of aquatic crustaceans, especially amphipods. After retirement, his focus will be on a new bride and working with clay (now as a medium rather than a substrate).



Mike Gavin (Ph.D., '02) currently holds an Assistant Professor position at Hawaii Pacific University, where he teaches in the Environmental Science and Environmental Studies Programs. His teaching includes courses on Natural Resource Management, Conservation Biology, Senior Environmental Seminar, Field Methods in Environmental Science, and Environmental Economics. Mike joined the faculty in the Environmental Studies Department at the Victoria University of Wellington (New Zealand) in June, 2005. Mike's research focuses on the use and management of natural resources by local people and the ecological impact of these activities at both species and community levels. He has studied both historical and current resource use patterns in a variety of locations, including the Amazon basin and East Africa. Since leaving UConn, Mike has also worked as a freelance writer with publications in The New York Times, BBC Wildlife, and Wild Earth. In late February, he and wife Jen welcomed their son, Skyler, into the world.

ALUM HONORS MENTOR AND PROFESSOR

When a contribution to the Ralph Wetzel Fund from Dr. Robert Behnke (B.A. '57) was received recently, it was not only the generosity of the gift but the lovely story behind the gift that prompted this article.

For those of you who fish for trout or salmon, Dr. Behnke's name may be very familiar. And for those of you who don't, a book by Behnke just might make you a convert. His 2002 award winning publication about North American fish, *Trout and Salmon of North America* (The Free Press) may do for fish what David Sibley's *The Sibley Guide to Birds* did for birds.

An accomplished author and retired Colorado State University professor, Dr. Behnke speaks often of the importance of his UConn education in his career. His contribution to the Ralph Wetzel Fund was made "in recognition of Dr. Wetzel's encouragement and inspiration for my lifelong endeavors – culminating in this book in 2002," says Behnke. Following military service in Japan and Korea and utilizing financial support from the GI Bill, Dr. Behnke, a native of Connecticut, found himself studying the biological sciences, focusing

on zoology, at the University of Connecticut with Dr. Wetzel. He notes it was Wetzel's "guidance and encouragement" that allowed him to pursue his dreams.

Ralph Wetzel retired from UConn in 1983 after 33 years of service in what was then called the Systematic and Evolutionary Section of the Biological Sciences. It was at Dr. Wetzel's initiation that the systematic mammal collection at UConn was created. He was a mammalogist and was well-known for discovering the Chacoan peccary, one of only a few large species of mammal discovered since 1901.

It is with obvious fondness and respect that Dr. Behnke speaks of his undergraduate years at UConn and particularly the impact Dr. Wetzel made in his life. He says, "The quest for native trout has resulted in a great life with wonderful memories." Dr. Behnke is currently in the planning stage of collaboration for a book on the taimen, the world's largest "trout." He says he "hopes to remain actively engaged as long as I can. The joy of life is in the quest."

PEET AWARDS ABOUND IN EEB

There are now three training programs in EEB supported by a very special program at the National Science Foundation called PEET (Partnerships for Enhancing Expertise in Taxonomy).

The National Science Foundation PEET Program runs only every two years. It is a program designed to train scientists in the taxonomy (the classification of organisms in an ordered system that indicates natural relationships of groups) of poorly known organisms, and where there are relatively few taxonomic scientists. Projects consist of three components: training of new taxonomic experts, monographic research, and the electronic dissemination of taxonomic products resulting from the project. For additional information on this NSF program please visit <http://www.nsf.gov>.

EEB faculty who currently have PEET awards include:

- **Janine Caira** - the Caira lab is focusing on training parasitologists and has had the support of a PEET grant entitled, "A Training Program in Cestode Systematics"
- **Louise Lewis** - PI (Principal Investigator) for a grant entitled, "Integrating classical with phylogenetic taxonomic treatments in five genera of coccoid green algae (*Chlorophyta*)."
- **Chris Simon** - co-PI for a grant entitled, "Partnership for training new experts on *Auchenorrhyncha* (*Insecta: Hemiptera*)."

CENTER FOR CONSERVATION AND BIODIVERSITY CELEBRATES 10TH ANNIVERSARY

On Saturday, April 30, 2005 EEB's Center for Conservation and Biodiversity celebrated its 10th Anniversary with a day-long program featuring talks and workshops. The keynote address was presented by Tyrone Hayes (University of California, Berkeley) whose research on the effects of atrazine, an environmental endocrine disruptor, on frog development has attracted worldwide attention. Dr. Hayes has shown that the widespread herbicide atrazine, even in infinitesimal quantities such as those that occur in our well and rainwater, feminizes tadpoles.

Preceding Dr. Hayes' talk, a mini-symposium showcased the research of six former and present EEB doctoral students. Former students: Dr. Mike Gavin outlined his work on natural resource use and management in the Peruvian Amazon; Dr. Sasha Spector spoke about his research on dung beetles as indicators of biodiversity in the Amazon. Dr. Ricardo Rozzi detailed his work in establishing the Cape Horn UNESCO Global Biosphere Reserve System in Patagonia. Current graduate students: Claire Healy outlined her research on parasites of the Requiem and Hammerhead sharks; Gregor Yanega spoke of the insectivorous feeding habits of hummingbirds; Colin Young focused on the interplay among biodiversity conservation, cultural conservation of indigenous knowledge, and local uses of plant materials in Belizean forests.

The event closed with a series of concurrent workshops on invasive species, bird and butterfly conservation, an invasive species walk, and collections and greenhouse tours.



FACULTY EXCELLENCE IN RESEARCH (SCIENCES) AWARD

In April, **Dr. John Silander** was awarded the UConn Alumni Association's 2004 Excellence in Research Award. This award encourages scholarly research in the sciences and liberal arts or creative works in the fields of art, music and writing.

Professor Silander has taught at UConn for 27 years specializing in plant ecology and evolution. He is recognized as one of the world's top scientists in the field of spatial ecology. He and his colleagues have been received more than \$3.5 million in grants.

Dr. Silander was instrumental in establishing the formal agreement between UConn and the University of Fort Hare in South Africa enabling both schools to offer joint courses. In addition he organized a working group at the National Center for Ecological Analysis and Synthesis, based at the University of California Santa Barbara that has become a national leader for achieving innovative, integrative breakthroughs in the field of ecology.

MEHRHOFF RECOGNIZED

Dr. Les Mehrhoff, the curator of the George Safford Torrey Herbarium, and Project Advisor for the Invasive Plant Atlas of New England (IPANE) Project has been selected as one of the 50 Most Influential Gardeners in the Northeast by People, Places & Plants magazine.

Magazine publisher Paul Tukey said, "Les Mehrhoff has really stepped to the forefront of a difficult problem, both from the standpoint of a solution and from a public relations perspective. Gardeners and nurserymen who sell plants don't want to be told what they can, and cannot grow. Les is giving the industry the scientific proof that we do in fact have a problem here. It's a very courageous effort he has put forth."

Other honorees from Connecticut include: rosarian Donna Fuss of Hartford, garden club member Helen Pritchard of Waterbury, seed saver John Sokoloski of Hampton, writer Tovah Martin of Litchfield, landscape professional Todd Harrington of Bloomfield, and nurserymen Dick Jaynes of Hamden, Mark Sellew of Glastonbury, Sal Gilbertie of Easton and Pierrie Bennerup of Wethersfield.

2005 BIOBLITZ IS A HUGE SUCCESS

The 2005 Connecticut State BioBlitz hosted by the Two Rivers Magnet Middle School, held on June 3-4, 2005 was a huge success.

BioBlitz organizers, EEB associate professor Dave Wagner and Hank Gruner, vice president, Programs and Exhibits at the Science Center of Connecticut, assembled a comprehensive program of public programming that provided considerable opportunity for participation. In addition, an interpretive trail along the Hockanum River Trail in East Hartford was created.

The Center for Conservation and Biodiversity and the EEB Department partnered with Connecticut State Museum of Natural History, Two Rivers Magnet Middle School, Capitol Region Education Council, and the Science Center of Connecticut for this year's event. The Connecticut Department of Environmental Protection took an especially large role in this year's BioBlitz. Fiscal, or 'in kind' contributions were made by EEB, O, R & L, Bristol-Myer Squibb, the Town of East Hartford, the NEAG School of Education, Connecticut State Museum of Natural History, the Center, College of Liberal Arts and Sciences, Coca-Cola, Dunkin Donuts, and host of others. Center co-Directors Silander and Wagner secured a "Teachers of the New Era" grant from the NEAG School

of Education to extend the science and discovery of the BioBlitz into statewide science curricula.



Happy BioBlitz participants

The crown jewel of this year's event was a 24-hour BioBlitz Camp for middle and high school students with interests in biology and environmental science. Students from across the state were invited to become "citizen scientists" for the duration of the event. The students were paired up with teachers and scientists. From all accounts, this new "BioBlitz" was an unqualified success.



EEB faculty and graduate students ensure equipment is ready to examine the day's specimens.

Total number of species 1791

Mammals	20
Reptiles & Amphibians	15
Birds	92
Fish	29
Higher Plants	353
Lower Plants	61
Fungi	60
Parasites	33
Protists & Non-arthropod Invertebrates	142
Insects	
Coleoptera	184
Diptera	118
Hymenoptera	110

Lepidoptera: macromoths 173

Lepidoptera: micromoths	101
Lepidoptera: butterflies	25
Odonata	17
Orthoptera	15
Other Aquatic Insects	45
Homoptera	33
Hemiptera	26

Non-insect Terrestrial Arthropods

Springtails, centipedes, opilionids, millipedes, thrips & isopods	29
Mites	33
Spiders	77

Total number of scientists 170

The Invasive Plant Atlas of New England's (IPANE) mission is to create a comprehensive web-accessible database of invasive and potentially invasive plants in New England that will be continually updated by a network of professionals and trained volunteers. The database will facilitate education and research that will lead to a greater understanding of invasive plant ecology and support informed conservation management. An important focus of the project is the early detection of, and rapid response to, new invasions. For more information about IPANE please visit their website at: <http://invasives.eeb.uconn.edu/ipane/>

THE DEPARTMENT OF ECOLOGY AND EVOLUTIONARY
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Dr. Gregory Anderson	Ms. Laurine Ford	Mr. John Matuszeski
Dr. Robert Behnke	Ms. Lauri K. Freidenburg	Dr. Kent Holsinger
Mrs. William S. Benninghoff	Mr. and Mrs. Thomas Giolas	Ms. Anna M. Lovrien
Ms. Linda Bireley	Ms. Catherine M. Green	Dr. Jane O'Donnell
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Mr. David Corsini	Dr. Barry G. Jacobs	Dr. John Silander
Mr. and Mrs. Robert W. Coughlin	Dr. Jermey Jay	Mr. Peter M. Silberfarb
Mr. and Mrs. Robert Curtis <i>In memory of Stephen and Mary Ellen Curtis</i>	Ms. Kirsten Jensen	Mr. David K. Skelly
Mrs. Ellen Dawley <i>In honor of Robert Dawley</i>	Dr. Cynthia Jones	Mrs. Burma Stelmak
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Mrs. Betty A. Feingold	Scott & Becky Lehmann	Ms. Sandford Von Eicken
	Dr. David Lovejoy	Dr. and Mrs. David Wagner
	Dr. and Mrs. Dale Matheson	Drs. Kentwood and Marta Wells

FUNDRAISING SUCCESS!

The Ecology and Evolutionary Biology Collections Fund met its \$10,000 fundraising goal on June 29, 2005 nearly 18 months ahead of schedule thanks to the generous contributions of many, many individuals, faculty and staff. The account has now become an endowed account. The Collections facility will use the income generated by the fund for its activities.

"I am delighted that the Collections Fund met its initial funding goal" said Kent Holsinger, EEB Interim Department Head. "Income from this fund will help to ensure these vital collections are curated and managed to the highest professional standards."

Mrs. Burma Stelmak, the Department's former Program Assistant, who began this fundraising project in 2003 was delighted to see it completed in record time. "This is wonderful" said Mrs. Stelmak. "The Department is truly grateful to all those who contributed over the years to bring this campaign to a very happy ending."

The purpose of this fund is to provide financial support for the Department's Collections activities including the sponsorship of guest curators, collecting field trips, workshops and symposia.

SUPPORT OUR EFFORTS

It would be impossible for our students to complete the necessary field component of their research without your financial support. For your past generosity we are extremely grateful. We ask you to continue your support this year. If you have yet to make a contribution, we ask you to consider doing so this year.

In the 2004-2005 academic year, our students conducted research in Belize, South Africa, Senegal, and Japan. Research in China, Panama and Costa Rica is planned for this summer. EEB students are conducting summer field studies in the US as well as working at the Shannon Point Marine Station in Washington, in the Cache Valley in Utah, and the Madrean sky islands of southeastern Arizona. Closer to home EEB students will conduct research in Pennsylvania, Virginia, Georgia, New York, New Jersey, Connecticut, and throughout New England.

These research activities would not happen without your support – it's that simple. Please consider making a tax-deductible contribution to the Ecology and Evolutionary Fund which provides the greatest flexibility in supporting our students. This Fund is unrestricted and allows us to use your gift in any field of study.

As there are always more applications for funding than there is money, contributions to funds that support a specific field of study (please see list of field specific funds on envelope) as well the Center for Conservation and Biodiversity are also most welcome.

Please join the growing number of EEB supporters who believe the research we conduct and the students we train make vitally important contributions to the future of the world in which we live. If we are to continue to attract the best students, graduate and undergraduate, fund high quality programs and provide scholarships and awards, your continued support is not only important but necessary.

LATE BREAKING AND EXCITING NEWS!

Dr. John Silander recently received notification of funding for two important grant proposals:

The first is a \$460,000 two-year grant from the USDA-NRI Competitive Grants Program. The grant will fund more work on invasive species and a continuation of the IPANE project. The title of the grant is "Integrating Predictive Modeling and Volunteer Networks to Enhance Early Detection and Rapid Response to Invasive Species." Dr. Les Mehrhoff, the curator of EEB's George Safford Torrey Herbarium, is the co-principle investigator (co-PI) on the grant.

A second grant awarded to Dr. Silander is an NSF-Ecological Biology Panel grant which will fund more work on the protea project in South Africa. The grant entitled "Collaborative QEIB Research: Spatio-Temporal Models of Species Distributions and Biodiversity at High Resolution - Integrating Climate and Population Responses" is an \$850,000 collaborative three-year grant with \$450,000 coming to UConn and \$400,000 going to Duke University. Alan Gelfand is the PI at Duke. Co-PIs include Gabriele Hegerl (climate modeler) at Duke, Bruce Hewitson (climate modeler) at the University of Cape Town, plus Tony Rebelo and Guy Midgley (ecologists) at the South African National Biodiversity Institute. Of special note is this proposal is the largest collaborative grant funded by the panel this year.

GRADUATE AWARDS

At the August 13-17, 2005 Botanical Society of America (BSA) Conference in Austin, TX Norm Wickett and Juan Carlos Villarreal (who will join us in January) were runners up for the A. J. Sharp Award from the Bryological and Lichenological Section.

Chris Martine won two awards at the BSA conference. He won Best Student Poster, Ecology Section (with EEB's Patrick Herron, Andrew Latimer, Stacey Leicht, and Eric Mosher). He also won the Cooley Award, given for the best paper presented by a plant systematist who is either a current student or finished their Ph.D. in the last 5 years.

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