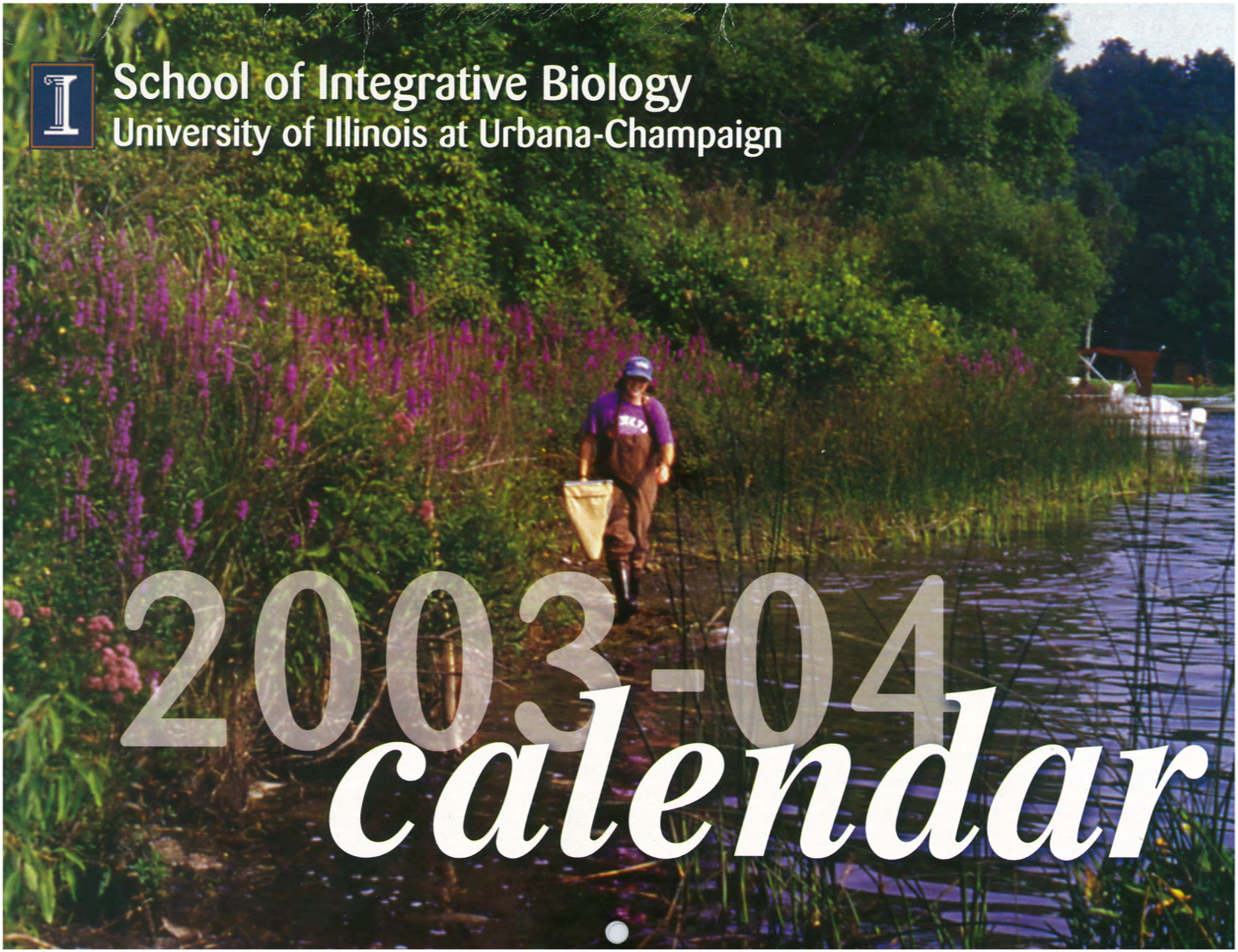

School of Integrative Biology
University of Illinois at Urbana-Champaign
2003-04
calendar

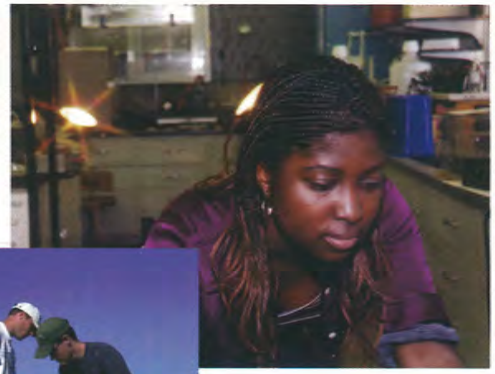
Photo by Corley Photography

The School of Integrative Biology

at the University of Illinois at Urbana-Champaign is dedicated to outstanding graduate and undergraduate teaching and research. Integrative biology is the study of the evolution and ecology of organisms and the mechanisms of plant and animal function. More than 50 faculty and affiliates in the School seek to understand how living things and their components interact at various levels—from molecules to global cycles. Some of their research is highlighted in this calendar.

The School is composed of the departments of Animal Biology, Entomology, and Plant Biology. In addition to departmental graduate programs, it sponsors graduate programs in Ecology and Evolutionary Biology and in Physiological and Molecular Plant Biology. The School also offers an exciting new undergraduate major in integrative biology that will prepare students for careers in fields as diverse as environmental law, medicine, and park or zoo management.

For additional information about the School, undergraduate and graduate degree opportunities, and research programs, please visit us at **www.life.uiuc.edu/sib/**



© 2003 School of Integrative Biology
University of Illinois at Urbana-Champaign

In Search of Tibetan Bumble Bees

The Tibetan Plateau of Sichuan, southwestern China, is sparsely populated by "cowboys," yaks, and the occasional Buddhist lama on a motorcycle. This "Heavenly Kingdom" is home to the protected giant panda, golden langur, snow leopard, and the most diverse and largest bumble bee fauna on earth. Our biologists, who are studying the systematics of bumble bees, recently collected 37 of the 45 known species in this region. They are constructing a worldwide phylogeny (classification and evolution) of the 240 species of bumble bees, which will lay the groundwork for comparative studies of mimicry and social behavior, including aggression, division of labor, and recruitment. For more information, see **www.life.uiuc.edu/scameron/**

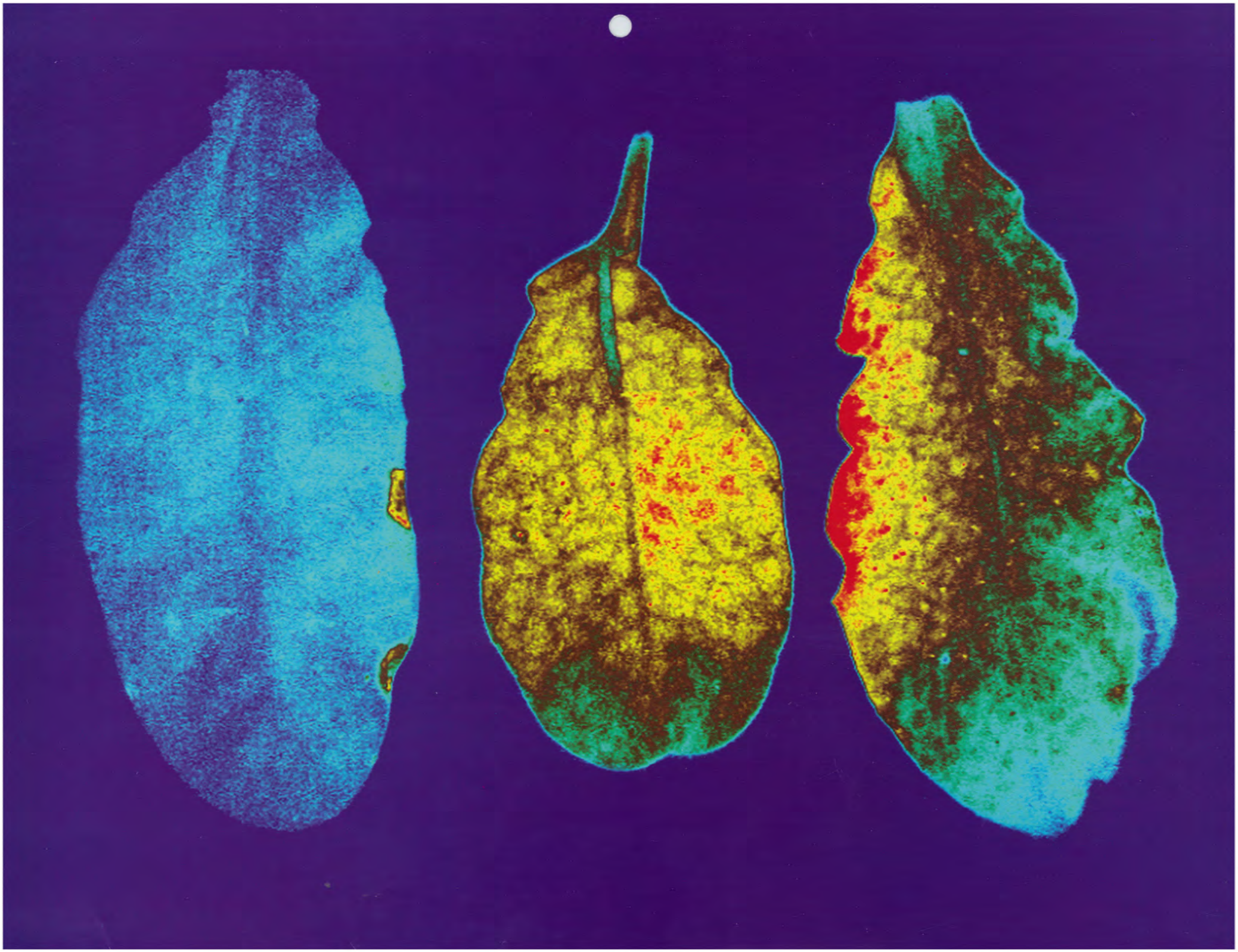
School of Integrative Biology
University of Illinois

SEPTEMBER 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 *Labor Day*	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Using recently collected bumble bees in a field of wildflowers in the Tibetan Plateau of Sichuan, China, Sydney Cameron, assistant professor of Entomology, is conducting molecular phylogenetic analyses of orchid bee, stingless bee, and bumble bee relationships. Cameron teaches one of the foundational courses in the new integrative biology major for undergraduates.

Photos by James B. Whitfield, University of Illinois



Chlorophyll Fluorescence from Intact Leaves

Our biologists have developed a novel fluorescence imaging system that provides detailed maps of the component reactions of photosynthesis across the surfaces of intact leaves. This system measures both chlorophyll and green-fluorescent protein fluorescence and is being used to study how herbivory by insects affects the photosynthetic competence of the remaining leaf tissue. Initial results indicated that photosynthesis is inhibited at substantial distances from the area of leaf tissue damage. By studying gene expression changes induced by insect herbivory, we can begin to understand the trade-offs between plant defense and photosynthesis, and ultimately to gain new insights into how plant-herbivore interactions may alter ecosystem production. For more information, see **www.life.uiuc.edu/delucia/**

School of Integrative Biology
University of Illinois

OCTOBER 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Evan DeLucia, professor and head of Plant Biology, doctoral student Jennie Tang, and other colleagues are measuring the expression of green fluorescent protein in the leaves of different transgenic Arabidopsis *plants to determine how gene encoding small unit rubisco responds to herbivory. DeLucia teaches a variety of plant ecology and environmental physiology courses as well as one of the new introductory integrative biology courses.*

Photos by Jennie Tang, University of Illinois

Otter Creek Wilderness

Atmospheric deposition of acidic compounds (commonly called acid rain), derived primarily from the combustion of fossil fuel, is a serious environmental problem in industrialized regions of the world. Acidic deposition can contribute to forest dieback and to the local extinction of fish populations and can have detrimental effects on soil fertility. Because of its unique geology, Otter Creek in West Virginia has been the most impacted by acid rain among watersheds in the Appalachians and has streams with a pH of less than 4. As a Class I Wilderness, Otter Creek is protected from the detrimental effects of air pollution by the Clean Air Act. Our biologists are investigating how air pollution affects forest ecosystems and how much reduction in emissions will be necessary for these ecosystems to recover. For more information, see **www.life.uiuc.edu/fitzhugh/**

School of Integrative Biology
University of Illinois

NOVEMBER 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22 *Thanksgiving vacation begins*
23	24	25	26	27 *Thanksgiving*	28	29
30						

Ross Fitzhugh, assistant professor of Plant Biology, is studying the effects of acidic deposition on soil fertility and forest health at the Otter Creek Wilderness on the Appalachian Plateau in West Virginia as a part of his research into the biogeochemistry of forest ecosystems in the northeastern United States. Fitzhugh teaches courses in biogeochemistry, plant ecology, and plant geography.

Photos by Ross Fitzhugh, University of Illinois

Climate Change

Does the earth's climate vary predictably at decadal to millennial time scales? Could the earth experience abrupt temperature fluctuations again as it did in the recent geological past? Would climatic warming lead to more frequent forest fires? How fast can trees migrate across heterogeneous landscapes? Knowledge of natural variability is essential to answer such questions. Because of the paucity of lengthy historic records, our ecosystem scientists use proxy records preserved in lake sediment to tackle these questions. Among recent discoveries, we found that extremely weak variations in solar output could cause hemispheric-scale climatic cycles, leading to pronounced changes in terrestrial vegetation, aquatic productivity, and nutrient cycling. For more information, see **www.life.uiuc.edu/hu/**

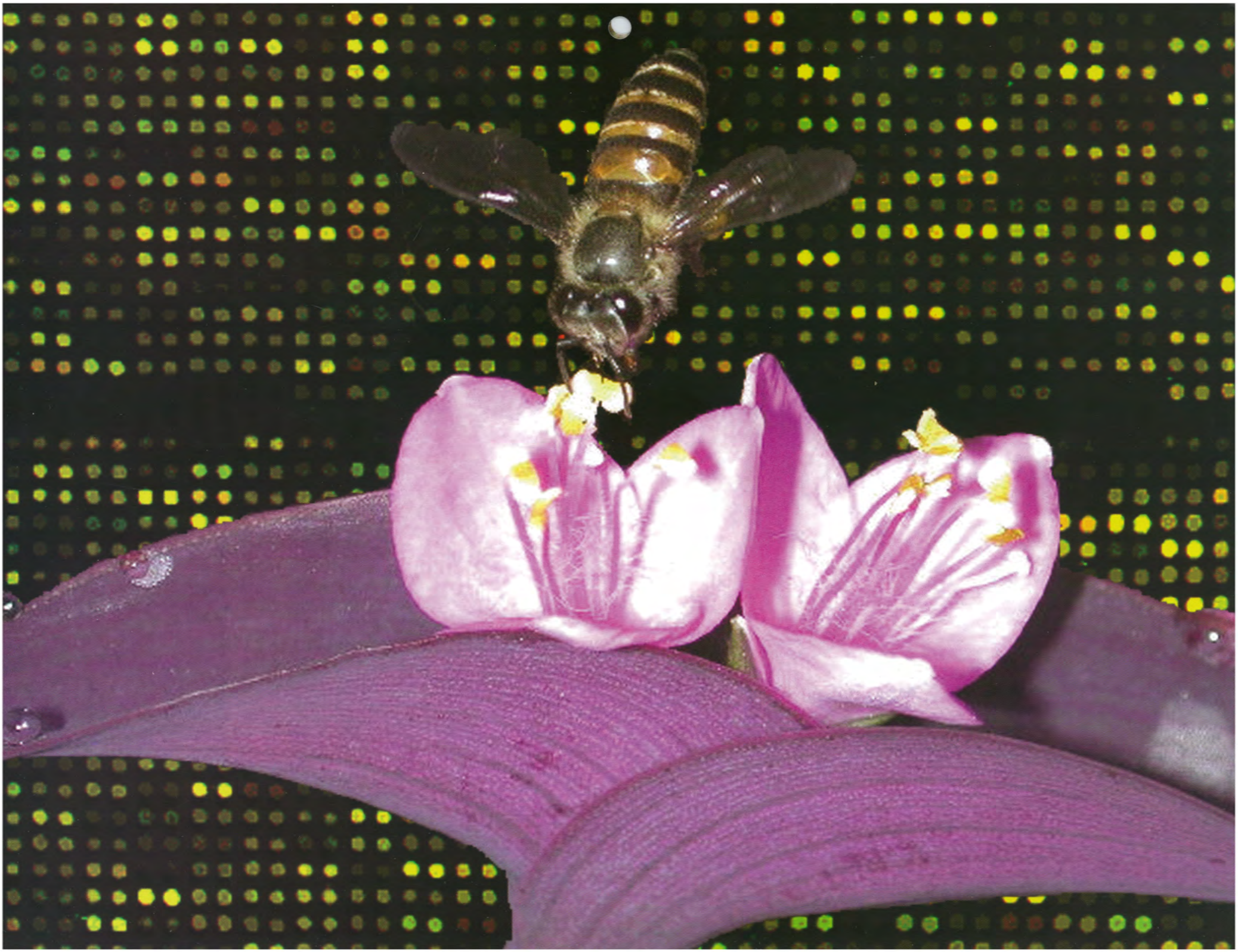
School of Integrative Biology
University of Illinois

DECEMBER 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 *instruction resumes*	2	3	4	5	6
7	8	9	10	11	12 *instruction ends*	13 *reading day*
14	15 *final exams begin*	16	17	18	19	20 *final exams end*
21	22	23	24	25 *Christmas*	26	27
28	29	30	31			

Feng Sheng Hu, associate professor of Plant Biology, works at the interfaces of biology, geology, and climatology and is interested in environmental dynamics at various spatial (from molecular to global) and temporal (from seasonal to millennial) scales. He and his lab work in Alaska, British Columbia, Minnesota, Michigan, and the Russian Far East. Hu teaches courses in introductory biology and ecosystem ecology.

Photos by Feng Sheng Hu, University of Illinois



Functional Genomics of the Honey Bee

The honey bee (*Apis mellifera*) is an interesting and important organism. Its powerful social instincts and unique behavioral traits make it particularly useful to neurobiologists. It is an important pollinator for the agricultural community. It is also relevant to human health as a model for antibiotic resistance, immunity, allergic reaction, development, mental health, diseases of the X chromosome, and longevity. Our biologists are currently sequencing the honey bee genome. To accelerate the molecular analysis of behavior in the honey bee, they have created expressed sequence tag (EST) and cDNA microarray resources for the bee brain. By comparing the results with other organisms, we are tentatively assigning molecular function and biological process to bee genes. For more information, see **www.life.uiuc.edu/robinson/**

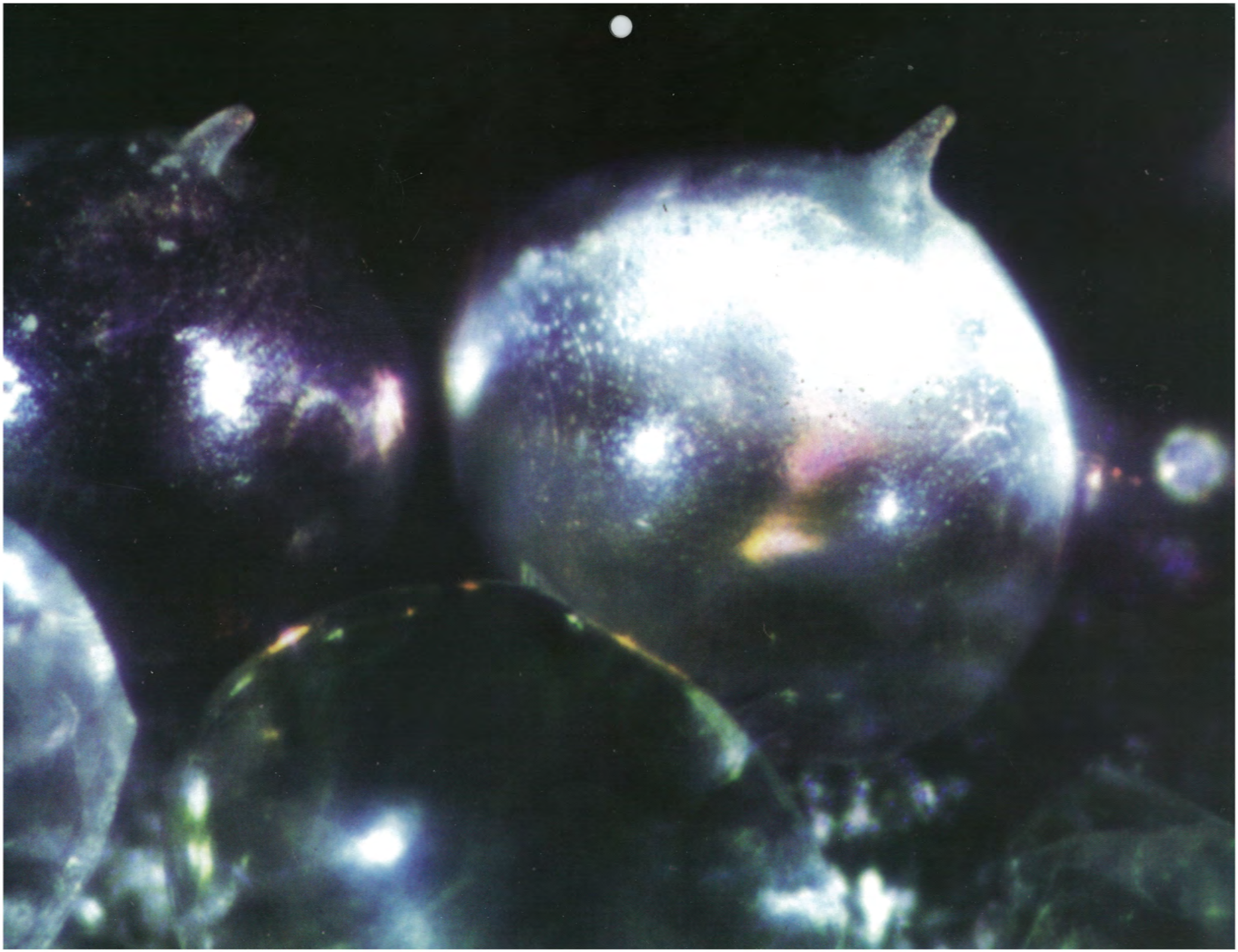
School of Integrative Biology
University of Illinois

JANUARY 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 *New Year's*	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19 *M.L. King Day*	20 *instruction begins*	21	22	23	24
25	26	27	28	29	30	31

Gene Robinson, G. William Arends professor of Integrative Biology, professor of Entomology, and director of the Neuroscience Program, heads a team of scientists working on the honey bee genome. To date, DNA microarrays have been fabricated with over 7000 EST cDNA clones. These microarrays have detected gene expression for 90% of Apis *cDNAs. Robinson teaches animal behavior, neuroscience, and molecular biology courses and a popular short course on bees and beekeeping.*

Photos by Charles Whitfield, University of Illinois



Salinity Sensitivity

Plants experience adverse environmental conditions continuously—drought, high light, temperature extremes, flooding, high salinity, viral, bacterial or fungal infections, or insect predation. As numerous as the combinations of stresses are, so are the adaptations. The common ice plant (*Mesembryanthemum crystallinum*) has evolved epidermal bladder cells (EBC), modified trichomes (surface hairs), into which salt is pumped and accumulated. These huge cells fill during salt stress and then protrude from the epidermis. EBCs cause light dispersion such that the plants seem to be covered by glittering ice crystals. The result is that the plants are extremely tolerant to high salt concentrations. Our biologists are studying this model plant to understand mechanisms employed by stress-tolerant plants. For more information, see **www.life.uiuc.edu/bohnert/**

School of Integrative Biology
University of Illinois

FEBRUARY 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29						

Hans Bohnert, professor of Plant Biology and Crop Sciences, is conducting eco-physiological analyses of Mesembryanthemum *to study the biochemical mechanisms that support the plant's survival at sodium concentrations exceeding seawater and to search for the underlying genes. Using insights from this model, Bohnert and his colleagues hope to understand salinity sensitivity in other species, and to use that knowledge in breeding stress-adapted crops. He teaches courses in plant biochemistry and molecular biology.*

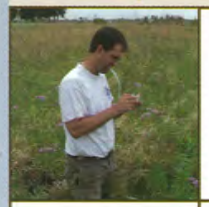
Photos by Pat Adams and Hans Bohnert, University of Illinois

Insects Alter Plant Chemistry to Find Mates

Each spring, amid the decaying rubble of prairie plants, emerging male gall wasps (*Antistrophus rufus*) find mates by capitalizing on changes in plant chemistry caused by their predecessors. Our biologists have found that, as adult gall wasps feed in warm weather, they change the ratio of plant chemicals so that males emerging after the winter season can recognize when they are on the right stems at the right time to find a mate. In essence, males smell their way to a mate through chemical cues off the surface of the plant. This study is providing new insight into plant-insect ecology in endangered native prairie habitats and shows that insects can influence plants for their own needs. For more information, see **www.life.uiuc.edu/hanks/**

School of Integrative Biology
University of Illinois

MARCH 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20 *spring break begins*
21	22	23	24	25	26	27
28	29 *instruction resumes*	30	31			

Larry Hanks, associate professor of Entomology, and John Tooker, doctoral student in Entomology, are studying these flea-sized gall wasps to understand how population control works for the wasps in natural prairie habitats. Hanks and his students study ecological interrelationships between plants, herbivorous insects, and their natural enemies in ecosystems dominated by humans. Hanks teaches courses in entomology and integrated insect pest management.

Photos by Larry Hanks and John Tooker, University of Illinois

Impacts of Argentine Ant Invasions

The Argentine ant (*Linepithema humile*) is a particularly damaging invading species in the United States. In addition to being a widespread urban and agricultural pest, the Argentine ant eliminates most native ant species in areas they invade. This loss of an entire assemblage of species has numerous direct and indirect effects on both vertebrate and invertebrate communities. Our biologists are also learning that interactions among a variety of invasive species may lead to even greater impacts. Particularly, habitat modification by one exotic species may facilitate the invasion, successful establishment, and spread of additional exotic species. Identifying these direct and indirect impacts of invaders is essential for prioritizing conservation efforts. For more information, see **www.life.uiuc.edu/suarez/**

School of Integrative Biology
University of Illinois

APRIL 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

The Argentine ant is being studied by Andrew Suarez, assistant professor of Animal Biology and Entomology. He uses comparative and experimental approaches to integrate the study of ecology, behavior, and evolution into the fields of conservation biology and invasion biology, with a particular emphasis on social insects. Suarez, who recently joined the faculty at Illinois, will be teaching animal behavior and a general education biology course.

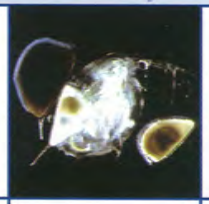
Photos by Marc Dantzker, Cornell University, and Neil Tsutsui, University of California-Irvine

Suspended Animation

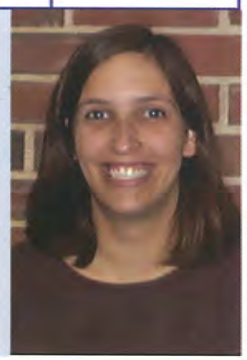
Microscopic animals (zooplankton) that inhabit lakes and ponds are a vital link in aquatic food webs. Many filter algae from the water and serve as prey for fish. Most zooplankton species are capable of making two types of eggs, those which hatch right away and those that enter a state of suspended animation called diapause. These diapausing eggs can accumulate in large numbers in the sediment at the bottom of the lake, where they can remain alive but asleep for centuries. These eggs can be removed from the sediment and hatched in the laboratory, where they provide a living link to the past. Our biologists use these eggs from the past to understand how populations and communities change over time. For more information, see **www.life.uiuc.edu/caceres/**

School of Integrative Biology
University of Illinois

MAY 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 instruction ends	6 reading day	7 final exams begin	8
9	10	11	12	13	14 final exams end	15
16 commencement	17 summer session I begins	18	19	20	21	22
23	24	25	26	27	28	29
30	31 Memorial Day					

Working with Carla Cáceres, assistant professor of Animal Biology, Kimberly Paczolt (senior in biology) collects zooplankton samples on Lake Michigan. Other research sites include Kickapoo State Park, near Danville, IL, and lakes near Kellogg Biological Station, Hickory Corners, MI. Cáceres teaches courses in limnology and environmental biology.



Photos by Alan Tessier, Michigan State University, and Allison Witt, University of Illinois

Detoxifying Insecticides

The black swallowtail caterpillar, *Papilio polyxenes*, feeds essentially on two families of plants—citrus (Rutaceae) and carrot (Apiaceae). These plants are rich in toxins, called furanocoumarins, which can cross-link DNA and interfere with transcription, causing mortality in organisms ranging from microbes to humans. Our biologists are studying how these caterpillars rely on enzymes called cytochrome P450 monooxygenases to detoxify these and other poisonous chemicals. Because humans also rely on P450s to detoxify plant-derived and synthetic poisons, understanding the evolution of structure and function of these enzymes in insects can provide insights not only into how hostplant specialization evolves but also into how insecticides that specifically target insects might be designed. For more information, see **www.life.uiuc.edu/berenbaum/**

School of Integrative Biology
University of Illinois

JUNE 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12 *summer session I ends*
13	14 *summer session II begins*	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May Berenbaum, Swanlund professor and head of Entomology, is interested in the chemical interactions between herbivorous insects and their hostplants, and the implications of such interactions on the organization of natural communities and the evolution of species. Berenbaum is author of several popular books on insects and founded the Insect Fear Film Festival. She teaches a variety of courses in entomology and a general education course on insects and people.

Photos by James Sternburg, University of Illinois

Palms in the Rain Forest

Palms are abundant in Neotropical rain forests where they can dominate the forest understory. Via their umbrella-like canopy structure, palms restrict seed arrival and limit seedling recruitment by the deep shade they cast. Thus palms limit the number of new individuals recruited into the tree community, as well as control their location. They provide specialized habitats for a limited number of species with particular traits governing seed dispersal and seedling survival, thus influencing the relative abundance of species, species composition, and number of species regenerating in the rain forest. Our biologists are examining how much of the understory is covered by dwarf palms and the extent to which they restrict seed arrival and limit seedling recruitment to understand the role of palms in controlling plant regeneration in the tropical rain forest.

School of Integrative Biology
University of Illinois

JULY 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4 *Independence Day*	5 *no classes*	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Carol Augspurger, professor of Plant Biology, and doctoral student Ophelia Wang are studying recruitment limitation by tropical palms. Augspurger conducts research in Costa Rica, Panama, Honduras, Ecuador, and Peru on phenology, seed dispersal, and seedling recruitment in undisturbed forests, and restoration ecology of degraded landscapes. She teaches plant, tropical, and field ecology courses at Illinois and at the Organization for Tropical Studies, Costa Rica.

Photos by Ophelia Wang, University of Illinois

The Spotted Antbird

The spotted antbird (*Hylophylax naeviodes*) is common in the forest understory in Central and South America. This species, along with many others in the Neotropics, lays a clutch of only two eggs, which is smaller than those produced by forest birds breeding at temperate latitudes. Our biologists have been studying the demography and ecology of tropical birds in Panama for over 30 years and recently completed a series of experiments in which clutch size of the spotted antbird was manipulated. Adults were able to feed all young while they were in the nest regardless of brood size. Rates of nest predation were independent of brood size. Survival rates of young during the post-fledging period, however, were less with the larger broods. Understanding the demography of these species is essential for their conservation. For more information, see **www.life.uiuc.edu/brawn/**

School of Integrative Biology
University of Illinois

AUGUST 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7 *summer session II ends*
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25 *instruction begins*	26	27	28
29	30	31				

Jeffrey Brawn, associate professor of Animal Biology and Natural Resources and Environmental Studies and Director of the Program in Ecology and Evolutionary Biology, is working with students and a large team of colleagues to understand the ecology and evolution of life histories in birds in the tropics and the Midwestern United States. Brawn teaches courses in statistical ecology and fish and wildlife ecology.

Photos by Ela Hau, Princeton University, and Jeffrey Brawn, University of Illinois

Effects of Browsing

Although the idea that plants can benefit from being eaten is counter-intuitive, biologists have found that deer and elk browsing on the montane wildflower scarlet gilia, in which 95% or more of the aboveground biomass is removed, actually increase plant reproductive success. Browsing results in a two- to three-fold increase in both the number of seeds produced and the number of seeds sired. Long-term studies are assessing this compensatory response at ecological, evolutionary, genetic, biochemical, and physiological levels. Gaining an understanding of the genetic basis of this compensatory response will be of interest to agriculturists, who might incorporate these genetic traits into crops, and evolutionary biologists, who might gain an understanding of how such mutualisms evolve. For more information, see **www.life.uiuc.edu/paige/**

School of Integrative Biology
University of Illinois

SEPTEMBER 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6 Labor Day	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Ken Paige, professor and head of Animal Biology, is conducting long-term studies in the San Francisco Peaks region of north central Arizona. His scientific approach combines field, greenhouse, and laboratory components to understand the phenomenon of overcompensation by plants. Paige teaches environmental, conservation, ecological, and evolutionary biology courses.

Photos by Ken Paige, University of Illinois

Mausica River, Trinidad

Genetic variation among individuals of the same species has profound implications for human health, agricultural practice, and the conservation of biodiversity. Genetic variation among humans leads to differential susceptibility to disease and differential response to therapeutic drugs. Maintaining genetic diversity within agricultural species promotes resistance to disease, pests, and environmental stress. The health of wild plants and animals also depends upon genetic variation, because it allows species to resist disease, avoid inbreeding, and adapt to changing environmental conditions. Our biologists use a combination of field studies and laboratory genetic analysis to determine how genetic variation is maintained, and to understand the consequences of loss of variation. For more information, see **www.life.uiuc.edu/kahughes/**

School of Integrative Biology
University of Illinois

OCTOBER 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Kim Hughes, assistant professor of Animal Biology, is studying maintenance of genetic variation, effects of inbreeding, and genetic and evolutionary causes of aging. Members of her lab are conducting a study of genetic variation in wild populations of guppies in Trinidad, where these small freshwater fish are subject to varying physical environments, predation risk, and food availability. Hughes teaches general genetics, evolutionary biology, and ecological genetics.

Photos by Corley Photography and Kim Hughes, University of Illinois

Tangled Roots

Mangrove forests are intertidal, tree-dominated communities characteristic of tropical coasts. A biocomplexity grant from the National Science Foundation has made it possible for our biologists to study a mangrove ecosystem off the coast of Belize. Twin Cays, just inside the Barrier Reef, is an archipelago of peat islands. The peat goes down about 10 meters, defying the rise in sea level for 10,000 years. The peat is largely partly decomposed fine roots of the red mangrove (*Rhizophora mangle*). The island was constructed of, by, and for the trees that live on it. We are studying the functional relationships among microorganisms, geochemical processes, hydrology, and nutrient availability in mangrove forests, and how these relationships interact to generate biological complexity. For more information, see **www.life.uiuc.edu/cheeseman/**

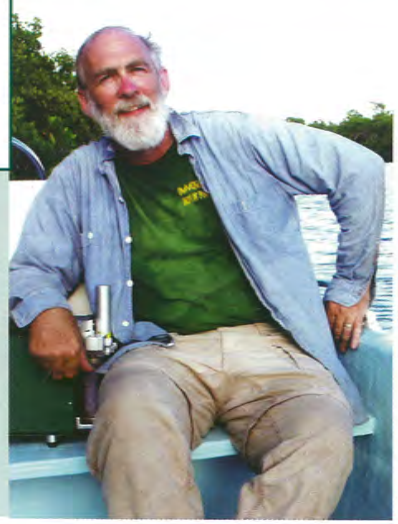
School of Integrative Biology
University of Illinois

NOVEMBER 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20 *Thanksgiving vacation begins*
21	22	23	24	25 *Thanksgiving*	26	27
28	29 *instruction resumes*	30				

John Cheeseman, professor of Plant Biology, is a principal investigator on this project and is concentrating on mangrove photosynthesis and the allocation of products to tannins and other phenolics. Carol Shearer, professor of Plant Biology, is also a principal investigator and is studying the systematics and ecology of wood-decaying fungi. Cheeseman helped develop one of our new foundational courses for the integrative biology major and also teaches courses in plant biology and ecology.

Photos by John Cheeseman, University of Illinois

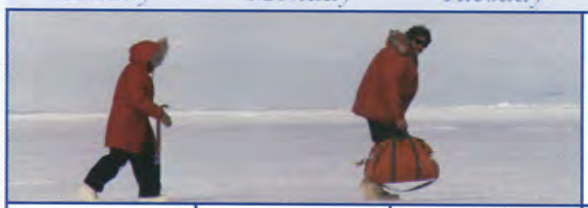


McMurdo Sound, Antarctica

The seawater of McMurdo Sound, the southernmost limit of marine life, is perennially at or near its freezing point of -2°C, and full of ice crystals. Marine bony fishes have a higher freezing point than seawater and should readily freeze and die in such frigid water. Cenozoic sea-level glaciation in the Antarctic and Arctic had driven the evolution of novel antifreeze proteins in a number of fish groups, which enabled them to avoid freezing and to colonize the otherwise uninhabitable polar marine environments. The study of these unique ice-binding proteins widens our understanding of adaptational physiology to extreme cold, novel protein function, molecular mechanisms of new gene genesis, and convergent evolutionary pathways. For more information, see **www.life.uiuc.edu/animalbiology/cheng.htm**

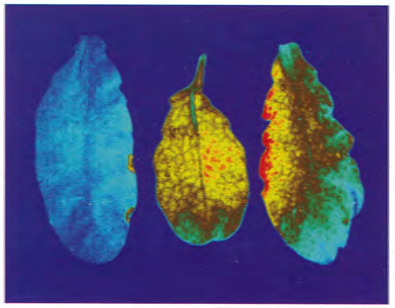
School of Integrative Biology
University of Illinois

DECEMBER 2004

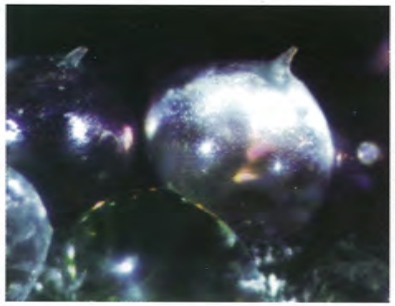
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10 instruction ends	11 reading day
12	13 finals begin	14	15	16	17	18 finals end
19	20	21	22	23	24	25
26	27	28	29	30	31	

Kevin Hoefling, research diver, Nelyn Soto, biology masters student, and Chris Cheng, assistant professor of Animal Biology, stand at the ice edge of McMurdo Sound, Antarctica. Cheng and Art DeVries, professor of Animal Biology, annually conduct field research on freezing avoidance and antifreeze proteins of Antarctic fishes at the NSF McMurdo Research Station. Both Cheng and DeVries teach physiology and evolutionary biology courses.

Photos by C.-H. Cheng and Art DeVries, University of Illinois

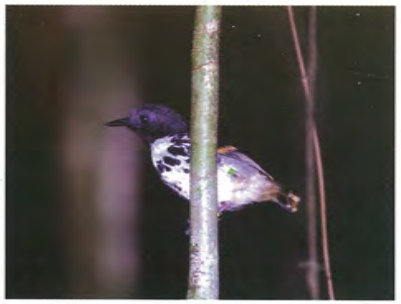















This calendar is a publication of the School of Integrative Biology, University of Illinois at Urbana-Champaign, and highlights some of our outstanding programs and faculty.
Editor: Jana Waite
© 2003 School of Integrative Biology.

School of Integrative Biology
University of Illinois
286 Morrill Hall
505 South Goodwin Ave.
Urbana, IL 61801 USA

phone: 217/ 333-3044
fax: 217/ 244-1224
email: sib@life.uiuc.edu
www.life.uiuc.edu/sib/