ECOLOGY AND EVOLUTIONARY BIOLOGY
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ASSISTANT PROFESSOR SEARCHES FOR CLUES TO MASS EXTINCTION

As a young boy, **Andy Bush** could not have known his fascination with dinosaurs would lead him to his current position with EEB. Dr. Andrew Bush is an assistant professor and the Department's paleobiologist.

While dinosaurs are not the focus of Andy's research, there is a common thread running between his research and the prehistoric reptiles: extinction.

Bush's research focuses on the Devonian extinction which occurred some 375 million year ago and primarily affected the Earth's oceans. Prior to the extinction, a great diversity of fish and invertebrates inhabited the sea and massive coral reefs dotted the ocean floor. On land, some plants, insects and primitive tetrapods existed. Paleontologists estimate near the end of the period between 70 and 80 percent of these species died off.

According to Bush, "a big part of what I do is to break open rocks that date from before and after a mass extinction. Rocks give us a record of what the environment was like at that time."

Unlike the better known Cretaceous extinction in which an asteroid impact wiped out the dinosaurs 65 million years ago, the causes and timing of the Devonian extinction remain a mystery.

"This extinction is interesting because it seems different than the others which can be explained by one big perturbation of the Earth," says Bush. "In this case, many different perturbations probably led to multiple extinction events."

Bush and his colleagues in EEB, the Center for Integrative Geosciences and the Anthropology Department recently received an Intermediate Research Equipment Grant from UCONN's Office of the Vice President for Research to purchase equipment for a thin section laboratory. The equipment, says Bush, will allow researchers to cut very thin sections of rock from field specimens collected from southwestern NY and northwestern PA — an area very rich in Devonian Period geology. By identifying the diversity of species before and after the extinction, he says, he can get a sense of how the environment changed.

One leading hypothesis for the die-off is that the ocean's waters became anoxic. Fossil evidence suggests during this extinction animal diversity declined more in deep waters than shallow waters, a finding Bush says supports the hypothesis.

According to Bush, "it's difficult to use all the oxygen in shallow water since the surface picks up oxygen from the air so shallow water animals could have survived better. If anoxia is the answer you would expect the extinction to be depth-selective."

Bush says his research is pertinent today because the Earth faces many similar issues. "Climate change and ocean acidification are big problems and mass extinctions show us that it is possible to disturb the Earth so badly that many organisms die off," he says. "A sure way to do that is to change the atmosphere and the oceans. "

And that early interest in dinosaurs — is it long forgotten? Not at all! Bush's graduate student, Patrick Getty, analyzes the impressions dissolved dinosaur bones leave behind in rock. Every other spring Bush, co-teaches a course with Christophe Dupraz of the Department of Marine Sciences called Earth History and Global Change. As part of the course students scour the Storrs campus for fossils and interesting rocks built into the sides of buildings; they identify burrows, clams, snails, marine invertebrates and, not least of all, dinosaurs.

For more information on Andy's research, please go to: http://hydrodictyon.eeb.uconn.edu/eebedia/index.php/Andrew_Bush

—Adapted from UCONN Today article by Christine Buckley

BARNEY LIBRARY DONATES A PIECE OF HISTORY TO THE BIOLOGICAL RESEARCH COLLECTIONS

More than two years ago, **Dr. Margaret Rubega** received a phone call from Norma Hartley, an energetic member of the Board of Directors of the Barney Library in Farmington, Connecticut. The library was to be emptied for a major renovation, and the Board of Directors needed guidance on how best to care for a valuable egg collection during the move.

Along with then-Vertebrate Collections Manager Jamie Fischer, Dr. Rubega paid a visit to the library to have a look at the eggs. Several things became immediately clear. This egg collection was valuable not only because it was in beautiful condition, but also because nearly every set of eggs had a matching data card. Margaret's initial objective was to prepare a cost estimate for the care of the eggs, but now she would advise Mr. Johnston and the library's board of the scientific value of Harry Curtis Mills' egg collection. Taken together with the data, this egg collection was a biological and environmental time capsule from the turn of the last century.

Harry Curtis Mills was born in Meriden in the 1860's and spent most of his life on the family farm in Unionville. An electrician when that technology was new, but a naturalist at heart, he collected birds' eggs over a span of nearly fifty years. Eggs in Mr. Mills' collection came from such far-flung localities as Iceland, Mexico and Dutch Guyana (now Suriname), from Mississippi, California and Newfoundland. One of Mr. Mills' earliest records details a clutch of Cedar Waxwing eggs from Unionville, taken from an "apple tree near the house," in June of 1899. Later data cards show that on one of his last collecting forays in 1917, he took several clutches of Osprey eggs in Niantic. The oldest eggs in the collection are those of a Barred Owl, collected in 1876 in Old Saybrook, by one Mr. John Clark.

Egg collecting as an amateur pursuit came to an end with the passage of the federal Migratory Bird Treaty Act, in 1918. Today, only a limited number of both state and federal permits are issued for institutions or individuals to collect birds, their eggs, or nests, and those permits are issued only for scientific purposes. Consequently, Mr. Mills ceased collecting, and donated his collection to the Village Library, as it was called, in 1924. The cabinet which housed the eggs on the day when Dr. Rubega visited the library was donated by the Barney family in 1947, when the collection first went on public display.

After months of emails, phone calls, board meetings and consultations, the Farmington Library Board of Directors decided to donate Harry Curtis Mills' collection of bird eggs to the University of Connecticut's Biological Research Collections. Grad students Diego Sustaita, Alejandro Guevara, Brian Hiller, undergrads Tanner Steeves, Julia and Chiron Otero, and Vertebrate Collections Manager Susan Hochgraf spent several spring weekends working alongside Dr. Rubega, to gradually empty the old mahogany egg cabinet of its fine collection. In total, there were 3820 eggs, packed as 1010 sets, or clutches, in clear plastic boxes on beds of polyester fiberfill.

As of this writing, the eggs have undergone pest-management treatment, been transferred to the compactors and sorted according to current avian taxonomy. Undergraduate Lionel Moirez '10, who already had extensive experience working in the Vertebrate Collections, photographed the specimens, and attached these images to an on-line database, affording continued public access to this wonderful natural resource.

Michael Willig, Director of the Center for Environmental Sciences and Engineering, awarded the Vertebrate Collections a generous grant which afforded the opportunity to properly curate our new egg collection.

—Article written by Susan Hochgraf
EEB Vertebrate Collections Manager

EEB GREENHOUSE OPENS EPIPHTYE ROOM

Plants that grow high up in trees, hanging from branches and collecting food and moisture from their surroundings are usually the stuff of misty rainforests deep in the tropics. Now, the EEB Greenhouse has a new room dedicated entirely to – and named for – these aerial plants: the Epiphyte Room. The Greenhouse hosted an open house and dedication of the Epiphyte Room on Sunday, April 25.

Epiphytes, including such well-known varieties as orchids and Spanish moss, grow on other plants and derive their water and nutrients from the air around them. The Epiphyte Room has as its centerpiece a 12-foot-tall, three-foot-wide "tree," made of wire mesh, cork bark, and coconut fibers. The tree and the mesh walls of the greenhouse room are home to hundreds of species of epiphytes, made possible in part by the Connecticut Orchid Society.

The epiphytes are just a fraction of the about 2,500 species of plants in the greenhouse. Nestled behind the Torrey Life Sciences building, the greenhouse opened in 1960 and is today home to one of the most diverse collections of plants in the Northeast. Morse acquires new plants by trading with other growers around the U.S., and he tries to select plants that will diversify the collection.

"We view the collection from a teaching standpoint," he says. "We ask: What adaptations does this plant have that would be useful in teaching?"

And he does a good job; the greenhouses are teeming with "weird stuff," he says. Within the epiphyte room, he points out an *Anthurium* plant, which has grooves in its several-feet-long leaves to catch rainwater and falling bits of nutrient-rich matter, such as bird droppings. This epiphyte does have roots, but they're bunched into a large sponge-like mass at the base of the plant, where they absorb the collected water and nutrients.

Nearby, the *Nepenthes* pitcher plant uses the caps on its pitcher-like leaves to present a sweet nectar, which attracts tree shrews. While the shrews eat away at the nectar, their droppings fall into the pitcher plant, supplying the plant with food. The greenhouse is also home to a host of economically important plants, such as the kola plant that flavors sodas; vanilla orchids that produce natural vanilla; and teosinte, the precursor to the modern corn plant.

The collection is primarily intended for education and research, with visitors ranging from plant systematics students to horticulture researchers to artists and photographers all making use of the plants. An incoming staff member will also perform horticulture therapy – the practice of creating therapeutic environments using gardens and plants – with people with disabilities. And in the coming months, says Morse, he hopes to collaborate with the School of Pharmacy to establish a medicinal plant garden.

After 32 years of practicing horticulture, Morse says that his inquisitive nature is what keeps his interest. Figuring out how to grow things is still his favorite part of the job. "When it comes to growing, you win some, and you lose some," he says. "But there's always something else out there that I haven't grown."

For more information about the greenhouse and the open house, visit the EEB Greenhouse web page at http://florawww.eeb.uconn.edu/ or the Greenhouse Facebook page at http://www.facebook.com/pages/Storrs-CT/UCONN-Ecology-Evolutionary-Biology-Plant-Growth-Facilities/121769795587

—Adapted from UCONN Today
article by Christine Buckley

DR. ROBIN CHAZDON DISCUSSES NEW MODEL FOR CONSERVATION OF TROPICAL FORESTS

Since more than 90 percent of the world's tropical forests are outside of reserves, parks and protected areas, the survival of species of plants and animals that live in the human-modified landscapes will require involving local communities in conservation strategies, according to Dr. Robin Chazdon.

Robin gave an invited talk on the topic at the Smithsonian Institution symposium in 2009 on the "Prospects for Tropical Forest Biodiversity in a Human-Modified World" and says a "whole new model" of conservation management offers some proactive approaches to help mitigate biodiversity loss in the tropics.

She calls for the development of biological corridors to connect remnants of old-growth forest to younger, secondary growth forests. The old-growth forests can act as 'arks" to preserve species until the secondary growth forests are established as new habitat. "If we can protect, expand, and enhance forest cover in these altered landscapes, the prognosis for conserving many forms of plant and animal life will improve in many regions," she said.

Chazdon has studied regrowth, or secondary growth tropical forests since 1991, long before research on regrowth forests drew much interest. Her recent research, supported by the National Science Foundation (NSF) shows that seedlings and saplings of tree species from original growth tropical forests in Costa Rica have found a suitable habitat in regrowth areas.

While other studies had shown that only 59% of the trees in the original forests were also found in regrowth areas, Chazdon and her collaborators took a broader look, including seedlings and saplings in the count as well as mature trees, and running statistical analyses to account for chance. She found that 90% of the original species were present in the secondary growth areas when the younger trees were counted too and demonstrated that regrowth areas are important for recovering tree diversity. This finding supports new conservation strategies such as building biological corridors and buffer zones surrounding existing reserves.

The Smithsonian symposium was convened because satellite data and other research reveal large tracts of previously logged or farmed areas are now regrowing. The symposium examined how and whether regrowth might mitigate the loss of biodiversity caused by massive deforestation and forest fragmentation over the past 50 years. Chazdon's own research in Costa Rica revealed regrowth forests regenerating in abandoned cattle pastures, the pastures having been abandoned after the international demand for beef declined.

Among the strategies to promote biodiversity are enrichment planting — planting seedlings or sowing seeds of native trees that are regenerating poorly on their own — and providing artificial roosts for animals in the new areas, says Chazdon. For example, shade-grown coffee and cacao allow the forest canopy to remain intact, preserving habitat for threatened species.

An effort, led by a Brazilian businessman with a background in biology, to connect forest fragments has enabled the highly endangered tamarin, a New World monkey, to increase its numbers to a point where the species is no longer endangered, notes Chazdon. Farmers and businesses can modify their practices so that both conservation goals and economic growth are served, she says. "It doesn't have to be black and white," she adds. "In many places, the gray areas are our best hope for retaining tropical biodiversity."

—Adapted from a UCONN Advance article by Cindy Weiss

FACULTY NEWS

In 2009, **Dr. Gene Likens,** EEB Distinguished Visiting Research Professor, was elected as one of the Chinese Academy of Sciences' Einstein Professors.

Each year, the Chinese Academy of Sciences awards Einstein Professorships to 15-20 international scientists actively working at the frontiers of science and technology. Awardees conduct lecture tours in China, with the goal of strengthening bilateral and international collaboration. Travel and accommodations are covered by the Academy.

"Effective Ecological Monitoring" a new book by Dr. David B. Lindenmayer, and Dr. Likens will be released later this summer. David Lindenmayer is a Research Professor at the Australian National University. He has worked on Australian forests, wildfire, conservation biology and forest management for more than 27 years, and has published over 25 books and 550 scientific papers on these topics.

Gene E. Likens is an ecologist best known for co-discovering acid rain in North America, co-founding the internationally renowned Hubbard Brook Ecosystem Study and founding the Institute of Ecosystem Studies (now the Cary Institute) in Milbrook, New York. In addition to his position at UCONN, he holds faculty positions at Yale, Cornell and Rutgers Universities, and State University of New York at Albany. He was awarded the 2001 National Medal of Science. He is the author, co-author or editor of 17 books and nearly 500 scientific papers and articles.

Dr. Likens will spend the Fall 2010 semester with the EEB Department. He will conduct a graduate seminar and will participate in the Department's doctoral program.

The Shanghai Academic ranking of world universities which was released in October 2009 ranked UCONN in a tie as 152nd in the world and 71st (again in a tie) in the U.S. See http://www.arwu.org/ARWU2009 2.jsp for more information.

Dr. Donald Les received two NSF grants —one to study the aquatic plant genus *Najas* in North America and the other to complete the digitization and imaging of the CONN herbarium vascular plant collection.

The former project collaborates with Dr. Sallie Sheldon and her students at Middlebury College, Vermont and the latter was authored jointly with **Dr. Robert S. Capers,** CONN herbarium collections manager.

The *Najas* work sent Don and his grad student, **Nic Tippery**, on a 7,000 mile trip throughout the southeast United States where they collected aquatic plants, numerous close-up pictures of alligators and many mosquito bites. Don also explored another 3,000 miles searching for rare *Najas* records in Utah, Arizona, Nevada and Idaho. The project also is providing support for undergraduate Emmeline Liu, who performs technical laboratory work relating to the project.

The collections grant enabled the herbarium to acquire three new large format digital scanners, two high performance i7 computer workstations, and upgrades to the database web server, which facilitate the storage and backup of 1.5 TB of specimen and image data. Don and Bob also received an REU supplement to the collections grant, which allowed them to host a recent high school graduate for a summer internship in the herbarium. Don's grad student, **Lori Benoit**, and several undergraduates also are supported by the databasing grant.

Don participated in an NSF panel for the Systematic Biology program in the spring, and will be serving on a second NSF panel in the fall. He chaired a contributed paper session at the "Botany 2009" conference in Snowbird, Utah; and has been invited to attend a Banbury Center Conference on "Aquatic Model Plants", which will be held at Cold Spring Harbor, NY in October. He will be travelling to Perth, Australia in December as an invited participant to attend an international workshop on Seagrasses organized by Macquarie University in New South Wales, Australia.

FACULTY NEWS

Dr. Steve Trumbo's research on burying beetles has recently taken a microbiological bent in collaboration with **Dr. Paula Philbrick**. They are investigating whether the anal secretions of parent beetles are serving to manipulate the microbial community growing on a prepared carcass to the benefit of the beetle.

Two undergraduates, Himank Gupta and James McCafferty, presented their poster on the microbial community of a carcass to the Connecticut Valley branch of the American Society of Microbiologists in October 2009.

In other work, the most unusual burying beetle in the world (studied in the Trumbo lab by Garrison Smith, M.S. University of Arizona), received attention in *Natural History* magazine for its habit of breeding on snake eggs rather than a carcass.

Continuing study on the effects of aging on reproductive performance in burying beetles resulted in the first publication from this line of investigation in *Behavioral Ecology*.

FACULTY AWARDS

Dr. Adam Fry was awarded the "2010 Alpha Lambda Delta's Professor of the Year Award."

Dr. Don Les was awarded UCONN's first "Award for Excellence in Research (Natural Science Division) in 2009.

Dr. Robert Thorson was awarded UCONN's "2010 Honors Faculty Member of the Year Award."

There has been a great deal of publicity associated with **Dr. Peter Turchin** and Dr. Walter Scheidel's PNAS paper entitled, "*Coin hoards speak of population declines in Ancient Rome.*" Several major world newspapers discussed the study including the New York Times, Spiegel (Germany), Standaard (Belgium), and Folha de S. Paulo (Brazil).

Other media also discussed the paper including N-TV (the German TV channel for financial and stock market news) and ORF (Austrian Public TV). Peter was interviewed on WNPR in November 2009

The article in the online supplement to *Science* includes a rejoinder from a proponent of the high count hypothesis which Turchin and Scheidel reject in their paper.

The story was also featured in the science sections of Yahoo, Yahoo-UK, Lenta and Infox (Russia), and EuropaPress (Spain).

Other web-based sources that covered the story are Wired, EurekAlert, and NSF News (the latter includes a video interview). The story also appeared in a variety of popular science magazines and web sites.

For links to all these articles, please see:
http://cliodynamics.info/Popular.html

Dr. Kent Well's book entitled *The Ecology and Behavior of Amphibians* has been names one of *Choice* Magazine's Outstanding Academic Titles. There were 575 titles on the list in all fields, but only 12 in zoology. *Choice* Magazine is used by many libraries to identify books to be added to their collections.

FACULTY NEWS

In May 2010 **Dr.Chris Simon** received a $643,000, 3-year NSF grant to study systematics of cicadas.

The NSF Tree of Life project has made substantial contributions to establishing the major branches of the tree of life dating back hundreds of millions of years; it is now time to focus on the shallower branches. The major goal of the current proposal is to reconstruct and interpret the evolutionary history/biogeography of the family Cicadidae worldwide as a model for the origin and transcontinental spread of insect biodiversity over the last 65 million years. Most of the plants and animals populating the earth today arose during this era.

Collaborators from Connecticut, New Zealand[1], Australia[2], South Africa[3] and Japan[4] will utilize DNA data to test five hypotheses concerning the timing and diversification of this remarkable group of more than 3000 insect species. To accomplish this they will incorporate new molecular and analytical tools for genealogical tree building, biogeography and speciation/ extinction studies. They will apply fossil and geological calibrations to groups that no one has previously attempted to date. Cicadas have natural advantages because they are distributed worldwide and their natural history creates strong genetic/geographic patterns.

In the course of their research, a new generation of systematists will be trained . The trees, maps, keys, photographs, and databases produced will be available through the worldwide web. The group consists of an international team of researchers and collaborators with complementary expertise in natural history, acoustic analyses, morphological taxonomy, and molecular systematics as well as detailed knowledge of local biogeographic regions. Their phylogenies will help systematists to group undescribed species and genera for which morphological characters are elusive or contradictory. It is anticipated the group will discover new biodiversity and revise higher-level taxonomy that has been confused for more than 100 years.

Collaborators on this grant include Dr. Simon and Dr. Dave Marshall from UCONN, Dr. Thomas Buckley[1], Dr. Max Moulds[2], Dr. Martin Villet[3], and Dr. Teiji Sota[4].

The rapid loss of old-growth tropical forests around the world signals an urgent need to understand the current and future importance of secondary (regrowth) forests for the conservation of biodiversity and ecosystem functions.

To meet this challenge, an international workshop was held at the National Autonomous University of Mexico (UNAM), Campus Morelia, Michoacan, Mexico, in October, 2009. The workshop, neoSelvas: An International Network on Tropical Secondary Forest Regeneration, convened with over 60 participants from 7 countries, including graduate students, post-doctoral fellows, and junior and senior scientists. EEB's **Dr. Robin Chazdon** is a member of the neoSelvas Network Steering Committeee; and **Dr. Mike Willig** was a co-organizer of the workshop.

During an initial symposium, speakers presented a review of the state of the art of distinct areas of secondary forest research (biotic interactions, functional traits, species composition, management, and remote sensing) based on input from workshop participants. These talks provided a foundation for further in-depth discussions within small groups, working groups and plenary sessions leading to a synthesis of existing knowledge, uncertainties and challenges, as well as new research directions.

A major outcome of the workshop was the decision to form an international network on secondary forest regeneration and restoration, which was named the neoSelvas Network. The global focus of the neoSelvas Network complements goals of existing tropical forest networks, such as the Center for Tropical Forest Science (CTFS network) of the Smithsonian Tropical Research Institution (focus on vegetation dynamics in mature tropical forest plots), the Tropi-Dry network (focus on ecological and human dimensions in Neotropical dry forests), and the Mexican Long Term Ecological Research Network (Mex-LTER).

For more information about the neoSelvas Workshop in Morelia, please visit
http://www.oikos.unam.mx/neoselvas/index.html

EEB STUDENT NEWS

GRADUATE STUDENTS WIN EXTERNAL RESEARCH AWARDS

Alyssa Borowske, working with Dr. Chris Elphick, and **Lily Lewis,** working with Dr. Bernard Goffinet, have been awarded 3-year NSF Graduate Research Fellowships.

In addition, two students were awarded NSF Doctoral Dissertation Improvement Grants (DDIG). **Chris Owen**, working with Dr. Chris Simon and **Kellie Kuhn,** working with Dr. Robert Colwell were the recipients.

Laura Cisneros received a grant from Bat Conservation International; she was also awarded a Grant-in-Aid of Research from the American Society of Mammologists. Laura works with Dr. Michael Willig.

Molly Letsch was awarded the Wilce Award, given for the best graduate student presentation, at the Northeast Algal Symposium in April 2010. Molly works with Dr. Louise Lewis.

Alejandro Rico-Guevara received a research grant from the American Ornithologists' Union. Alejandro works with Dr. Margaret Rubega.

Beth Wade received a Sigma Xi grant in April 2010. Beth works with Dr. Chris Simon

HERBARIUM LIBRARY BOOK LIST NOW ONLINE

A list of books in the Herbarium Library is now online. To search the Herbarium library go to:
http://bgbaseerver.eeb.uconn.edu/librarylist.xls

2010 DEPARTMENTAL RESEARCH GRANTS AWARDED

The following graduate students have been granted awards from the EEB Department for research in their fields of study listed below. Since1999, EEB has granted more than $160,000 in research awards to graduate students. These awards are made possible through the generosity of EEB donors who give annually to the UCONN Foundation to funds listed here.

Botany: Awards are made possible through the **Bamford and Andrews Endowment Funds.**

Awardees: Vanessa Boukili, Kerri Mocko, Juan Carlos Villarreal, Amanda Wendt, and Adam Wilson

Invertebrates: Awards are made possible through the **DeCoursey, Penner, and Slater Endowment Funds.**

Awardees: Roberta Engel, Geert Goemans, Frank W. Smith, Elizabeth Wade

Vertebrates: Awards are made possible through the **Clark, Manter, Trainor, Wetzel and Whitworth Endowment Funds.**

Awardees: Laura Cisneros, Brian Klingbeil, Bill Ryerson, Kat Shaw, Alejandro Rico-Guevara, Diego Sustaita, Beth Timpe, Jon Velotta

For information about these Funds, please contact

EEB STUDENT NEWS

UNDERGRADUATES WIN PRESTIGIOUS AWARDS

Three EEB seniors, **Kevin Burgio, Anne Ewert, Nicole Stubbs,** and one junior, **Kaitlin Heenehan,** were inducted into Phi Beta Kappa in April 2010.

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Joe Keller, Biological Sciences major, whose advisor is Dr. Elizabeth Jockusch, was the co-winner of the 2009 Aetna Writing in the Disciplines Award in Sciences. This is the first award given by Aetna in this discipline.

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Two EEB majors and one Biological Sciences major received awards the 27th Biology Undergraduate Research Symposium which was held on April 30, 2010.

The **Claire Berg Award** is given annually to an outstanding female senior who has conducted original research in molecular or microbial genetics. Biological Sciences Major **Megan Ribak** received the award this year. Megan's advisor is Dr. Chris Simon. Megan's presentation was entitled, *"Assessing the Phylogenetic Utility of DNA Barcoding using the New Zealand cicada genus Kikihia."*

The **Connecticut Museum of Natural History Award** is given annually to a senior who has demonstrated an outstanding level of scholarship as an undergraduate and who has conducted original research concentrating on natural history, behavior, or overall biology of a focal organism during her or his undergraduate career. EEB major, **Kevin Burgio**, received the award. Kevin's advisor is Dr. Margaret Rubega. Kevin's presentation was entitled, *"Monk Parakeet Nesting Behavior on Utility Poles in Connecticut."*

The **Outstanding Senior in EEB Award** is awarded annually 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. The award this year went to EEB major **April Rodd.** April's advisor is Dr. David Wagner. April's presentation was entitled, *"An Experimental Study of the Immune Response in Hyphantria (Lepidoptera: Arctiiidae)."*

SUPPORT NEEDED FOR STUDENT RESEARCH

You can help EEB students conduct research by contributing to one of the Funds listed below. These Funds provide annual student research awards. **All gifts should be made payable to The University of Connecticut Foundation, Inc.** The Foundation is a nonprofit, tax-exempt 501(c)(3) corporation designated by the University to raise and administer private gifts and grants that support the pursuit of excellence in teaching, research, and public service. Donors to the Foundation have the right to request in writing their gifts remain anonymous.

Ecology and Evolutionary Biology Collections Endowment Fund
Ecology and Evolutionary Biology Endowed Fund
Center for Conservation and Biodiversity Endowment Fund

Ecology and Evolutionary Biology Operating Fund
Center for Conservation and Biodiversity Fund

Henry Andrews Fund (plant biology)
Ronald Bamford Fund (botany)
George Clark, Jr. Fund (ornithology)
Russell and Betty DeCoursey Fund (entomology)
Introductory Biology Teaching Assistantship Award (excellence in teaching)
Jerauld A. Manter Fund (ornithology)
Lawrence Penner Fund (parasitology/invertebrate zoology)
John R. Rankin, Jr. Fund (marine sciences)
Judith Humphrey Shaw Parasitology Fund (parasitology)
James A. Slater Fund (entomology)
Francis Rice Trainor Fund (aquatic ecology)
Ralph Wetzel Fund (vertebrate biology)

EEB GRADUATE STUDENT STUDIES WILDFIRES

Adam Wilson spent a great deal of time outdoors as a child. His interest in the natural world led him to obtain degrees in biology and earth science, and then travel to Morocco on a 2-year Peace Corps assignment. There he educated local villagers about environmental resources, helped build an educational center for young women, and provided support for a local cooperative. His time in Morocco solidified his decision to pursue a doctoral degree.

Wilson was drawn to the prestigious, interdisciplinary work of EEB's Dr. John Silander whose ongoing project based in South Africa relates to biodiversity and climate. He accepted an invitation to study at UCONN with Silander without having met him or ever setting foot in Storrs.

South Africa is now the center of Wilson's own research which focuses on understanding and explaining patterns of wildfire in the Cape Floristic Region. Rather than seeking ways to prevent wildfire, Wilson's research strives to "understand what controls wildfire, what drives it, and then frame those questions in a larger context of climate change; and try to understand how temperature, precipitation and humidity influence the probability of fire." Wilson says recent research suggesting longer, warmer, and drier summers in certain areas of the world may present greater opportunity for wildfires to occur. Whether the longer fire seasons are due to climate change and whether that contributes to more frequent fires remain among the complex questions Wilson is attempting to answer.

EEB ALUM NEIL SAWYER DIES

Neil William Sawyer lived for 60 years before succumbing peacefully and painlessly to esophageal cancer on July 17th 2009. He worked until two weeks before his death and never stopped fighting his disease.

As a child in rural upstate New York, Neil Sawyer loved to collect snakes and salamanders. As a young man he moved to New York City and worked for the next 20 years as an actor. Finally he combined both of these loves in the only way possible: he became a professor of biology. To do this, he went back to school and obtained his B.S. at Colorado State University and his Ph.D. at the University of Connecticut where he worked with Dr. Greg Anderson.

He did his graduate research on certain tropical members of the tomato family in South American cloud forests. He also worked close to home, learning and mapping local flora. This established a career-long pattern of pursuing adventures but without losing his roots. He continued his research on the evolutionary relationships of tropical plants while also studying the reproductive biology of native plants. He also lent his expertise in plant taxonomy to help local non-profit organizations, such as The Nature Conservancy in Connecticut and the Lake Lorraine Restoration and Protection Association in Wisconsin.

Neil found his life's meaning in his work and always sought to convey this to his students. His love of science was his love of life. In memory of him, there will be a garden planted on the University of Wisconsin Whitewater campus and dedicated to him, available to all for learning, teaching, dreaming, and the appreciation of wild and beautiful things.

EMERITI NEWS

FRANK TRAINOR RECEIVES HONORARY DEGREE FROM PROVIDENCE COLLEGE

Dr. Francis R. Trainor received an honorary degree from his alma mater at Providence College's commencement on Sunday, May 16, 2010. Dr. Trainer earned his bachelor's degree from Providence College and his master's and doctoral degrees from Vanderbilt University.

Dr. Trainor taught in EEB for 40 years, receiving the Distinguished Faculty Award for Excellence in 1962 . In 1965 he received the Darbaker Prize from the Botanical Society of America for his work in the study of algae. Trainor was a Fulbright Research Scholar at the University of Stockholm and a Fulbright Lecturer in Yugoslavia and Greece.

GREG ANDERSON COMPLETES TERM AS GRADUATE DEAN IN RESIDENCE AT NSF

In 2009 Greg Anderson finished a term as the Graduate Dean in Residence working between NSF and the Council of Graduate Schools (CGS). He worked intensively at the NSF to promote international experiences for US graduate students. (NSF limits fellowship support to US citizens.)

In this context, he organized a major workshop entitled "Globalizing Graduate Education and Research". The workshop was attended by about 100 persons representing embassies, NSF officers, Graduate Deans, non-profit and industry representatives. Greg also traveled to Germany and Canada to speak about NSF and CGS programs.

THE DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY GRATEFULLY ACKNOWEDGES SUPPORT FROM THE FOLLOWING FRIENDS

Drs. Greg and Mona Anderson

Ms. Kathy Pardee Andreasen

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Dr. Jane O'Donnell

Mr. and Mrs. Ronald P. Novick

Mr. Thomas S. Platt

Portland Garden Club

Dr. Carl Schaefer

Dr. Carl Schlichting

Dr. Eric Schultz

Dr. Kurt Schwenk

Ms. Judith Shaw

Dr. John Silander

Mr. Franciscus Thomas, Jr.

Dr. Stephen Trumbo

University of Cambridge

UCONN Student Organization Fund

Dr. and Mrs. David Wagner

Drs. Kent and Marta Wells

Mr. and Mrs. Donald Wetherell

STAFF CHANGES IN THE EEB GREENHOUSE

The Greenhouses' Lead Agricultural Worker, ***Ms. Sandra Ek*****,** retired after nearly 3 decades of service. With her penchant for cultivating the unusual Sandy has had a long-lasting impact on the collections over the years. She continues to play an active role in the greenhouses even in retirement, coming in one morning a week to volunteer her time and services in the tropical houses and passing along her wealth of knowledge to a new generation of horticulturists.

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The Greenhouse welcomed its newest staff member, ***Ms. Dana Ozimek*** in April. Dana comes to us with a BS in Botany from the University of Vermont with a minor in Sustainable Landscape Horticulture as well as internships at Longwood Gardens and an interest in Horticultural Therapy. She is an active outdoorswoman and dog lover with an eagerness to share the amazing world of plants with others. Dana's primary area of responsibility will be the tropical collections greenhouses attending to the horticultural care as well as to assist users/visitors to gain a better appreciation of our outstanding collections.