Campus prepares for possible avian flu outbreak

Flu fighter Kip Mecum, director of emergency planning in the Division of Public Safety, leads the Infectious Disease Work Group, which is preparing action plans for the campus in the event that the avian influenza virus becomes transmissible between people.

Federal, state and local officials, as well as peer universities, are developing similar plans to monitor and control a possible outbreak of the disease among humans.

Research News

### Rare Chinese frogs communicate by means of ultrasonic sound

By Jim Barlow

News Bureau Staff Writer

First came word that a rare frog (Amolops tormotus) in China sings like a bird, then that the species produces very high-pitch ultrasonic sounds. Now scientists say that these concave-eared torrent frogs also hear and respond to the sounds.

The findings, to appear in today’s issue of Nature, represent the first documented case of an amphibian being able to communicate like bats, whales and dolphins, said corresponding author Albert S. Feng, a UI professor of molecular and integrative physiology.

Feng, a researcher at the Beckman Institute for Advanced Science and Technology, was introduced to the frog species by Kraig Adler, a Cornell University biologist who had heard about it while conducting a survey of amphibians in China. Feng continues to study frogs and bats to understand how the brain processes sound patterns, especially in sound-cluttered environments in which filtering is required to allow for communication.

Feng and colleagues previously reported that males of the species make these high-pitched bird-like calls, with numerous variations in terms of harmonics and frequency sweeps. Some sounds exceeded their record-keeping device’s maximum capability of 128 kilohertz. Human ears hear sound waves generally higher than 20 kilohertz. The frogs studied inhabit Huangshan Hot Springs, a popular scenic mountainous area, alive with waterfalls.

“Nature has a way of evolving mechanisms to facilitate communication in very adverse situations,” Feng said. “One of the ways is to shift the frequencies beyond the spectrum of the background noise.Mammals such as bats, whales and dolphins do this, and use ultrasound for their sonar system and communication. Frogs were never taken into consideration for being able to do this.”

Adler had drawn attention to the species because the frogs do not have external eardrums, raising the possibility of unusual hearing abilities. “Now we are getting a better understanding of why their ear drums are recessed,” Feng said. “Thin eardrums are needed for detection of ultrasound. Recessed ears shorten the path between eardrums and the ear, enabling the transmission of ultrasound to the ears.

To test if the frogs actually communicated with their ultrasonic sounds, Feng and colleagues returned to China with their recording equipment and a special device that allowed playback of recorded frog calls in the audible or ultrasonic ranges. They observed eight male frogs under three experimental conditions (no sounds, playback of calls containing only audible parts and playback of just ultrasonic frog calls).

During playback, the researchers watched for evoked calling activity in which a male frog begins calling upon hearing calls from other frogs in the area. Six frogs responded to ultrasonic and audible sound ranges, with four responding with calls in both ranges. One frog called 18 times to ultrasonic calls, including four very telling rapid responses, Feng said. Another frog did not respond to ultrasonic stimulation but produced calls 18 times to an audible prompt.

Clearly, Feng said, some of the frogs indeed communicated ultrasonically. They See FROGS, Page 13

By Shartia Forrest

Assistant Editor

Campus officials hope the next flu season flies by as relatively uneventfully as this winter’s season has done. However, amid growing concern about the potential spread of the H5N1 avian flu virus among bird populations worldwide, communities throughout the U.S., including the UI’s Urbana campus, are preparing comprehensive action plans to mitigate the effects of a potential outbreak of the disease among humans.

A case of naturally occurring virus among birds, the H5N1 virus usually does not infect humans. Although the virus has not been detected among birds in the U.S. yet and is not expected to migrate to North America until fall or later, it is endemic among flocks in Africa, Europe, the Near East and South-east Asia.

Following a directive from the U.S. federal government, state and local officials, health-care facilities and emergency services agencies are preparing pandemic response plans in the event the H5N1 virus mutates to a form capable of sustained human-to-human transmission and becomes a global public health concern. Peer universities such as Pennsylvania State University, Stanford University and the University of Minnesota have developed or are developing response plans for their campuses.

At the UI’s Urbana campus, the Infectious Disease Work Group is updating the Infectious Disease Response/Incident Action Plan, a comprehensive program of monitoring, communication and containment protocols that UI officials would deploy in accordance with directives from state officials, including the Illinois Department of Public Health, emergency services agencies and Carle Foundation Hospital, the hospital designated by IDPH to coordinate responses to medical crises in Region 6 of Illinois.

The current draft UI plan outlines protocols that would be undertaken in three phases: if a confirmed case of human-to-human transmission of avian flu were to occur anywhere, if a suspected or confirmed case appeared in the contiguous United States or in the Midwest, and if a case were confirmed on campus and had the potential to disrupt normal university operations, such as classes, administrative functions and events.

Kip Mecum, chair of the work See AVIAN FLU, Page 13

Campus prepares for possible avian flu outbreak

Focusing on value

A new public campaign seeks to refocus Americans on the value of higher education.

Managing menus

Student-run restaurants provide dining alternatives for campus community.

On the Web

www.news.uiuc.edu/ii
New facility to feature senior design projects

Idella Albro-Wrightinger, 80, died Feb. 10 at 2306 S. University Ave. in Champaign. She was a 14-year employee of Carle Foundation Hospital and later worked in the business office at Carle Hospital for nine years, retiring in 1986.

Betsy Daniels Davis, 51, died Feb. 27 at her home in Bloomington. She was an elementary school teacher for 17 years, retiring in 1983 as a research scientist in botany at the University of Illinois Botanic Garden.

Betty Caroline Denker, 78, of 5016 S. University Ave. in Champaign, died Feb. 10. She retired in 1982 from the Champaign County Hospital. She was a 37-year employee of the hospital.

Dorothy L. Dye, 81, of 502 N. Regina Ave. in Champaign, died Feb. 6. She retired in 1979 from the University of Illinois College of Medicine where she was a stenographer for 36 years.

Terry R. Baumgardner, 69, of 1213 N. Dugdale Ave. in Champaign, died Feb. 6. He retired in 1986 from the University of Illinois Research Foundation, where he was a computer programmer.

Jane E. Albritton, 85, of 5407 W. Third St. in Champaign, died Feb. 6. She retired in 1981 from the University of Illinois where she was a bookkeeper for 17 years.

April 20, 2006 • 185605 • 185605

Insiders

Tweeple approve CAS appointments and renovation projects

By Takatoko Sato

The UI Board of Trustees met at the Urbana campus on Thursday, approving the appointments of 12 faculty members, including two associate deans, to the College of Arts and Sciences, as well as the appointment of the interim executive vice chancellor for the College of Engineering.

The board also approved a $710,000 renovation contract to Homan Robinson Company.

The board approved the appointment of eight faculty members to the Aviation and Automotive Engineering Department.

The board approved the appointment of 12 faculty members to the College of Engineering.

The board approved the appointment of 12 faculty members to the College of Law.

The board approved the appointment of 12 faculty members to the College of Medicine.

The board approved the appointment of 12 faculty members to the College of Nursing.

The board approved the appointment of 12 faculty members to the College of Social Work.

The board approved the appointment of 12 faculty members to the College of Veterinary Medicine.

The board approved the appointment of 12 faculty members to the College of the Built Environment.

The board approved the appointment of 12 faculty members to the College of the Fine and Applied Arts.

The board approved the appointment of 12 faculty members to the College of Communications.

The board approved the appointment of 12 faculty members to the College of Education.

The board approved the appointment of 12 faculty members to the College of Human and Consumer Sciences.

The board approved the appointment of 12 faculty members to the College of Information Sciences and Technology.

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University Women’s Club celebrates 100 years

For more information about the Women’s Club or to support its scholarship program, visit the club’s Web site: www.uwomensclub.org.

Square deals
Women’s Club members Jennifer Richardson, left, visiting professor coordinator in the department of agricultural and biological engineering, and Sandi Thomas, club president, hope the club will raise at least $25,000 for its scholarship endowment through its campaign, which allows donors to designate how they wish to support the university’s faculty. The club’s scholarship program. Each year the club gives out five or six scholarships to UI juniors, seniors, or juniors who are members or members of the club. The club’s scholarship program. Each year the club gives out five or six scholarships to UI juniors, seniors, or juniors who are members or members of the club. The club’s scholarship program. Each year the club gives out five or six scholarships to UI juniors, seniors, or juniors who are members or members of the club. The club’s scholarship program. Each year the club gives out five or six scholarships to UI juniors, seniors, or juniors who are members or members of the club. 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By Andrea Lynn
News Bureau Staff Writer

What’s not to like about today’s youth films, titles such as "The Chronicles of Narnia" and "Harry Potter and the Goblet of Fire"?

Adapted from respected novels for children, the PG and PG-13 ratings, respectively, have a lot going for them. They are not only enjoying huge box-office receipts, but the books were nominated for four Academy Awards.

Like their namesake novels, the films have their appeal, says Betsy Hearne, one of the country’s top experts in children’s literature.

"Both, however, are a "mixed blessing for their young audiences,"" Hearne said. Moreover their shared shortcomings is symptomatic of the way most children's stories are being told on the silver screen these days.

The problem, according to Hearne is, that two critical elements – "creative space and silence" – are typically left out of the cut.

"Without space and silence, our children’s attunement spares through unembarrassed inner stimulation. They are being raised in a sea of constant stimuli: 'Finger pop for pop culture kids,' " said Hearne, the director of the Center for Children's Books and a UI journalism professor.

Hearne demonstrated her point about silence and space with a scene from "The Chronicles of Narnia:"

"When Aslan the lion sacrifices himself to save Edmund, the focus in the book is on how and on the witch who is enforcing the old magic," she said. "Although C.S. Lewis includes a restrained description of Aslan's being torn and beaten, the film's long-hand sequence features a deluge of horrific creations including in papier mâché curls more attention to the monster's special effects than to the character's sadness and nobility," Hearne said.

"A parallel in Disney's "Beauty and the Beast,"" Hearne said, "is the dancing dishes, "which, however 'charming,' distract from a focus on the relationship between the two main characters."

The new film "Treasure Planet," on the other hand, does give the kind of space featured in the picture book.

"In the scene where Captain Grant and the Man with the Yellow Hat are sailing over New York City with a bunch of balloons, there's a wonderful sense of release and joy that just takes over the screen without interference or overdramatics," Hearne said.

"In fact, one of the film's major merits is a simple game of pop-a-box, which accords perfectly with children's audience's enjoyment without overpowering or pressuring them with narrative," Hearne said. Similarly, "Holes," she said, "travels one work of art another. The flashback indicated by spaces on the book's cover, in the film, skillfully rendered through fades that clarify transitions between present and past events but at the same time add a striking visual dimension."

"When a young child is totally humbled by a book's subject matter, he begins to ask the why, what and how questions that are central to the development of young minds," Hearne said. "But does it actually occur, she added, "when a child is exposed to these critical elements?"

"Not does it become, she asked, "the kind of storytelling that characterizes the "Harry Potter" series? Rather, "Holes" transforms one work of art into another. The flashbacks indicated by spaces on book's cover are in the film, skillfully rendered through fades that clarify transitions between present and past events but at the same time add a striking visual dimension."

By James C. Kimlinger
News Bureau Staff Writer

In Roman mythology, Janus was the god of change and transition, often portrayed with two faces gazing in opposite directions. At the UI, Janus particles are providing insight into the movement of molecules, and serving as the basis for new materials and sensors.

"By modeling the surface of colloidal particles into a Janus chemical compound, we can measure the rotational dynamics of single colloidal particles in suspension as well as at interfaces," said Dr. Gregor, a professor of materials science and engineering, of chemistry and of physics. "We can also take advantage of the particles' "very dissimilar sides to create families of microenvironments."

Using a metal-deposition technique, Gregor and his research team - graduate students Luang Hong and Steven Anthony, and research associate spinach Gao - make particles half-coated by metal, and gauze geometrically symmetrically but chemically asymmetrically. For instance, inside the micron-size particles are magnetic and optical properties that can only be seen through the second hemisphere, not through the metal-coated hemisphere.

"Because these colloidal particles are rotating, they spiral as they move back and forth," retreating by Brownian motion," said Gregor, who also is a researcher at the Frederick Seitz Materials Research Laboratory and at the Beckman Institute for Advanced Science and Technology. "By carefully monitoring the motion of the particles, we can ask new questions about that motion that were not possible before."

Individual particles can be tied together like strands of pasta. Using precision-tracking techniques, the researchers can monitor the movement in the stymieing around the particles. The particles can also be used as microprobes and microsensors.

"We are continuing to explore the chemical modification of the metal surface to form new colloidal-based materials," said Gregor, who will describe his team's work at the March Meeting of the American Physical Society, to be held at the Baltimore Convention Center this week, March 15-17.

"We are also investigating the use of electric and magnetic fields to manipulate individual colloids and the particles."

The U.S. Department of Energy funded the research.

By Craig Chandler
News Bureau Staff Writer

College basketball fans will be getting something extra with their March Madness this year: a plug for the value of a higher education.

Beginning Monday, it is all part of their coverage of the men's and women's NCAA Division I basketball tournaments. CBS and ESPN will broadcast public service announcements. For Telefónica also will be broadcasting them during prime-time scheduled for the last half of March. And full-page ads are planned for devoted space in the Wall Street Journal.

"It's all part of the kickoff for a public campaign, " said Steve Granick, a professor of materials science and engineering, of chemistry and of physics. "Solutions for Our Future: A Campaign for Higher Education," sponsored and organized by the Northeast Conference on Education, with the College Basketball Kempn and the Goblet of Fire campaign. University of Illinois have a "mixed blessing for their young audience. "They are not only engage their juvenile audience with hyperactivity often involving violence and the Beast" might be the \"Silence and space are important the all-important silences over the information-besieged lives,"" Hearne said.

"They do give their young audience the time and the space to think and be," she said.

"In fact, one of the film's major merits is a simple game of pop-a-box," "Holes," she said, "travels one work of art into another. The flashbacks indicated by spaces on the book's cover, in the film, skillfully rendered through fades that clarify transitions between present and past events but at the same time add a striking visual dimension."

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By Alexis Terrell

**On-the-job training**

Undergraduate techning assistant Kaitlin Perkewich, of Aurora, Ill., explains to servers the proper way to serve plates to diners. Students run the Spice Box and Bevier Café as self-sustaining businesses and are expected to make a profit.

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Each student at Bevier Café works 10 hours a week and is graded according to a daily checklist of factors, including how they deal with food temperatures, sanitation, preparation and clean-up. Students rotate every two weeks through the stations: management, hot foods, pantry, bakery and sautéing.

“A line forms as the doors to Bevier Café open for lunch at 11:50 am. Junior Andrea Klein of West Brooklyn, Ill., greets customers from behind the salad bar.”

“Like a real restaurant, anything can happen,” North said. In a previous semester, one student chose to flambé bananas and the other chose to pair the dish with brie. “At the last moment, I changed my mind,” Klein says. Bevier Café serves daily lunch specials costing $4.25, with a variety of vegetarian entrees and fresh fruit.

“Students enrolled in Food Science and Human Nutrition 340 and FSHN 443 operate the facility,” said Jill North, teaching associate and director of the Spice Box and Bevier Café. “It’s a pretty small major, so everyone knows each other and helps each other out.”

“Graffiti within the program are high, and most graduates go into food service, catering or restaurant management,” North said. The students may serve up to 180 guests in one day at Bevier Café. Daily menus are online and posted outside the Café, on the second floor of Bevier Hall, at the corner of Goodwin Avenue and Gregory Street.

“Some professors have been eating at Bevier Café for 20 years. ‘The food is good, the service is nice, and they have excellent desserts,” he said. ‘I don’t get tired coming here every day.”

Students running Bevier Café usually don’t get tired either. Yes, the traditional chef hats slip off easily. The hours are long. This week is the last to serve food. The quality is hot. But the food is ‘the best part’,” said senior Jeff Mazzucco of Waukegan, Ill., who had been on dish-washing duty for two days at Bevier Café. He looked over at his classroom Graze, sitting with a full tray of food – chicken noodle soup, charbroiled salmon, baked ziti and bread sticks, pasty and pizzas. We make ads, but with more money, we will be able to offer more to them and modern trends.”

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**Facelift, equipment upgrade needed for kitchen, restaurants**

By Alexis Terrell

Swiss Benevolent Student Union

Two student groups in the Quantity Food Laboratory, wearing white chef coats and hats, their faces hidden in camaraderie behind onions, sautéed almonds and teriyaki sauce, untangle the giant bowl of ingredients they’ve been mixing.

“Does it look good or nasty?” freshman Kendall Robertson of Chicago asks graduate chef Jesse Quinonez as he helps prepare for that evening’s Spice Box meal.

“You well eat?” Quinonez asks.

“Sure.”

“Then keep mixing.”

The Spice Box, along with Bevier Café, is a student-run restaurant on the UI cam-

puses. Showcasing the talents of senior hospitality-management major Marla Todd, the restaurant serves two- and four-course gourmet meals on Friday and Tuesday evenings in the spring. Students enrolled in the junior-level “Food Production and Service” course run Bevier Café, open weekdays for breakfast, lunch and afternoon snacks.

“Marla Todd, coordinator for external and alumni relations,” said Marla Todd, coordinator for external and alumni relations, “is doing a fabulous job.”

“With more than 140 reservations to fill over the course of four outings, Marla dealt with much more on her night as the manager of the Spice Box.”

As snow exploded earlier in the day, the winds blew through the giant bowl of ingredients. Each student at Bevier Café works 10 hours a week and is graded according to a daily checklist of factors, including how they deal with food temperatures, sanitation, preparation and clean-up. Students rotate every two weeks through the stations: management, hot foods, pantry, bakery and sautéing.

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**Next course**

By Alexis Terrell

Swiss Benevolent Student Union

A group of students and additional customers have boosted the need to raise funds for two student-run restaurants on the UI campus. The department of food science and human nutrition is responsible for raising money to re-open the Flame Grille Bevier Halls’ Quantity Foods Facility, which has been closed for ongoing.

“An unreliable equipment and outdated décor needs to be replaced,” said Graeme Ott of West Brooklyl, Ill., who had been on dish-washing duty for two days at Bevier Café. He looked over at his classroom Graze, sitting with a full tray of food – chicken noodle soup, charbroiled salmon, baked ziti and bread sticks, pasty and pizzas. We make ads, but with more money, we will be able to offer more to them and modern trends.”

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**Creation of antibiotic in test tube holds promise for better antibiotics**

By Jim Barlow

Science News Staff Writer

Scientists have made a, naturally antibiotic used for more than 40 years to preserve food, in a test tube using nature’s toolbox. They also identified the structure of the enzyme that makes nisin and gives it its unique biological activity.

The work — published in the March 10 issue of Science — shines light on the almost magical nature in which nisin is made in nature and moves researchers closer to producing new antibiotics that would probably the development and spread of antibiotic-resistant bacteria, said Wilfred van der Donk, a professor of chemistry, and Satish Nair, an assistant professor of biochemistry.

Nisin, a peptide, contains 34 amino acid residues and the unusual amino acids lanthionine, methyllanthionine, dehydroalanine, and dehydro-meso-butyric acid. The latter are made by post-translational modification of proteins.

Nisin works well against Gram-positive bacteria and foodborne pathogens that cause botulism and listeriosis because it punches chemical bonds in a stereospecifically defined fashion. Specifically, they showed that NisC is responsible for the formation of five characteristic thioether rings required for nisin’s biological activity.

“Despite all the progress in synthetic chemistry, we cannot come close to making a compound like nisin efficiently,” van der Donk said.

“The thioether rings vary in size from four to seven amino acids and provide steady protection to the thioether bond at precise locations. They account for nisin’s robust resistance capability. It was theorized that one enzyme makes all five rings despite their very different sizes, but it did so as if it were the mystique of a magician, thus van der Donk said.

Nisin is one of numerous members of a family of compounds called lantibiotics, all of which are candidates for bioengineering into new pharmaceuticals, van der Donk said. The key is learning more about the enzymes involved in their biosynthesis. “Our work, while not explaining everything, has brought us much closer to that understanding. In particular the beautiful structure solved by the Nair group,” he said.

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**Child-welfare study shows recovery coaches can help reunite families**

By Craig Chamberlain

News Bureau Staff Writer

On any given day, as many as 70 percent of the Illinois children in foster care are in that situation, at least in part, because their parents abuse drugs or alcohol. Only a small percentage will ever be reunited with their parents.

What if those parents, however, had extra help from a “recovery coach,” someone whose primary job was to prod and encourage them to get and complete treatment for substance abuse?

A five-year study by the UI and its 1,500 patients of 1,600 children in foster care in Cook County, found that having such a coach makes a difference for a small but significant number of families.

The parents in the study who were assigned coaches “got into treatment more quickly, completed treatment at a higher rate, were more likely to get their children back, and were less likely to have a subsequent allegation of maltreatment,” according to Joseph Ryan, the study’s principal investigator.

The new research also showed that NisC has unexpected structural similarities with mammalian farnesyl transferases, which are important for the activity of the Ras protein which when mutated is implicated in 25 percent of breast cancers. Preventing farnesylation possibly could prevent the cancerous effects, because the mutant protein would no longer be localized at the membrane, Nair said.

As accompanying Perspective article in Science, written by chemist David W. Christiano of the University of Pennsylvania, suggests that some of the five thioether rings may turn out to be golden in the never-ending search for blockbuster antibiotics. Joining van der Donk and Nair on the study, funded primarily by the National Institutes of Health, were Bo Li, a biochemistry doctoral student, Wilfred van der Donk, professor of chemistry, and John Paul J. Yu, an M.D.-Ph.D. student in the Nair group. The computer screen shows the crystal structure of the lantibiotic nisin.

The task is made more difficult because, for most of these parents, substance abuse is only one of the problems that create a barrier to safe reunification. Ryan said. Sixty-two percent had at least one prior substance-abuse-related, medical or legal issue in the child showed evidence of substance abuse during pregnancy. Forty-two percent had had more than one.

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The improvement is significant and the researchers are encouraged to continue research to identify other enzymes involved in the production of nisin efficiently,” van der Donk said.
Sparrow Museum A celebration of world cultures is April 1

The Illinois State Museum will host the celebration of world cultures, from 12 to 5 p.m. April 1. Glockenspiel with thesyllables museum will perform in the European Gallery, and Japanese jujitsu smiths will take place in the Asian Gallery. Crafts will be available for children of all ages. The agen- dentation details available on the museum’s website, www.sparrow.museum.

College of Law New TV program highlights law courses

“Illinois Law,” a new weekly show on WCIA-Chan- nal 5, highlights legal issues in the news and features UI College of Law Law in practice segments. The program covers legal topics and issues.

Lanny Arvan, assistant CIO for CITES Educational Tech- nology, also has been restructured. The installation of servers, to be installed this month, will more than double the computing power for the college.

FROGs, ContinentalPizza Fol 1  Have the ability to do so, but some reason some frogs die and some, we don’t believe, “all of them have to die. This is a disease in nature.”

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Restorative powers In honor of the Latino/Latinx Studies Program's 10th anniversary, artist Oscar Martinez restored, unmasked and unveiled two murals on the wall of the house at 50 El. Chabbers Street where the program is located. Martinez started the awards 10 years ago when he was a student, using his own points and small donations from other students. "The small award represents the strength that Latino students had individually and collectively during the 1970s but are situated within the larger economic, political and social movements across the nation during the 30 years since artist Oscar Martinez painted the wall murals. The doves taking flight also symbolize a growing awareness among students of the justice for the Latino community today.

Entries for the calendar should be sent 15 days before the desired publication date to Lynn Wachtel, UI. E-mails to: 1022 CWSA, UI. 205 N. University Street. 212/121-8100, Fax: 212/121-8101. Ad removed for online version

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CALENDAR, CONTINUED FROM PAGE 15

College of Law

6 Thursday

7 Thursday
Men’s Tennis, U of Illinois, 6:30 p.m. Eichelberger Field.

8 Saturday

9 Tuesday
Baseball, U of Illinois vs. Purdue, 6 p.m. Illinois Field.

10 Saturday

11 Tuesday
Baseball, U of Illinois vs. Purdue, 6 p.m. Illinois Field.

12 Tuesday
Baseball, U of Illinois vs. Iowa State University, 6:35 p.m. Illinois Field.

13 Wednesday
Baseball, U of Illinois vs. Western Illinois, 7 p.m. Illinois Field.

14 Thursday
Women’s Tennis, U of Illinois vs. Eastern Illinois University, 6:35 p.m. Illinois Field.

15 Saturday

Sports

To confirm times, go to www.fightingillini.com.

9 a.m.-5 p.m.
Open 7:30
10 a.m.-6 p.m.
7-9 p.m. First Friday.
3:30-5:30 p.m. Saturday.

Men’s Tennis.
Illinois Field.
Michigan University. 6:35 p.m.
4 Eichelberger Field.
Softball.
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