

## NUMBER 14

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## DARWIN BICENTENNIAL LECTURE SERIES SCHEDULE

### The Charles Darwin Bicentennial Colloquium Series

2008-2009

**Janet Browne**, Aramont Professor of the History of Science, Harvard University.

**Thursday, September 25, 2008, 4:00 P.M.**

**Title: Commemorating Darwin: 1809 to 2009.**

Janet Browne will be our lead-off speaker. She is the premier modern biographer of Charles Darwin, the author of the award-winning two volume biography, *Charles Darwin: Voyaging* (1996) and *Charles Darwin: The Power of Place* (2003). She also has been one of the editors of the landmark Correspondence of Charles Darwin project at Cambridge University Press, and is the author of several other books, including *The Secular Ark: Studies in the History of Biogeography and Darwin's Origin of Species: A Biography* (2006).

**Daniel C. Dennett**, Austin B. Fletcher Professor of Philosophy and Co-Director, Center for Cognitive Studies, Tufts University.

**Thursday, October 2, 2008, 4:00 PM. Title: Darwin and the Evolution of Reasons.**

Daniel C. Dennett is a distinguished philosopher of science who has written widely on Charles Darwin and his influence on many fields of thought. He is the author of many books, including *Darwin's Dangerous Idea* (1995), *Freedom Evolves* (2003), and *Breaking the Spell* (2006).

**Sandra Herbert**, Professor of the History of Science, University of Maryland, Baltimore County. **Wednesday, November 5, 2008, 4:00 PM. Title: The Arc of Ambition: Charles Darwin as Geologist.**

Sandra Herbert is a leading Darwin scholar. Her most recent book is *Charles Darwin: Geologist*, which has won numerous awards, including the Geological Society of America's 2006 Mary C. Rabbitt Award, "given annually in recognition of outstanding contributions to the understanding of the history of the

geological sciences in the United States and abroad." The book is also the winner of the 2006 Suzanne J. Levinson book award from the History of Science Society, the George L. Mosse Prize from the American Historical Association given for an outstanding work on European history, and the Albion Book Prize from the North American Conference on British Studies.

**Ian Tattersall**, Curator of Anthropology, American Museum of Natural History. **Wednesday, December 3, 2008, 4:00 PM. Title: Charles Darwin and Human Evolution** Ian Tattersall is one of the leading paleoanthropologists in the world and an expert on both the fossil history of humans and primates and on Darwin's contributions to anthropology. He has lectured widely to both professional and general audiences and is the author of many books, including *The Fossil Trail: How We Know What We Think We Know About Human Evolution* (1995), *The Last Neanderthal: The Rise, Success, and Mysterious Extinction of*

*Our Closest Human Relative* (1995), *Becoming Human: Evolution and Human Uniqueness* (1999), and *Extinct Humans* (2000).

**John Haught**, Distinguished Research Professor, Dept. of Theology, Georgetown University.

**Wednesday, Feb. 25, 2009, 4:00 P.M. Title: Evolution and Faith: What Is at Stake?**

John Haught is a distinguished Catholic theologian whose research interests focus on issues in science and religion, cosmology and theology, and religion and ecology. He is the author of *God After Darwin: A Theology Of Evolution* (2000) and *Deeper Than Darwin: The Prospect for Religion in the Age Of Evolution* (2003).

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## DARWIN BICENTENNIAL LECTURE SERIES CONTINUED

**Marc Hauser**, Professor of Psychology, Organismic and Evolutionary Biology, and Anthropology, Harvard University.

**Thursday, March 19, 2009 4:00 P.M.**

**Title: The Evolution of a Moral Grammar.**

Marc Hauser is an expert on the evolution of animal communication, behavioral ecology, and the evolution of mind. His work integrates animal behavior, cognitive neurosciences, anthropology, and philosophy. He is the author of a number of influential books, including *The Evolution of Communication* (1996) and *Moral Minds: How Nature Designed our Universal Sense of Right and Wrong* (2006).

**John Beatty**, Professor of Philosophy, University of British Columbia.

**Wednesday, March 25, 2009 4:00 P.M.**

**Title: Karl Popper, Darwinianism, and Totalitarianism: Evolutionary Theory and Political Ideology.** John Beatty is a philosopher of science whose research focuses on the theoretical foundations, methodology, and socio-political dimensions of genetics and evolutionary biology. His current work focuses on the distinction between "history" and "science," the relationships between biology and "the state," from the Manhattan Project to the Human Genome Project, and the theological dimensions of the Darwinian revolution. He is the co-editor of *Thinking about Evolution: Historical, Philosophical and Political Perspectives* (2000) and co-author of *The Empire of Chance: How Probability Changed Science and Everyday Life* (1989).

**Paul Ewald**, Professor of Biology, University of Louisville.

**Wednesday, April 15, 2009 4:00 P.M.**

**Title: Darwinian Medicine.** Paul Ewald began his career as a behavioral ecologist, but more recently has turned his attention to the study of evolutionary medicine, a field he helped to establish. He is a member of the interdisciplinary Program on Disease Evolution at the University of Louisville and the author of *Evolution of Infectious Disease* (1994) and *Plague Time, The New Germ Theory of Disease* (2002).

## LIVE SCIENCE

Thousands of new plant and animal species were discovered in 2007, though only 10 were bizarre enough, lethal enough or just plain cool enough to garner spots on a new Top-10 list.

Each year, the International Institute for Species Exploration (IISE) at Arizona State University issues the Top 10 New Species list, which spotlights flora and fauna described during the previous year, in this case 2007.

The new list includes lethal animals like a box jellyfish (*Malo kingi*) — named after Robert King, who apparently died after he was stung by this species — and the Central Ranges Taipan (*Oxyuranus temporalis*), now thought to be one of the most venomous snakes in the world. And a dragon millipede, whose shocking-pink exterior would put a 1980s fashionista to shame, gets a spot on the list. Rather than setting trends, the arthropod uses its gaudy coloration to alert predators of its toxicity.

Some species made it onto the list due to their modern monikers, including the Michelin Man, a succulent plant from Western Australia that resembles the rotund tire guy. Also on the list: an ornate sleeper ray from the east coast of South Africa that was named after the Electrolux vacuum cleaner brand due to the animal's ability to suck up prey in the water.

"While scientists discover thousands of species each year, with an estimated 16,969 species considered new to science in 2006, plenty of plants and animals are waiting to be found. Scientists estimate 10 million or so species exist on Earth, with 1.8 million species described since Carl Linnaeus developed the modern system. Most people do not realize just how incomplete our knowledge of Earth's species is or the steady rate at which taxonomists are exploring that diversity," said Quentin Wheeler, an entomologist and director of IISE.

The international committee was chaired by **Janine Caira** of the University of Connecticut, and included scientists from across the globe, including the United States, United Kingdom, South Africa, Spain and New Zealand. **For additional information go to:** <http://www.livescience.com/animals/080617-top10-species.html>

Written by **Jeanna Bryner**, Senior Writer – Live Science; reprinted with permission



## FACULTY HIGHLIGHTS

**Kurt Schwenk's** article "Horned lizards (*Phrynosoma*) incapacitate dangerous ant prey with mucus" has been selected by the *Journal of Experimental Zoology A* to be its "featured article" when it appears online and in print this summer.

The article will be freely available for download. It is co-authored with Dr. Wade Sherbrooke, the world's leading expert on horned lizards and author of the recent book, *Horned Lizards of North America* (Univ. of California Press). The paper examines how horned lizards are able to capture and swallow dozens of harvester ants at a time, even though the ants bite viciously and have the most venomous sting known for any insect!

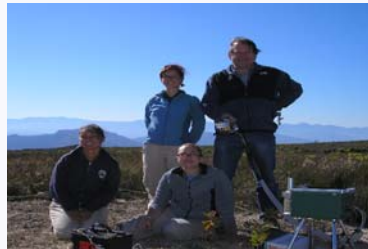
Kurt and Wade discovered the lizards neither bite nor chew the ants, but instead ball them up in strings of rope-like mucus within their throats as the ants are swallowed, employing unique pharyngeal and esophageal papillae. The authors are continuing their collaboration and are preparing a second manuscript on the co-evolutionary arms race between horned lizards and their prey, the highly venomous harvester ants (*Pogonomyrmex*).

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**Kent Holsinger** received a grant from the National Science Foundation last fall to explore mechanisms of evolutionary radiation in the white *Proteas* – a small, South African clade that is distributed through most of the Cape Floristic Region. The project's goal is to determine whether the recent and rapid radiation in this clade is a result of natural selection causing adaptation to different environments or of genetic isolation associated with topographic heterogeneity and climatic range shifts. Graduate student Rachel Prunier began investigating this problem shortly after she arrived. She collected leaf samples and established experimental gardens during a 6-month stay in Cape Town as the resident advisor for the UConn "Honors in Cape Town" semester in spring 2006.

**Jane Carlson** joined the Holsinger lab in November, 2007 as a post-doctoral research associate, having received her Ph.D. from Louisiana State University earlier that year. In February, Jane and Rachel traveled to South Africa to collect seed and soil samples from the populations Rachel sampled in 2006. They were joined later that month by Ann Gawel, who graduated with a B.S. from the University of Chicago in 2006.

Rachel returned to Storrs in early March, but Jane and Ann stayed in South Africa. For the next two months they traveled through much of South Africa collecting leaves, stems, seeds, and flowerheads for later analysis.



In mid-May Kent and Rachel arrived in Cape Town for a three-week visit. While there, "Team Protea" took gas exchange and chlorophyll fluorescence measurements on plants in Rachel's experimental gardens (that's the cuvette to a LiCor 6400 that Kent's holding in the photograph), measured survival and growth of plants in the garden, collected leaf samples for analysis of  $\delta^{13}\text{C}$ , collected flowerheads from a couple of populations, collated much of the field data Jane, Rachel, and Ann had collected, and packed up samples that Kent and Rachel brought back with them in early June.

Jane and Ann planted more than 3000 *Protea* seeds in a greenhouse at Kirstenbosch, and Jane will be transplanting those seedlings to experimental gardens adjacent to the ones Rachel established in early-mid July.

"Team Protea" will be returning to Cape Town for the next two years to collect data that allow them to relate trait differences among plants to differences in individual survival, growth, and reproduction.

By combining those data with microsatellites and AFLPs, they should be able to tell you in a few years whether the radiation of white *Proteas* is adaptive.

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**Carl Schaefer** has been busy.

**Lectures:** In September 2006, he gave an invited talk at the European Hemiptera Congress (Ivrea, Italy), on a new species of heteropteran all of whose relatives so far occur only in eastern Europe. The formal paper will be published in a Festschrift for the Bulgarian hemipterist, Michail Josifov.

In November 2006 Schaefer was made a Fellow of the Royal Entomological Society; this is the highest entomological honor. Carl presented a talk at the 2007 Meeting of the Entomological Society of America., "Bugs that look like other bugs (and maybe why)."

**Publications** during this period include: January 2008 Schaefer, Packauskas (Ph.D '95) and Bu published the description of a new species of leaf-footed bug, *Leptoglossus katieae*. Schaefer & Packauskas, named for the 3rd author, Katie Bu, an undergraduate research scholar in Schaefer's lab who died in October, 2006. The paper was published posthumously; in it Schaefer and Packauskas write, "This paper is very much a collaboration of its three authors. Tragically, Katie died in October, 2006. We, CWS and RJP, name this species in her honor, with sadness and pride."

CONTINUED ON PAGE 5



## FACULTY HIGHLIGHTS CONTINUED

### Carl Schaefer con't:

Schaefer, C.W. & I. Ahmad 2007. a revision of *Burtinus* (Hemiptera: Aldidae). Ann. Entom. Soc. Amer. 100: 830-838.

Schaefer, C.W. & Y. Kikuhara 2007. *Parastrachia nagaensis* (Distant) (Hemiptera: Parastrachiidae) from Laos. Oriental Insects 41: 459-462.

Qi, B.-Y., C.W. Schaefer, & X.-H. Lü 2007. Additions to the mirid (Hemiptera: Heteroptera) fauna of China. Zootaxa 604: 21-35.

Schaefer, C.W. 2007. The correct name of the neotropical soybean bug (Hemiptera: Alydidae). Neotropical Entomology 36: 320-321.

Schaefer, C.W. & I. Ahmad 2008. A revision of *Neomegalotomus* (Hemiptera: Alydidae). Neotropical Entomology 37: 30-44.

Schaefer, C.W. 2008. [essay-review of] "Hug the Bug: Festschrift zum 70. Geburtstag von Ernst Heiss." Ann. Entom. Soc. Amer. 101: 463-464.

Schaefer, C.W., R.J. Packauskas, & K. Bu 2008. A new species of *Leptoglossus* (Hemiptera: Coreidae: Coreinae: Anisoscellini) from Brazil. Proc. Entom. Soc. Washington 110: 61-66

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**Charles Yarish, Stamford Campus,** has been elected to the Connecticut Academy of Science and Engineering. Membership in the Academy is limited to 250 individuals, so his election is a major honor.

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**Kent Holsinger** was elected President of the Botanical Society of America. He took office in July 2008.

**Kent Wells'** book, *The Ecology and Behavior of Amphibians*, published by the University of Chicago Press, was awarded by the 2007 Best Single-Volume Science Reference Book by the Association of American Publishers.

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**Stephen Trumbo, Waterbury Campus,** was granted promotion to Professor in the EEB Department by the Board of Trustees in April 2008.

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**Peter Turchin** published an essay in *Nature* in July 2008 entitled "Arise 'cliodynamics.'" The essay can be found at: <http://www.nature.com/nature/journal/v454/n7200/full/454034a.html>

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**Greg Anderson** was named the Council of Graduate Schools/National Science Foundation Dean-in-Residence for 2008-2009. He will be spending the next year in Washington, DC.

This program was created in 2001 to provide a mechanism for ongoing and substantive communications between senior administrators at universities that provide graduate education and the NSF — a major funder of graduate support programs.

The program is a distinct opportunity to bring to the NSF insights, perspectives, and the practical experience of a senior administrator at a research university. In turn, the DIR shares with the graduate dean community, as well as broader science and engineering faculty, NSF's perspective on graduate education

Dr. Anderson served as UCONN's Vice Provost for Research and Graduate Education and Dean of the Graduate School from 2005 to 2008.

Before heading to DC, Drs. Greg and Mona Anderson established a fund to support EEB graduate students. The **Annual Best Thesis Award Fund** provides an annual cash award and certificate for the best thesis in the areas of systematics, ecology, and/or evolution.

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**Robert Thorson** had an article printed in the Winter 2007 issue of *Lake Line* entitled "Meet the Northeast Lakes."

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**Robin Chazdon** is the principal investigator on a grant from the Blue Moon Fund entitled "A Baseline Survey of Biodiversity, Environmental Services, and Conservation Value of Secondary and Mature Forests in the Osa Biological Corridor." Co-Investigators on the project include: MSc. Braulio Vilchez Alvarado, Instituto Tecnológico, Costa Rica; Dr. Edgar Ortiz, Instituto Tecnológico, Costa Rica; Dr. Bryan Finegan, CATIE, Costa Rica; Dr. Juan Pablo Arroyo Mora, University of Connecticut, USA; Dr. Catherine Potvin, McGill University, Canada

The objective of this collaborative project is to establish a set of permanent monitoring plots in the Osa Biological Corridor representing different stages of secondary growth (including mature forests), to conduct baseline surveys of the woody biodiversity and environmental services, and to initiate long-term studies of vegetation dynamics and flowering and fruiting phenology in a subset of sites.

## FACULTY HIGHLIGHTS CONTINUED

**Robin Chazdon con't:** The field-based data will provide robust estimates of carbon storage in vegetation and rates of carbon sequestration, rates of forest regrowth, conservation of endemic and threatened tree species, and resources available for wildlife in the corridor. Analyses of current land-use and distribution of forest cover types within the Osa Biological Corridor will also be conducted, an essential tool for conservation planning and landscape management. The project will develop urgently needed methodologies for assessing environmental services and biodiversity that can be broadly applied to other land uses within the region, including agro-forestry and selectively-logged forests.

The current water challenge facing Australia has drawn **Dr. Gene Likens**, EEB's Distinguished Research Professor, to Australia as a Flagship Fellow with the Water for a Healthy Country Flagship.

The six-month posting, which began in January 2008, will see Dr. Likens present scientific lectures, review and advise on current and future work of the CSIRO-led Flagship, and visit project teams around Australia including Adelaide, Wodonga, Brisbane, Townsville and Darwin.

"We have a debate which people can understand," says Likens, "because it deals with issues which they are experiencing. As Ben Franklin said: 'You don't know the value of water until the well goes dry'."

Dr Likens says the current water crisis facing Australia is in many ways a microcosm of a problem common around the world, which is exacerbated, and perhaps sometimes initiated by, climate change and population increases.

"Australia has an opportunity to be a world leader and develop science to help with this serious problem, and export that know-how to the world, and is pursuing that opportunity," says Likens. .

"Even though the land mass of the US and Australia are about the same, Australia has a total population about the same as that of New York State. I've been really impressed with how bright and original our scientists are here."

Dr. Likens' great passion is bringing an holistic approach to the big challenges now facing our river ecosystems. He will bring together key thinkers to an April 2008 workshop in Canberra and challenge them to think about the big questions and the complex challenges in our river ecosystems.

In 2007 Likens stepped down as director of the Institute of Ecosystem Studies and returned to full-time research.

## DR. MARK URBAN JOINS EEB FACULTY

Dr. Mark Urban began his position as Assistant Professor in August, 2008. Mark earned his Ph.D. at Yale University in 2006. Following graduation, Dr. Urban accepted a Postdoctoral Fellowship at the National Center for Ecological Analysis and Synthesis in Santa Barbara, CA. At UConn Mark is currently teaching the "W" Ecology courses. It is anticipated he will also teach EEB's Limnology course, which is currently pending approval by the University's Curriculum Committee.

As for research, Mark is generally interested in understanding how evolutionary and ecological processes interact to shape species diversity across multiple spatial scales. His work has focused mainly on predator-prey interactions among salamanders in temporary ponds. For additional information about Mark's research, please visit Mark's website at:

<http://hydrodictyon.eeb.uconn.edu/people/urban>





## PARASITIC BEETLE BEHAVIOR MAY ENDANGER RARE REPTILES

Dr. Stephen Trumbo, an EEB professor at the UCONN Waterbury Campus, and Garrison Smith, a biology teacher at the Kent School, have documented parasitic behavior in burying beetles (*Nicrophorus pustulatus*) that is both “interesting and bizarre.” The behavior is a rare example of an insect preying on a vertebrate’s eggs, says Trumbo.

Trumbo has published widely in scientific journals on the burying beetle, known for burying the corpses of dead mice to feed them to its larvae. A few years ago, an adult burying beetle was found in a snake nest tending its larvae which were feeding on snake eggs. No insect had been observed previously in this type of parasitic behavior toward a vertebrate says Trumbo.

Trumbo and Smith (who pursued a master’s degree in Trumbo’s lab) tested the field observation in the lab. The results of their work were



published in a paper in the *Journal of Evolutionary Biology* late in 2007. Smith, the lead author, earned his Masters at the University of Arizona but did his thesis experiments in Trumbo’s lab. The pair found that *Nicrophorus pustulatus*, common in CT and other eastern states, does indeed feed, and thrive, on snake eggs. Other burying beetle species walked right over the snake eggs, ignoring them. The *pustulatus* beetle, in the field, does not respond to dead songbirds or mice as other burying beetles do. The unusual behavior of this species of burying beetle may indicate an evolutionary transition from one prey to another, says Trumbo. *Nicrophorus pustulatus* has

been found in fox and rat snake nests. Rat snakes are a threatened species in Massachusetts and have protected status in Connecticut because of declining populations. Smith notes that “burying beetles are also rarities in the insect world for biparental investment – both parents help feed the young.” Smith’s Kent School biology students engaged in further experiments on the species during this recently completed academic year. Burying beetles are efficient at doing three things, Smith says – they strip a mouse carcass of fur, round it into a ball, and bury it. His students rated how well three species of beetle did this. “If they’re losing some of these behaviors, it could indicate a host shift from carcass to eggs,” he adds.

Adapted from a UCONN  
*Advance* article written  
by Cindy Weiss



“NO INSECT HAD  
BEEN OBSERVED  
PREVIOUSLY IN THIS  
TYPE OF PARASITIC  
BEHAVIOR TOWARD  
A VERTEBRATE “

## EDITOR’S CORRECTION

Our last newsletter, (EEB Newsletter 2007, Number 13), incorrectly stated Dr. Zoe Cardon’s position at The Marine Biological Laboratory (MBL). The following is an updated, and corrected, article.

**Dr. Zoe G. Cardon** accepted a position at the Ecosystems Center at The Marine Biological Laboratory, Woods Hole, MA in January, 2008.

Dr. Cardon, a terrestrial ecologist and senior scientist at the Ecosystems Center, is a nationally recognized ecologist, with expertise in plant physiological ecology and plant-rhizosphere (the interface between roots and soil) interactions.

Dr. Cardon will collaborate with the MBL’s Bay Paul Center in the Micro-Eco Interfacean initiative that will bridge research of the Ecosystems and Bay Paul Centers.

Dr. Cardon was an associate professor in EEB. In addition, she was the associate director of the University’s Center for Integrative Geosciences and served as the Center’s Graduate Program Director.

She received her Ph.D. from Stanford University and her undergraduate degrees in biology and Spanish from Utah State University



## FIVE-YEAR COLLABORATIVE EFFORT PRODUCES CONNECTICUT BUTTERFLY ATLAS

The Department of Environmental Protection released the **Connecticut Butterfly Atlas** in June, 2007. The 5-year project yielded a gorgeous 376-page full color guide for 117 of Connecticut's known butterfly species.

**Dr. Jane O'Donnell, EEB Biology Collections Manager**, chaired the project and edited the atlas. **Co-editors were Dr. Lawrence Gall, Peabody Museum of Natural History, Yale University, and Dr. David Wagner, EEB professor.** Each also authored chapters on the history of butterfly study in Connecticut, key results, butterfly conservation, and studying butterflies.

Over 350 volunteers contributed nearly 8,500 specimens or photos with accompanying data cards to the project; nearly every section of the state was searched for butterflies. All finds had to be verified by a committee of butterfly experts that included Wagner, Gall, the late Charles Remington, curator of the Peabody Museum, and others.

The core of the book consists of two-page species accounts that introduce readers to each butterfly's life history and conservation status. Each account is lavishly illustrated with color photographs contributed by many of Connecticut's finest macro-photographers. The atlas is especially rich in images of caterpillars and other early stages.

The book offers a large focal image and a brief description of each adult butterfly, allowing both beginners and seasoned butterfly chasers alike to readily identify the state's most commonly encountered butterflies.

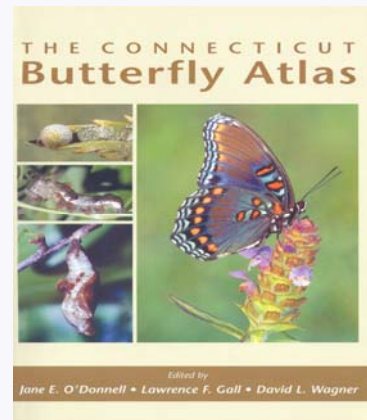
The guide's small format (5"x 9") makes the atlas an obvious grab for those headed out into the field. "It's not really a field guide, but people are using it that way," says O'Donnell.

On warm days early in the spring the first butterfly you may see is *Nymphalis antiopa*, or Mourning Cloak. Species most commonly found during the project include the Pearl Crescent, *Phyciodes tharos*, which flies close to the ground in open areas in most part of the state; the Cabbage White, the tiny European Skipper – both non-native species.

A unique feature of the atlas is the appendix on "Ten Great Butterflying Spots in Connecticut." The description of the butterflying "hotspots," each written by one of the state's top naturalists, includes suggestions on where to park, hike, and observe, and lists what species are to be expected there.

The next step for the project would be to create a network of volunteers to monitor the butterfly population by walking a set transect every week and counting the butterflies they see. The greatest threat to CT butterflies is the loss and/or fragmentation of their habitat. In addition, deer browsing threatens butterfly species by eradicating host plants. Gardeners can help by planting native host plants including sedge grasses and wild Indigo.

The atlas sells for \$20 per copy and makes a perfect gift. Order directly from the Connecticut DEP On-line Store (<http://www.ctdepstore.com/main.sc>) or, to order by phone, please call (860) 424-3555.



Butterfly Atlas Cover



## FACULTY GRANTS 2007-2008

The scope of research in which EEB faculty engage is clearly evident in the grants they received since our last publication.

Faculty	Organization	Title of Grant
Robin Chazdon	Blue Moon Fund	<i>A Baseline Survey of Biodiversity, Environmental Services, and Conservation Value of Secondary and Mature Forests in the Osa Biological Corridor</i>
Robin Chazdon	NSF	<i>Collaborative Research/LTEB Successional Pathways and Rates of Change in Tropical Forests of Brazil, Costa Rica, and Mexico</i>
Jean Crespi	NSF	<i>Collaborative Research: Reactivation of Continental Margin Fracture Zones: Insights from Seismology, Strain Patterns and Numerical Modeling of Modern and Ancient Orogens</i>
Cynthia Jones	UCONN Research Foundation	<i>Variation in Structural and Functional Traits Across Diverse Plant Grown Forms</i>
Cynthia Jones	NSF	<i>Collaborative Research: Resistance, Repair, and Redundancy: Traits that Protect Shrubs Against Drought</i>
Bruce Goldman	NSF/UMASS	<i>Social Control of CNS Morphology in a Eusocial Mammal</i>
Kent Holsinger	NSF	<i>Evolutionary Radiations in South African Proteaceae</i>
Donald Les	CT DEP	<i>A Molecular Genetic Approach to Evaluate Herbicide Resistance and Vectors of Spread for Populations of the Invasive Aquatic Plant <i>Hydrilla verticillata</i> (Hydrocharitaceae) in Connecticut</i>
Gene Likens	CSIRO-Australia	<i>Healthy Water Ecosystems</i>
Margaret Rubega	NSF	<i>Seed-Dispersal Mutualisms: The Spatio-Temporal Dynamics of Fleshy-Fruited Plants and their Avian Dispersers</i>
Eric Schultz	UCONN Research Fdn	<i>Copulation Kinematics in <i>Poecilia</i>, a Genus of Livebearing Fish</i>
Eric Schultz	CT DEP	<i>Estimating Predation on Declining River Herring: Tag-Recapture Study of Striped Bass in the Connecticut River</i>
Christine Simon	NSF	<i>Systematics and Biogeography of the Australian Cicadettini and Their Relatives Worldwide</i>
Stephen Trumbo	UCONN Research Fdn	<i>Basic and Applied Research on a Host Shift Among Burying Beetles</i>
Dave Wagner	CT DOT	<i>Survey for Threatened or Endangered Species – Route 14 and 14A Sterling</i>
Mike Willig	NSF	<i>Long-term Ecological Research in the Luquillo Mountains of Puerto Rico</i>



## STAFF HIGHLIGHTS

### CLINT MORSE WINS EXCELLENCE IN OUTREACH AND PUBLIC ENGAGEMENT AWARD

**Clint Morse**, EEB Plant Growth Facilities Manager, was named this year's winner of the University of Connecticut Award for Excellence in Outreach and Public Engagement.

Clint organizes greenhouse tours that bring more than 2,700 formal tour participants through EEB's greenhouses. An additional 4,500 individuals tour the greenhouse on their own each year. Clint was instrumental in bringing more than 22,000 people to campus when the "corpse flower" (Titan Arum) bloomed in 2005. Clint has been responsible for organizing plant exchanges with more than 170 institutions throughout the U.S.

Clint maintains the EEB Greenhouse website (<http://florawww.eeb.uconn.edu/>) that highlights "featured plants" and a host of other information vital to botanical

### JEN MURPHY AWARDED 2008 OUTSTANDING UNDERGRADUATE STUDENT ADVISEMENT AND ADVOCACY AWARD

**Jennifer Murphy** has been chosen (from over 50 nominations) as the staff recipient of the 2008 Outstanding Undergraduate Student Advisement and Advocacy Award in recognition of the excellent job she does advising EEB and Biological Science majors.

The award honors one faculty member and one professional staff member who exemplify excellence in academic advising and advocacy. Academic advising assists students in the development of meaningful educational plans that enrich their studies and promote the achievement of goals; it is fundamental to creating motivation to pursue academic excellence. This award is one way in which the University of Connecticut expresses its commitment to this very important component of higher education.

### DR. ADAM FRY PRESENTS PAPER

**Dr. Adam Fry** co-presented a paper with Dr. Rob Ceglie (NEAG School of Education) entitled: "Culturally-Responsive Teaching in Introductory Biology Classes: Theory Meets Practice" at the Lilly-East Conference on

## ALUMNI HIGHLIGHTS

**Colin Young, Ph.D. 2005** Dr. Colin Young is featured on a detailed web site interview on tropical forest conservation ([http://news.mongabay.com/2007/1116-interview\\_young\\_belize.html](http://news.mongabay.com/2007/1116-interview_young_belize.html)). After graduation, Dr. Young returned home to Belize and has been working in tropical forestry and teaching at Galen University since that time.

**Catherine Cardeleus, Ph.D. 2003** Cat and her husband, Eddie Watkins, also a tropical botanist, have accepted a joint (150% time) appointment for a tenure-track Botany position at Colgate University. They are both very happy!

**Chris Field, B.S/M.S. 2008** Chris Field was offered a position at Audubon Connecticut. He was up against 30+ applicants from across the country (quite a few of whom had a lot of prior experience - including a few PhDs). One snippet from the email Dr. Chris Elphick, BS/MS Program Coordinator received from Field's new boss: "Great job in training Chris in your program. He has really come a long way since his internship, and he was a spectacular intern!"

**Patrick Owen, Ph.D. 2003**

Patrick Owen has accepted a position as Asst. Prof. at Raymond Walters College of the University of Cincinnati which is the largest state university branch campus in Ohio. Since leaving UConn he has been at Ohio State University at Lima.

**Jonathan Richmond, Ph.D. 2005** Dr. Richmond is currently a Postdoctoral Research Fellowship in the Ecology and Evolutionary Biology Department, Cornell University, E237 Corson Hall, Ithaca, NY 14853-2701. Jonathan can be reached at: [jqr2@cornell.edu](mailto:jqr2@cornell.edu).

**Florian Reyda, Ph.D. 2007** After graduation, Dr. Reyda continued his work here on cestodes as a Postdoctoral Associate in Janine Caira's lab. They have been studying new species of cestodes from elasmobranchs in Indonesian Borneo, including several species from the freshwater stingray, *Himantura signifer*.

In August 2008 Florian began his position at the State University of New York, Oneonta. He will serve as Assistant Professor in Invertebrate Zoology, and as Biological Field Station Researcher at the SUNY field station in Cooperstown, New York.

**Mac Given, Ph.D. 1987**

Mac Given, a Professor of Biology at Neuman College in Aston, Pennsylvania, has been appointed Dean of Arts and Sciences at the college.

**Katie Levasseur, B.S. 2006**

Katie accepted a 6 month position working with sea turtle nesting ecology through the Jumby Bay Hawksbill Project in Antigua. She is a co-field director and will be in charge of monitoring sea turtle activity, nesting, tagging, turtle and egg measurements, etc.

**Manuel Morales, Ph.D. 1999**

Following graduation, Manuel accepted a postdoc position at University of Maryland. From there he joined Williams College in western MA as an Associate Professor. He was tenured in Fall 2007. You may contact Manuel at <http://mutualism.williams.edu>



**Andrew Latimer, Ph.D., 2006**

Following graduation, Dr. Latimer accepted a Postdoctoral Assistant in EEB. Dr. Latimer left the Department in July 2008 to join the Department of Plant Sciences

at University of California Davis as an Assistant Professor. In the past year, he has continued to work on impacts of climate change on fire and plant populations in South Africa. In addition, he joined a new research project to study the effects of climate change on plant species in Australia's South West Botanical Province.

With members of the Department of Environment and Conservation of Western Australia and the South African National Biodiversity Institute, he is using statistical models to identify populations that should now be facing drought stress. The plan is then to use monitoring and field experiments to observe their responses to variability in rainfall and temperature. With this information, we will project the trajectories of populations, identify sensitive life history stages, and then integrate these population-level predictions to forecast their distributions under conditions projected by climate models.

**Norman Wickett, Ph.D. 2007** Following his graduation, Dr. Wickett continued his work in EEB as a Postdoctoral Associate in Bernard Goffinet's lab. In June 2008 Norm accepted a Postdoctoral Assistant position in the Biology Department at the University of Pennsylvania.



## GRADUATE STUDENT HIGHLIGHTS

**Nicola Plowes, Ph.D. 2008** In May 2008 Dr. Plowes accepted a lecturer position at the School of Life Sciences at Arizona State University, 1711 South Rural Road, Tempe, AZ 85287. Nicola can be reached at [Nicola.Plowes@asu.edu](mailto:Nicola.Plowes@asu.edu). Prior to graduation, Nicola won the President's Prize, awarded for first place in the student talk competition at the Entomological Society of America. She presented her work on self-organizing conflicts in the invasive ant *Tetramorium caespitum*.

**Maxi Polihronakis, Ph.D. 2008** Following graduation, Dr. Polihronakis accepted a position at the Santa Barbara Museum of Natural History, 2559 Puesta del Sol Rd., Santa Barbara, CA 93105.

**Krissa Skogen, Ph.D. 2008** The Provost's Commission on the Status of Women, the UConn Alumni Association, and the Women's Center annually honor outstanding graduating women from each of UCONN's twelve schools. Krissa was selected as one of three outstanding women scholars from the Graduate School in 2008. Immediately following graduation, Krissa accepted a position at the Chicago Botanic Garden in Glencoe, IL.

**Jessica Budke** (Goffinet/Jones labs) Jessica won second place in the '2007 Conant "Botanical Images" Travel Award' competition for her colorized SEM of the peristome of *Timmia megapolitana*. This award is intended to support travel to the annual meetings of the Botanical Society of America.

**Amanda Wendt** (Chazdon lab) received a grant for \$1500 from the Organization for Tropical Studies to support her proposed research on "Roosting behavior, foraging behavior, and seed dispersal by frugivorous phyllostomid bats in secondary forests at La Selva Biological Station." Amanda is at La Selva now, ready to go!

**Lori Benoit** (Les Lab) was awarded a student scholarship by the Northeast Aquatic Plant Management Society for her research on *Hydrilla*.

**Maria Pickering** (Caira Lab) was awarded the 2008 Introductory Biology Teaching Excellence Award which recognizes outstanding contributions to our Introductory Biology curriculum. The award is administered by The Connecticut State Museum of Natural History and comes with an honorarium.

**Kathryn Theiss** (Holsinger Lab) received the award in Tropical Botany from the Garden Club of America this spring.

**Tobias Landberg** (Schwenk Lab)/**Rachel Prunier** (Holsinger Lab)/**Roberta Engel** (Jockusch Lab)

Tobias Landberg and Rachel Prunier each received \$5000 College of Liberal Arts and Sciences mentoring fellowships for the spring 2008 semester. These fellowships are intended for graduate students who are heavily involved in mentoring undergraduates in independent research. This is part of a program on innovative teaching methods funded by the College and the Schwenk Fund.

Roberta Engel and Tobias received NSF Dissertation Improvements Grants — Roberta's from the Systematics Panel and Tobias's by Population Biology.

**Justin Davis** (Schultz Lab) began working for DEP as Fisheries Biologist with the Inland Fisheries Division, Eastern District. Justin remains a student in the Schultz lab, and will continue progress on his doctoral degree.

**Trina Bayard** (Elphick Lab) received the Paul A. Stewart award from the Wilson Ornithological Society. It is her second grant this year, and her fifth extramural grant overall. Trina received a grant from The Quebec-Labrador Foundation. In addition Trina was awarded a 2008 Chapman Grant from the American Museum of Natural History's Frank M. Chapman Memorial Fund. The grant, named for a long-term Chairman of the Department of Ornithology at the Museum, will support Trina's field research on the behavioral ecology and conservation of saltmarsh sharp-tailed sparrows in coastal Connecticut.

This most recent award follows on from three other highly competitive grants - the Cooper Ornithological Society Mewaldt-King Award, the Francis M. Peacock Scholarship for Native Bird Habitat, and an Animal Behavior Society Student Grant received by Trina in 2007.

**Kat Shaw** (Schlichting Lab) received grants from both the Animal Behavior Society and the Raney Fund (American Society of Ichthyologists and Herpetologists) for her work on mating behavior in sticklebacks.

**Carrie Fyler** (Caira Lab) was awarded the 2008 Upper Level Teaching Excellence Award which recognizes outstanding contributions to our Upper Level Biology curriculum. The award is administered by The Connecticut State Museum of Natural History and comes with an honorarium.



## GRADUATE STUDENT HIGHLIGHTS CONTINUED

### TWO EEB GRADUATE STUDENTS TRAVEL TO JAPAN TO CONDUCT RESEARCH

**Jessica Budke** was accepted into the EAPSI 2008 Program (East Asia and Pacific Summer Institutes) in Japan and spent a couple of months working in Dr. Mitsuyasu Hasebe's lab at the National Institute for Basic Biology in Okazaki (the leading *Physcomitrella* genomics lab) on sporophyte development in *Physcomitrella*.

**Jenica Allen** was also funded by the NSF-EAPSI 2008 Summer Program (East Asia and Pacific Summer Institutes) to conduct research in Japan. Jenica will be working with Nobuyuki Tanaka at the Japanese Forestry and Forest Products Research Institute, Tsukuba, Japan to work on GIS databases of Japanese plant species that are invasive in the US, and with Tatsuhiro Ohkubo and Takayoshi Nishio at the Weed Science Center of Utsunomiya University to work in the field on the ecology of some of these same Japanese species that are invasive in the US.

The awards provide a \$5,000 stipend, an allowance of up to \$2,500 for international travel and foreign co-sponsoring organizations will provide additional support to cover EAPSI students living expenses abroad during the period of the summer institutes.

The East Asia and Pacific Summer Institutes provide U.S. graduate students in science and engineering: 1) first-hand research experience in Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan; 2) an introduction to the science and science policy infrastructure of the respective location; and 3) orientation to the society, culture and language. The primary goals of EAPSI are to introduce students to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts. The institutes last approximately eight weeks from June to August.

#### **Susan Herrick**

Susan completed her third year at her field site collecting data on the social interactions between Bullfrogs and Green frogs. Breeding activity on the pond was again noted with several study animals showing up for the third season and many newly mature animals. This year Susan is working in ponds all around eastern CT to verify previous years' findings, continuing to focus on the influence that Bullfrogs have on the social behavior of Green frogs.

In 2007 Susan was awarded the EEB upper level courses teaching award, served as part of the herpetology twig for BioBlitz in Middletown, and presented her research at Windham High School's Experimenta, the honors biology students' annual capstone event for their term projects. Two travel awards allowed Susan to present part of my research in a talk at the annual Joint Meeting of Ichthyologists and Herpetologists in St. Louis and to Cornell to present at the International Society for Behavioral Ecology Meeting.



## GRADUATE STUDENT HIGHLIGHTS CONTINUED

Adult streamside salamander (*Ambystoma barbouri*)  
in its native Kentucky habitat.



### LANDBERG MENTORS UNDERGRADS THROUGH HIS RESEARCH

Tobias Landberg's research on salamanders combines the emerging field of evolutionary developmental biology with traditional functional morphology to answer questions such as "where does variation come from" and "how does phenotypic variation affect performance and fitness." Recently, he was awarded an NSF Doctoral Dissertation Improvement Grant (DDIG) for his work on mole salamanders.

When organisms invade novel habitats they bring with them a genetic legacy that includes the ability to respond to environmental variation. Developmental programs generate variation based on this legacy that can be beneficial or detrimental to the organism depending on the new environmental conditions. Selection in the new environment may therefore favor the ancestral plasticity or select against it. To discover how selection has acted on developmental plasticity, Tobias raises three species of salamander larvae under various conditions in the lab.

The genus *Ambystoma* includes several of our local vernal pool breeding species such as the ubiquitous spotted salamander. Most of the 30+ species in the family Ambystomatidae breed in still bodies of water that dry out periodically—precluding predatory fishes. However, a couple of species have invaded stream habitats. The streamside salamander, (*A. barbouri*) is almost indistinguishable in its adult form from the pond breeding small-mouthed salamander (*A. texanum*). However, these sibling species differ dramatically in breeding habitat, reproductive mode and larval form. Egg size, embryonic period, hatching stage, gill and tail-fin size, and length of the larval period all co-vary across ecological lines. Tobias is currently studying how oxygen levels and maternal investment in yolk affects growth, development, behavior and several measures of performance.

Tobias has also been fortunate to work with several exceptional undergraduates. During the spring '08 semester he was awarded a Schwenk Mentoring Fellowship by the College of Liberal Arts and Sciences. This award provided half a semester of research assistantship support. During that time he mentored five students. Highlights include traveling to his old home town of San Antonio for the annual meeting of the Society of Integrative & Comparative Biologists where Leah Brown-Wilusz won the best student poster prize in the Division of Vertebrate Morphology (DVM). Tobias was also elected as the DVM representative to the graduate student and post-doc affairs committee at that meeting. Laurel Dwyer, an Environmental Sciences major, was awarded a Summer Undergraduate Research Fellowship in support of her honors thesis on predator-induced plasticity in salamanders. Tobias also helped Dede Latif start the Biology Club, an undergraduate group that meets bi-weekly during the semester to meet with faculty and professionals from across all the biological science disciplines to discuss academics and research opportunities for undergrads.



## EEB ALUM OVERSEES CONSTRUCTION OF WORLD'S FIRST LEED CERTIFIED PUBLIC GARDEN BUILDING



**Richard V. Piacentini, M.S. 1984** is currently the Executive Director of the Phipps Conservatory and Botanical Gardens. Under his direction, Phipps has taken the lead for sustainable buildings and practices in public gardens in the US. In March, 2005 Phipps opened the first LEED certified building in a public garden. December, 2006 Phipps opened the most energy efficient conservatory in the world. Most recently, Phipps signed a contract with an architect to design and build the greenest building in the world, a building that will exceed LEED Platinum and produce all its own energy and treat all its own water on site.

For additional information, you may contact Richard at [richard@phipps.conservatory.org](mailto:richard@phipps.conservatory.org) or Richard V. Piacentini, Executive Director, Phipps Conservatory and Botanical Gardens, 1059 Shady Avenue, Pittsburgh, PA 15232; 412-622-6906. The Conservatory website can be found at: [www.phipps.conservatory.org](http://www.phipps.conservatory.org)

## GRADUATING SENIORS RECEIVE BIOLOGICAL AWARDS

The 26<sup>th</sup> Annual Biology Undergraduate Research Colloquium was held on May 2, 2008 and EEB was well represented as eight of the 20 seniors presenting were affiliated with the EEB department.

**Kristina Catanese** and **Leah Brown-Wilusz** were both awarded the Connecticut Museum of Natural History Award. This award is presented to a senior 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. Kristina's project was "Light use in green algae of the class Chlorophyceae" and Leah's was "Hatching plasticity in spotted salamanders (*Ambystoma maculatum*)."

**J. Steven Ferketic** received the Honors Award in Life Sciences for his research presentation on "Conservation justice in metropolitan Cape Town, South Africa and Rio de Janeiro, Brazil." This award is given to an outstanding senior graduating with honors who has conducted interdisciplinary research related to the life sciences.

**Logan Senack** received the Outstanding Senior in EEB Award for his research presentation on "Seed weight and germination in two common and one rare species of *Desmodium*." This award is presented to a senior who has demonstrated exceptional academic and research accomplishment within the EEB department during his or her undergraduate career.

Additional student presenters include: **Martha Divver** who talked about her research on "Mating systems, copulatory organ size and scaling relationships in mollies (*Poecilia* spp)"; **Zbigniew (Polik) Grabowski** who presented on "Evolution, synthesis and application of ecologically sustainable living systems" and **Caley Johnson** and **Dimpi Parikh** who worked collectively on "Alkaloid screening and bioassay of eastern Nicaraguan medicinal plant species." Caley's talk focused on the alkaloid screening results and Dimpi presented the bioassay results.



## Biological Research Collections Receives Book Donation

Earlier this year, Dr. Storrs L. Olson, a paleo-ornithologist and senior scientist at the Smithsonian Institution, donated his personal collection of more than 1,000 books, journals, and reprints in the field of bryology to EEB's Biological Research Collections Library. Bryology is the field of botany that studies mosses, liverworts, and hornworts.

The donation includes books dating from the 1700's as well as books authored by contemporaries of Charles Darwin. It gives UCONN one of the most comprehensive libraries on mosses in the nation. The addition of these materials makes the Biology Collections Research Library one of the top-ranked libraries in the entire field of bryology says Bernard Goffinet, associate professor of ecology and evolutionary biology. Dr. Goffinet specializes in the field.

"It is an incredible resource for us, an inspiring collection of great books in the field," says Goffinet. The UCONN collection includes one of only 251 copies in the world of a 1741 book, *Historia Muscorum*, as well as books from the 1800s and current books. Also included is a set of *The Bryologist* from 1898. *The Bryologist* is the oldest North American journal in the field. Dr. Olson's donation also completes a set of *Revue Bryologique*, building on an earlier donation by the late Lewis Anderson, a former Duke professor.

Olson became interested in mosses as a student at Florida State in 1966. After taking a graduate course in bryology taught by Ruth Breen, author of *Mosses of Florida*, he was fascinated by exposure to a new world of small plants. Olson earned his doctorate at Johns Hopkins University with a focus on fossil birds and island ecosystems. He is currently the curator-in-charge of the Division of Birds at the Smithsonian. His interest in mosses remained, however. In 1992, some 20 years after completing his Ph.D., he purchased his first bryological book collection – a two-volume edition of *Mosses of Eastern North America* on sale at half price.

Olson acquired his collection through a friendship with Bill Hoe, a local Hawaiian bryologist whom Olson met when completing field work to collect fossil birds. "Bill Hoe was an avid, almost fanatical, collector of bryological publications..." says Olson. When Hoe died, his collection was passed on to his nephew, and Olson was able to purchase the bryological books. The extensive collection, acquired over the course of more than two decades, filled two large shipping pallets, and was sent to Olson's Arlington, VA home where it took him months to unpack it.

After moving into smaller quarters in Fredericksburg, Dr. Olson decided to fulfill a longstanding desire to donate the collection. Dr. Goffinet heard about Olson's plan and wrote to him about his research in Chile where mosses are prevalent and diverse. After considering making the donation to Chile, Olson decided to donate the collection to UCONN instead.

Goffinet, UCONN's only bryologist, and EEB professor John Silander are among the co-authors of a new paper in *Frontiers in Ecology and the Environment* that calls Cape Horn (at southernmost headland of the Tierra del Fuego archipelago of southern Chile) and southern Chile "hotspots" for bryophytes and non-vascular plants. The paper reported that more than 5 percent of world's bryophytes are found on less than .01 percent of the earth's land surface at the southern tip of South America. The lead author of the paper, Ricardo Rozzi (Ph.D. 2002) is Silander's former graduate and was instrumental in the establishment of the Cape Horn Biosphere Reserve in 2005 (EEB Newsletter 2005, Number 11).

In the Cape Horn region where Goffinet conducted field research, eco-tourism has become so important to the local economy that "everyone wants to have a hostel." His field guide to mosses was published by the Chilean Ministry of Tourism. The lure of observing and recording moss species attracts both amateur naturalists and professional scientists.



## SUPPORT STUDENT RESEARCH WITH YOUR CONTRIBUTION

Would you like to make a gift that will provide research opportunities for EEB students and faculty? Would you like your donation to contribute directly to research at UCONN and beyond? If you answered yes to either of these questions, there is a way for you to participate.

The College of Liberal Arts and Sciences (CLAS) has agreed to match dollar-for-dollar the spending allocation assigned to EEB's Biological Research Collections Facility. The spending allocation is the investment income generated by the endowment's principal.

The EEB Biological Research Collections facility houses more than 750,000 specimens of botanical, invertebrate, and vertebrate species. The collections are utilized regularly by EEB students and faculty as well as researchers from other colleges and universities. With additional funding we would be able to acquire additional specimens and broaden the use of the Collections facility. EEB is deeply grateful to Ross MacKinnon, CLAS Dean, for his confidence and support of our efforts to make the Collections Facility one of the best in New England. For more detailed information about the collections and the facility, please go to <http://collections2.eeb.uconn.edu/collections/chp.html>.

Now, here's how you can help. Please make a gift of any amount to EEB's Biological Research Collections facility. As the principal grows, the spending allocation increases as does the match from CLAS. It's that simple. For additional information about the Collections facility, you may contact Dr. Bernard Goffinet, 860-486-5290 or [bernard.goffinet@uconn.edu](mailto:bernard.goffinet@uconn.edu).

## KATIE BU MEMORIAL FUND

Kyunga "Katie" Bu was a believer in the power each of us has to transform our energies, to pass along the life we have in us to help each other, and to solve environmental problems.

Born in Korea, Katie joined her mother in the United States when she was 14. She was fluent in Korean, Japanese, and English, gifted in music and graphic arts, and adept in origami. She consistently earned scholarships and awards for excellence in the study of science and language. She also had a passion for helping others succeed, realizing her energy radiated outwards and charged those in her vicinity. Katie was a student in the Honors Program and was pursuing dual degrees in Environmental Science and Natural Resources. Her life was tragically cut short in her Junior year.

The Katie Bu Memorial Fund was created to realize her vision: "Today, mankind faces severe challenges in effective management of natural resources as well as restoring stability of natural processes. It needs strong, educated environmental minds that can awaken the public, develop solutions to existing problems, and prevent further destruction in the future."

The annual awards are earmarked specifically for undergraduates who are conducting and/or assisting in environmental work designed to solve problems, awaken the public, or contribute original scholarship. Appropriate activities include, but are not limited to: research, writing, fine arts, advocacy and organizing. Awards can be as high as \$300.

In April 2008 the first Katie Bu Memorial Awards were presented to four UCONN undergraduates – Heather Heenehan, Michael Sanders, Jonathan Glenn, and Martha Divver. Each student received \$300. Financial support for undergraduate students is limited and highly competitive. If you would like to support the Katie Bu Memorial Fund and its mission, please make your check to the University of Connecticut Foundation. In the memo line, please indicate Katie Bu Memorial Fund.



## **EEB GRATEFULLY ACKNOWLEDGES SUPPORT FROM THE FOLLOWING FRIENDS**

Dr. and Mrs. David Bingham	Dr. Jeremy Jay	Dr. Carl Schlichting
Dr. Catherine L. Cardelus	Dr. Cynthia Jones	Dr. Kurt Schwenk
Dr. George A. Clark, Jr.	Mr. Robert Kruger	Mrs. Judith H. Shaw
Dr. Zoe Cardon	Lucky Cricket Productions, LLC	Mr. and Mrs. John Silander, Sr.
Islay Jean Cowie	Mr. Jed Marshall In memory of Dr. Antoni Damman	Dr. and Mrs. John Silander, Jr.
Dr. Bernard Goffinet	Mattabeseck Audubon Society	Dr Susan Skomel
Ms Anne Griswold	Middletown Garden Club	Ms Anne Smets
Mr. Stephen Gundernatch	Ms. Courtney Murren	Mrs. Burma Stelmak In memory of Scott Stelmak
Dr. Charles Henry	New Hampshire Bird Club	Dr. and Mrs. Stephen Trumbo
Dr. Kent Holsinger	Dr. Jane O'Donnell	Dr. and Mrs. David Wagner
Mr. Steve S. Hunter	Ms Stella Ross	Drs. Kentwood and Marta Wells
Mr. and Mrs. Robert Jaeger	Dr. Carl Schaefer	

## **EDITOR'S ACKNOWLEDGEMENTS**

Welcome to the e-version of the EEB newsletter. As a cost-saving measure, we have taken our first foray into e-publication. It is our hope this format will allow us to bring you updates of EEB faculty, student, alumni, and staff accomplishments more frequently.

I would like to thank two of our student workers, Laura Funk and Nina Gonzalez, for their initial efforts to get the publication started. Without their help, you would not be reading this issue. Watch for updates and future issues posted to the EEB website.



## UNDERGRADUATE STUDENT HIGHLIGHTS

### 2008 University Scholars

Congratulations to **Benjamin Plourde** and **Michael Sanders**, two juniors doing research in EEB who have been selected as 2008 University of Connecticut University Scholars. This highly-selective program (only 14 students were selected this year) offers motivated and academically-talented students the flexibility to craft individualized plans of study during their last three semesters. With guidance from a faculty advisory committee, University Scholars select courses from across the university to carry out their own programs of study and engage in intensive, focused research or project work, culminating in a high-level piece of scholarship or creative accomplishment.

**Benjamin Plourde** -Biological Sciences and Physics  
Project Title: Life History and Wood Specific Gravity of Secondary Tropical Rainforest Trees  
Faculty Advisors: Robin Chazdon, EEB; Janine Caira, EEB; Susanne Yelin, Physics

**Michael Sanders** -EEB  
Project Title: Conservation Education Media Productions for the University Audience  
Faculty Advisors: David B. Miller, Psychology; Carolyn Lin, Communication Sciences; Kurt Schwenk, EEB

### Undergraduate Awarded Best Student Poster



EEB undergraduate **Leah Brown-Wilusz**, with co-author **Tobias Landberg**, won the prize for 'best student paper' in the Division of Vertebrate Morphology of the Society for Integrative and Comparative Biology, at its annual meeting in January. The title of Leah's poster was "Ontogenetic effects of hatching plasticity in spotted salamanders due to larval and egg predators." The poster was based on work Leah has done as part of her honors thesis. The prize is not only highly competitive and very prestigious, but Leah beat-out many excellent graduate student competitors!

When asked about the experience, Leah stated "working in the lab really helped me get a whole new perspective on science and research. It really gives me a lot more confidence in talking about my abilities in science."

Leah graduated in May and is now a graduate student in UConn's Teacher Certification Program for College Graduates (TCPCG). "I want to inspire and make kids love science as much as I do," she says. "I want kids to think it's cool to draw out the cell cycle and go down to the river and pull up a bunch of muck."



## UNDERGRADUATE STUDENT HIGHLIGHTS CONTINUED

### UNDERGRADS PRESENT THEIR RESEARCH

Many undergraduates at UCONN are currently engaged in research programs under the thoughtful guidance of faculty mentors. However, it is seldom that undergrads are given the opportunity to present their work in a public manner.

To provide such opportunities, the University of Connecticut Honors Program has sponsored for the past eleven years "Frontiers in Undergraduate Research," an exhibition in which undergraduates engaged in research from a variety of disciplines can present their work publicly. Ten EEB research undergraduates displayed their posters in the 2008 Frontiers in Undergraduate Research Poster Session held April 11-12, 2008 in the Wilbur Cross Building on the University's Storrs campus.

"Ontogenetic effects of hatching plasticity in Spotted Salamanders due to larval and egg predators"

**Leah Brown-Wilusz, EEB**

**Advisor: Carl Schlichting**

"A study of the use of carbon dioxide and light energy in desert and aquatic green algae of the class Chlorophyceae"

**Kristina Catanese, EEB**

**Advisor: Zoe Cardon**

"The evolution and systematics of Cicadas in the genus *Amphipsalta*"

**Colleen Chambers, Biological Sciences**

**Advisor: Chris Simon**

"*Spiniloculus* (Tetraphyllidea) diversity in Bamboo Sharks (Orectilobiformes: Hemiscyliiidea) of Australia and Borneo"

**Leah Desjardins, EEB**

**Advisor: Janine Caira**

"The influence of mating systems on copulatory organ and body size for six species of *Poecilia*"

**Martha Divver, EEB**

**Advisor: Eric Schultz**

"Conservation justice in metropolitan Cape Town – a study on the cape flats at the Macassar Dunes Conservation Area"

**J. Steven Ferketic, Biological Sciences and Political Science**

**Advisor: John Silander, Jr.**

"Tadpole schooling in *Leptodactylum insularum*"

**Kathy Les, EEB**

**Advisor: Kentwood Wells**

### 2008 SURF Grants

Congratulations to three undergraduate students doing research in EEB on being awarded a 2008 Summer Undergraduate Research Fund (SURF) grant. Each year competition for these grants is more competitive; this year there were over 90 applications, half of which were funded. This award covers 10 weeks of research activity and may be used for travel, supplies, equipment, and living costs associated with research. Students may use SURF grants to fund research conducted on a UCONN campus, at another location in the United States, or abroad.

**Laurel Dwyer** is a senior majoring in Environmental Sciences. She is working in Carl Schlichting's lab studying "The effects of predators on the plasticity of metamorphosis in salamanders."

**Rachel Krauss** is a student in the joint BS/MS program in Biodiversity and Conservation Biology. She is working in Chris Simon's lab studying "Phylogeny of the Australian Cicada genus *Gudanga* based on morphological and molecular data."

**Garrett Waldron** is a senior majoring in Biological Sciences. He is working in Andy Bush's lab studying "The Frasnian/Famennian extinction in New York."