Wichita State to host Science Olympiad National Tournament

Almost 2,000 teenagers cheered on by 3,000 teachers, family members, volunteers and officials will accomplish feats of science using pulleys, wheels, life models, and chemicals during the 2007 Science Olympiad National Tournament. Wichita State and the Fairmount Center for Science and Mathematics Education are hosting the “Soaring with Science” event May 17-20. A total of 120 middle and high school teams will compete in 46 events.

Sometimes described as “academic track meets,” Science Olympiads are intellectually challenging interscholastic competitions between teams of student scientists. Events in biology, chemistry, earth science, physics and engineering take place in laboratory, exhibition, and TV show formats. The young scholars have fun, and they gain many skills through their preparation and participation.

“Students not only learn about science, but they experience critical thinking, creativity, logic, and teamwork,” said Harry Gregory, the national tournament director. “These are skills scientists use every day.”

Junior high and high school science students across the nation began preparing for the competition in September. Coaches assign two students to an event, sometimes in the most unlikely of pairings. For example, a coach may match a popular, outgoing student who has strong analytical and math skills with a shy student who has strong communication and planning skills.

Formerly a teacher at Kapaun Mt. Carmel Catholic High School, Gregory has helped coach science students at the state, regional and national levels.

“Successful coaches are able to discern students’ abilities and how they may complement weaknesses in others,” said Gregory. “Part of being a successful scientist is the ability to work as part of a team, particularly with members from diverse backgrounds.

“A synergy is formed.”

Teamwork is particularly helpful in events such as “Write it Do it” where participants build something sight unseen based on their partner’s communication skills. One team member writes a description of a structure and the other attempts to build it using only the written description.

The program can also influence a student’s career choice.

Kate Brane, a graduate student in

Biological sciences faculty members Bin Shuai, left, and Christopher Rogers discuss research on fitness maximization in wintering birds at WSU’s biological field station.

Biological field station gets NSF grant

WSU’s biological research station, a 330-acre tract of land that affords opportunities for lessons in prairie rebirth, aquatic and bird life and other studies, will eventually get a permanent field station building, thanks to a major federal grant.

The National Science Foundation recently awarded a $240,000 grant to build an approximately 3,000-square-foot laboratory and classroom building at WSU’s Ninnescah Field Station and Experimental Tract. NSF grants are highly competitive, and the WSU request was funded in full, according to WSU officials.

“This facility will greatly enhance


Dear alumni and friends,

One of the experiences I have most enjoyed as professor and dean is seeing students achieve their goals and move on in their careers. It is at once bittersweet and uplifting, particularly when they are students I have known well and have mentored.

The feelings are the same when colleagues move on, especially when they are people with whom I have worked with for several years. Our office staff configuration is in the midst of a sea change.

Last December, Gerry Lichti retired after 25 years as assistant dean of the college. This February, Gary L. Miller, vice president for academic affairs and research, named Sharon Iorio, associate dean, to be dean of the college of education, beginning July 1, and announced that Keith Pickew, associate dean, was selected to be associate vice president, beginning June 18. In March, Carrie Wyatt, our office receptionist and college scholarship coordinator, accepted a job offer as special projects assistant for the Self-Help Network for Community Support and Research. Each of these individuals has served the college well and we are a better unit within the university because of their service. Their contributions created a strong platform on which my next colleagues may build and succeed in moving the college forward.

To Gerry, Sharon, Keith, and Carrie, I give my appreciation for your service and collegiality. I thank you for supporting me as your dean, and send you forth with best wishes for your new endeavors.

Sincerely,

William D. Bischoff

Dean

Enclosed is a partial listing of the species seen at the Ninnescah River for the current year. Many faculty, graduate students, and undergraduates used the field station to conduct long-term research projects, which have included studying plant-herbivore interactions, avian winter ecology, the incidence of West Nile virus in birds, sedimentation dynamics, and prairie restoration and recovery from overgrazing. High school students will also use it to research open-ended projects in biology, such as stream sampling.

Mark Schneegurt, associate professor, and Leland Russell, assistant professor, both in biological sciences, are co-investigators for the grant.

—Compiled by Amy Geiszler-Jones and Cheryl K. Miller

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Professors keep it real with evolution

Students enrolled in Biol 646P: Evolution during the fall semester experienced what most college students don’t: a class focusing entirely on the subject of evolution.

"It's unusual for universities to have a course devoted to evolution," said Niall Shanks, Curtis D. Gridley Professor in the History and Philosophy of Science. "It's unusual to think that students pick it up as they go along in other classes. We're not convinced of that. If they're not focused on it, they're not getting it." This point was clearly demonstrated on the first day of class when Shanks gave them an informal oral quiz. Even though the students had completed 12-18 credit hours of biology and other science courses such as chemistry, none of them answered the question correctly.

"Often students have very misleading ideas of what evolution is," said Karen Brown, associate professor of biological sciences. "One very important lesson they learned from this class is that evolution means to a biologist." Zach Farber, senior, biological sciences, agrees. "We believe the class made the principles of evolution much more clear. Even for a group of students majoring in biology, we found that there were many concepts that we did not fully understand," he said.

As team teachers, Shanks and Brown designed the course to be reading and writing intensive, and also included speaking components. Following lectures and readings, students participated in discussions that started with Charles Darwin’s writings on religion. Darwin was deeply conflicted between his religious beliefs and the theory of evolution he originated.

Next the class studied Darwinian principles and medical evolution, and how evolution is evident in contemporary health issues. Cancer, for example, is difficult to treat because the population of cancer cells in the body is prone to mutation. This enormous genetic variation can render chemotherapy ineffective because some cells are able to detoxify the harsh chemical environment meant to kill them. Class content then accelerated into other scientific areas of inquiry.

"We went into classic population genetics, how natural selection works with genetic drift, and the evolution of cooperative behavior and altruism," Brown said.

"To discuss evolutionary biology in a meaningful way requires the acquisition of some serious knowledge in genetics, developmental biology, ecology, molecular biology, and other areas of scientific inquiry," Shanks said.

The focus of the course is to remain firmly centered on the academic literature and studies supporting evolutionary theory. "We're not interested in getting students to come out and say, 'I'm a true believer in evolution,'" said Shanks. "We're interested in getting them to say, 'I now understand what it's all about.' Based on student reactions, they seem to have met their goal.

"An understanding of the theory of evolution is paramount for every individual studying biology because it reveals so much about the workings of the biological world and it is interconnected with a number of disciplines," said Farber.

Shanks and Brown will offer the course again for the spring 2008 semester.

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Gerry Lichti retire

After providing 25 years of service to Wichita State and advising thousands of students, Gerry Lichti, assistant dean, retired in December. His wife, Treva, an academic advisor for the school of nursing, also retired. Lichti's plans are to travel, garden, read and continue volunteer activities with organizations such as NAMI-Kansas, the state affiliate of the National Alliance on Mental Illness.

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Gerry Lichti

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Gerry Lichti

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Lichti retires

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Rogers joins the search for ivory-billed woodpeckers

Christopher Rogers, biological sciences, has joined the efforts to find the ivory-billed woodpecker, Campephilus principalis, a bird species previously believed extinct. He searched the ancient swamps along the Choctawhatchee River in the Florida panhandle in January.

“This is exciting work and there could be a huge payday. I am thankful for the dean’s office and the biological sciences department for supporting this historic search,” said Rogers.

“This is ‘big science,’ as big as it gets,” he said in reference to the putative rediscovey of the species in Arkansas in 2004 and the recent Florida claimed sightings. The last widely accepted documented sighting occurred in 1944 in what is now known as the Tensas River National Wildlife Refuge in northeastern Louisiana.

In 2005, Auburn University professor Geoff Hill organized a team to search for and document what scientists believe is a small population of ivory-billeds scattered among thousands of acres of swamps in the Florida panhandle. Researchers from Auburn, the University of Windsor, Cornell University, and Wichita State have spent thousands of hours documenting evidence of the birds, including sightings and audio recordings.

“These are elusive birds. Knowledgeable people have seen them,” Rogers said, alluding to the species’ known wariness and similarity with the smaller, common pilate woodpecker (Dryocopus pileatus). The Auburn-led search team has observed birds they identified as ivory-billeds 14 times and heard sounds matching historical descriptions of their calls and drums on 41 occasions.

Getting a clear photograph, though, has been problematic. The ivory-bills do not tolerate human presence.

“We believe that through natural selection the woodpeckers have become genetically predisposed to wariness,” Rogers said. “Their major source of mortality came from collectors who shot them for use as museum specimens in Europe and the United States in the nineteenth and early twentieth centuries.”

The birds’ guardedness, however, is only partly responsible for their survival.

The bottomland old-growth swamp forest habitat the ivory-bills favor is uninviting and arduous to maneuver. During the warm season, it is home to mosquitoes, venomous copperhead snakes and alligators. Year-round, the water level changes frequently, and cypress knees poke through or lie submerged just below the swamp’s surface, making it difficult to traverse by foot or by kayak. The leafy, wooded habitat obscures fields of view and provides ample hiding places for the birds, most often seen as they fly through the forest, and usually at a distance.

To improve their chances of getting photographs, scientists placed 25 digital time-lapse cameras in various transects of the study area. The cameras sit opposite of suspected roosting cavities and feeding areas and are set to take a photograph every two seconds. Wichita State loaned six of these cameras. Technicians check and service them daily along with cameras from Auburn and Cornell.

Rogers is optimistic about getting the valued picture.

“It’s a matter of time until the photograph is taken,” he said.

Elliott School hires Kansas Health Foundation Distinguished Chair of Strategic Communication

Described as a visionary, international scholar and award-winning teacher, Deborah Ballard-Reisch will join the Elliott School of Communication at Wichita State in August as the Kansas Health Foundation Distinguished Chair of Strategic Communication.

“We are delighted that Dr. Ballard-Reisch has accepted our call to fill the first endowed chair position in Fairmount College,” said William Bischoff, dean.

“Her expertise and demonstrated success with students and the community nicely dovetails with the college and the Elliott School’s shared goal of preparing students to work in the business, government, education, law, and social service sectors.”

Ballard-Reisch has been an international educator for 20 years, teaching and working with judges and health professionals from more than 20 countries. She has taught throughout the U.S., and in Canada, Kazakhstan, Kyrgyzstan, Mongolia, Russia, and Zimbabwe. Her areas of specialty include judicial education, communication, leadership, gender, culture, and advocacy.

“What was most attractive to me about this position was the Elliott School’s integrated approach to communication combined with the Kansas Health Foundation’s commitments to improving the health of all Kansans and making Kansas the best state in which to raise a child,” said Ballard-Reisch.

“For me, this is an unbeatable combination of community-focused scholarship, philanthropic vision, and community partnerships that will significantly enhance the lives of Kansans well into the future.”

“Put simply, Deborah’s a visionary who understands how to successfully build an academic enterprise that seamlessly connects teaching, research, and service around community engagement in an urban context,” said Susan Husman, director of the Elliott School and associate professor of communication.

“Her track record demonstrates how well she collaborates with students, colleagues and community groups to produce project after project that is rigorous for the academy, relevant to the public, and timely.”

For example, Ballard-Reisch was co-architect of the University of Nevada, Reno’s strategic plan that initiated its School of Public Health. The school is grounded in an ecological approach to health, emphasizing communication, ethics, a lifespan approach, and culture and diversity.

Marni Vilet, president and CEO of the Kansas Health Foundation was especially pleased with Ballard-Reisch’s hiring.

“We are so excited to have Deborah as the first Kansas Health Foundation Distinguished Chair in Strategic Communication,” said Vilet. “She is such a wonderful fit and her background in both public health and communication is a rare and valued combination. We can’t wait to see the impact she will have not only on Wichita State, the Elliott School and its students, but also on the Foundation’s work to improve the health of all Kansans.”

In August 2005, the Kansas Health Foundation gave $2 million to the Wichita State University Foundation to fund the Kansas Health Foundation Distinguished Chair of Strategic Communication. This is the largest gift endowed to support faculty in the history of Fairmont College. The combined monies from the gift’s endowment earnings and the State of Kansas will also provide faculty development funding for Ballard-Reisch, and for a designated Kansas Health Foundation Faculty Fellow in the Elliott School. The funds also make possible the hiring of a Kansas Health Foundation graduate teaching assistant and the creation of a visiting professor lecture series in the Elliott School.

Ballard-Reisch holds three degrees in communication: a doctorate and a bachelor of arts from Bowling Green State University, and a master of arts from The Ohio State University.
Assistant Professor George Dehner is keenly interested in the diseases of history, most notably the Swine Flu. It’s not just for pigs. Humans are susceptible to swine influenza, and pigs are susceptible to human and avian influenza. As concerns mount regarding potential Avian Flu pandemics, scientists will be watching hog populations and their health.

“The Swine Flu was influenced by a book he read during his master's program at the University of Denver—Alfred Crosby's Ecological Imperialism.” Another of Crosby's books, America's Forgotten Pandemic, focused on the Spanish Flu of 1918 that killed millions of people worldwide, and coincidentally, was published as this year's Avian Flu pandemic is still raging.

Dehner says his research has implications for future historians because it is applicable to discussions about today's Avian Flu and national and international responses to possible pandemics. He is concerned as a historian that there has been institutional amnesia with proper response in the way of public health measures.

“We have such marvelous benefits from public health, and it’s worryingly under-funded and ignored until there’s some sort of disaster,” he said. “It is unlikely that there will never be another influenza pandemic.”

National Tournament cont’d from page 1

Soaring with Wichita State

Wichita State has a long history of hosting the Kansas Science Olympiad, the state level competition from which first place winners go on to compete nationally. Wichita State hosted the first state tournament in 1986, and the 20th consecutive tournament took place this April, according to Greg Novacek, director of the Fairmount Center and director of Kansas Science Olympiad. Kansas ranks annually in or near the 10th spot in the country for the number of schools participating in Science Olympiad.

“This think says a lot about our teachers and the commitment they have to promoting science,” Novacek said. This long experience in hosting the Kansas competition helped secure WSU’s bid for the 2007 national event. The suggestion to make a bid emanated from a well-placed nudge by a former Science Olympiad participant, Jason Bennett, a Fairmount College alumnus, participated in Science Olympiad when he was a student at Goddard High School and then went on to compete in the national tournament. When he was Student Government Association president at Wichita State, he suggested to WSU President Donald Beggs that Wichita State should host the Science Olympiad National Tournament.

“Dr. Beggs thought this was a good idea, so word filtered down that we should make a bid,” said Novacek. “We submitted a proposal three years ago and the rest, as they say, is history.”

Event sampler:

• Awesome Aquifer—students design and build a model aquifer they use to demonstrate and explain groundwater concepts.
• Fermi Questions—teams develop a rough estimate of quantity in power(s) of ten.
• Don’t Bug Me—students show understanding of taxonomic keys, natural history and geographic distribution.
• Chemistry lab—teams conduct lab work related to gases and nuclear chemistry.
• Physics lab—teams display laboratory skills related to rotational motion.

Supporter sampler:

• Abbott
• Barton Solvents
• BG Products
• Boeing
• Fairmount College
• LSI
• Lubrication Engineers
• Vulcan Chemicals

For more information, visit the Science Olympiad National Tournament Web site: http://webs.wichita.edu/sos

Paul Magelli, former Fairmount College dean, to establish the Center for Women’s Studies at Wichita State.

She earned two major recognition awards: the 1966 Regents Award for Excellence in Teaching and the 1994 Laura Cross McMullen Distinguished Service Award. Also a photographer, she co-authored Standing Proudly on the Hill, a pictorial history commemorating WSU’s centennial. Memorial donations may be made to the Dr. Geraldine E. Hammond Scholarship Fund, c/o WSU Foundation, 1845 Fairmount, Wichita, KS 67208-0002.

Eibel Rogers, 83, assistant professor emeritus of math, died December 26. She taught at WSU from 1958 to 1990.

Hai Rothman, 48, former director of the public history program, died February 25. He taught at Wichita State five years before leaving to become chair of the history department at the University of Nevada, Las Vegas.

In memoriam

Geraldine Hammond, 97, professor emeritus of English, died January 14. She graduated from the University of Wichita in 1931 with a degree in English language and taught at her alma mater (now Wichita State) from 1932 to 1978. She also held advanced degrees in English from the University of Kansas and Colorado University. An advocate for women's equity, she was the first female cheerleading student for WSU, championed faculty rights for women, and in 1970 worked with...
Grant mystery solved

George Platt, associate professor emeritus, Hugo Wall School of Urban and Public Affairs, has laid to rest a long-standing mystery: which WSU college received the first grant, Fairmount or engineering?

We did.

In the fall of 1906, William H. Isely, dean and professor of history and political science, received a grant from the Carnegie Institute to study “the strife in Kansas in 1854-1859,” the “Bleeding Kansas” period. Isely used the grant money for travel expenses to Washington D.C. on a trip between semesters in order to review records of the Library of Congress and several other agencies.

Isely’s research was published as “The Sharps Rifle Episode in Kansas History,” in the April 1907 issue of the American Historical Review.

Student accolades


The Society of Independent Professional Earth Scientists Foundation awarded eight scholarships in a national competition. Three Wichita State geology students won these awards: Daryl A. Lederhos and Michael B. Lichtenwalter, both graduate students, and Renee Vardy, undergraduate.