Historic Morrow Plots indicate too much fertilizer ineffective

By Jim Barlow

The nation’s oldest crop-research plots are speaking out: Soil stewardship pays. Yields in fertilized continuous corn plots are one-third lower than in similarly fertilized plots where long rotations have been used.

The Morrow Plots, planted at the UI in 1876 to find out how exploitable Illinois land has been farmed remains strong.

“Despite the fact that soil organic matter has been decreasing, yields have increased,” said Susanne Aref, an agricultural statistician in the UI department of crop sciences. “During the past decade, yields have been level, though changes to stand density may boost yield to a higher level.”

Yields have risen as a result of technological advances, such as the introduction of hybrids, pesticides and commercial fertilizers, but the use of fertilizers at 1 1/2 times recommended rates, as used by many farmers and as an experiment in the Morrow Plots, has not provided consistent benefits.

“Based on the last 30 years of experiments, we have learned that too much fertilizer does not work,” said Aref. “It does increase yields in some years, but it makes production unstable.” During the 1988 drought, for instance, crop yields in over-fertilized plots were dramatically smaller than those from untreated soils, where corn yields were essentially unaffected.

Lessons learned from the Morrow Plots, which cover about 3/5 of an acre, were described by UI soil scientist Michelle M. Wander at the joint annual meetings of the American Society of Agronomy, Crop Science Society of America and the Soil Science Society of America Oct. 26-31 in Anaheim, Calif.

A comprehensive review of soil changes in the Morrow Plots – named for George E. Morrow, the first dean of the UI College of Agriculture – will be published next year in “Advances in Agronomy, Volume 62.” The plots were recognized as a National Historical Landmark in 1968.

The first experiment began with three different crop rotations involving corn, oats and hay and three fertility treatments. As changes in agriculture occurred, so changed the experiments. The long-term data that have been harvested, researchers say, “provide us with the only reasonable empirical basis upon which we can evaluate agricultural sustainability.”

The plots’ history was divided into four phases, based on activity. Phase five begins next spring, when only the recommended rates of fertilizer will be used, plant density will increase from a rate of 24,000 plants to 36,000 plants.

“In the last 30 years of experiments, we have learned that too much fertilizer does not work,” said Susanne Aref (right), an agricultural statistician in the crop sciences department. “It makes production unstable.” Aref and Michelle Wander, professor of soil fertility in the department of natural resources and environmental sciences, recently were taking soil samples at Morrow Plots.

Water Survey scientists: Great Lakes intensify ferocity of passing storms

By James E. Kloeppel

The Great Lakes exert a significant influence on passing cyclones, causing storms to speed up and grow in strength, say researchers at the UI and the Illinois State Water Survey. Also, the number of potentially dangerous storms is on the rise, they report.

Cyclones that traverse the Great Lakes have important impacts on the physical environment and human habitation in the region,” said James Angel, a climatologist at the UI. “There is a lot of development along the lakes, and when the water level is high – as it is now – the area becomes extremely vulnerable to shoreline damage from these storms. A better understanding of how the Great Lakes affect passing cyclones may allow better forecasting of these storms and their potential effects.

Cyclones are low-pressure storm centers, “often accompanied by high winds and heavy precipitation,” said Scott Isard, a UI professor of geography. “The ensuing heavy precipitation can be huge, ranging in size from 800 to 1,500 miles in diameter.”

To study the effect the Great Lakes have on passing cyclones, Angel and Isard examined the rates of movement and the changes in intensity for 583 cyclones that passed over the region between the years 1965 to 1990. The researchers’ findings, published in the September issue of Monthly Weather Review, identify several important features regarding the lakes’ influence on these storm systems.

“In general, we found that cyclones accelerated as they approached the Great Lakes region and increased in intensity over the lakes,” Angel said. “This effect was most pronounced from September to November, when the surface waters of the lakes are warmer than the surrounding air and can provide a major source of both moisture and heat that energizes passing storms.”

From January to March, when broken ice cover is generally present on the lakes, cyclones accelerated less and did not intensify, Angel said. However, cyclones that traversed the region during May and June did speed up and grow in strength.

“This surprised us, because the lakes are usually cooler than the overriding air mass during spring and summer, and have not generally been considered as an important energy source for cyclones at that time,” Angel said. “We don’t yet have a satisfactory explanation for this phenomenon.”

In another study (to appear in the journal Climate), Angel and Isard analyzed trends in storm strength for the years 1900 to 1990. “We are seeing evidence of an increase in the number of stronger storms, particularly in the months of November and December,” Angel said.

Historically, some of these cyclones have produced hurricane-force winds and caused extensive damage. The “great storm of 1943,” for example, sank a dozen ships and claimed more than 250 lives.

More recently, the ore carrier Edmund Fitzgerald – popularized in a ballad by Canadian singer and songwriter Gordon Lightfoot – sank in Lake Superior during a major storm on Nov. 10, 1975. All hands were lost.
During its October meeting, the senate sent Kagan’s proposal to the Senate Council for revision. At its November meeting, Richard Schacht, senate council chair, motioned for an alternate proposal to be substituted for Kagan’s version. The senate council’s version called for documents to be posted on the senate’s website “well in advance of senate meetings whenever possible.” The council called for the substitution because it felt that, under Kagan’s proposal, the senate might be prevented from discussing pressing issues solely because documents concerning those issues hadn’t been posted on the Web before the two-week deadline. Schacht argued that the senate needed to be realistic in its expectations of the staff members in the senate office. Computer scanners are imperfect machines, the senate’s office staff is small, and there is a lot of material to be scanned, he said. But Kagan urged senators not to substitute the senate council’s version. “I urge you to vote on a resolution with some hard and fast rules to it,” he said.

Kagan noted that he’d only received the November senate meeting agenda two days before the meeting, and two days weren’t enough for him to share the agenda with other faculty members. Despite objections, the senate approved the substitution of the senate council’s alternate proposal in favor of the original, and then voted in favor of the proposal.

Faculty Library Committee

The senate also discussed senator Harry H. Hilton’s objection to the composition of the Senate Library Committee. Senate bylaws call for the committee to have more than two faculty members from any unit. The current membership of the committee consists of three faculty members from the College of Liberal Arts and Sciences and a student.

In addition, Hilton pointed out that two colleges, LAS and the College of Liberal Arts and Social Sciences, represent 55 percent of the committee’s membership, while other colleges, including the College of Engineering, are not represented at all. At the meeting, Hilton sponsored a resolution that called for the election of a faculty member from the College of Engineering to the committee.

But Schacht pointed out that the senate council’s research into the history of the senate bylaws regarding library committee membership showed that the term “unit” was not intended to apply to colleges but only to smaller units. “We do not have a problem with failure to comply that would force us to do this,” Schacht said.

The number of people on the committee is fixed by the senate bylaws. The only way to change the committee’s membership would be to remove current members and replace them with others, Schacht added. If the senate voted to replace a current member with someone from the College of Engineering, it would have to consider doing the same for other colleges that had expressed interest in being represented on the committee, he said.

Mathematics professor Peter Loeb asked if the rule governing the number of committee members would be temporarily changed to allow more members to sit on the committee. But Schacht responded that the senate shouldn’t be in the business of changing its rules on the senate floor. Since the item was in conflict with senate bylaws, it was ruled out of order.

NCAA Certification Program

In business, the senate was presented with information regarding an upcoming NCAA certification visit to the UI’s Division of Intercollegiate Athletics. The division will participate in the NCAA certification program during the 1998-99 academic year. The NCAA’s orientation visit will be in March 1998, and its evaluation visit will be in late spring 1999. The university is forming a committee to evaluate the DIA.

In an informational item, the senate was presented with a copy of the DIA self-study plan that will be used by the committee. Under the plan, the committee would undertake such goals as completing an accurate and comprehensive review of the intercollegiate athletics program at the Urbana-Champaign campus, identifying the strengths and weaknesses of the current intercollegiate athletics program, and assessing whether NCAA operating principles are being met.

A separate informational item was mentioned at the meeting. Stephen Kaufman, a professor of cell and clinical biology, suggested that the senate consider the issue of whether NCAA regulations about “color” are appropriate. “Whether the caricature and impersonation of a Native American Indian as the UIUC athletic mascot serves the integrity of the UIUC athletic program, the campus and the principles of the NCAA?”

The suggestion was applauded by a number of senators.

Jet Service to Willard Airport

In remarks near the beginning of the meeting, Chancellor Michael Aiken gave an update on the university’s attempts to regain jet service at Willard Airport. Four airlines fly into Willard Airport, but each of those airlines uses propeller-driven airplanes. Aiken called the current arrangement a “fragmented” one. In addition, he noted that Willard Airport often loses customers because many people drive to other airports in the region, including those in Bloomington, Ill., and Indianapolis.

The university has hired a consulting firm to look into the feasibility of regaining jet service. The firm will help the university develop strategies that university representatives might consider in negotiating with airlines. Among the strategies the university might consider in order to attract jet service to Willard may be reducing competition at the airport by using only a single carrier. However, Aiken added that it was too early to discuss specifics concerning the issue.

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**Deaths**

**Virginia J. Drake**

Virginia J. Drake, former UI secretary, served as secretary in the Office of the Dean of Men and retired as an administrative aide to the associate vice chancellor. She is survived by her husband, K. James Drake.

**Samuel W. Dunn**

Samuel Watson Dunn, former head of the department of advertising at the UI, died Nov. 28 at Carle Arbours, Savoy. He was 78.

Dunn served as head of the department of advertising for 11 years. He was a former dean of the College of Business and Public Administration at the University of Missouri, and former professor of advertising at the University of Wisconsin. He was a Fulbright lecturer in France and a former president of the American Academy of Advertising.

He is survived by his wife, Elizabeth, two daughters, and four grandchildren.

**Walter Keith**

Walter Keith, professor emeritus of landscape architecture at the UI, died Nov. 28 at the Carle Arbours, Savoy. He was 78.

Keith taught landscape architecture at the UI for 38 years and was director of Robert Alentoft Park for 27 years. He was an Urbana Park District commissioner for 10 years and president of the park board for three years.

He helped develop a campground design for the South Rim of the Grand Canyon.

He was an Army infantry officer in England and France during World War II, and a member of the Royal Air Force before he was discharged in 1946.

Survivors include a daughter; two grandchildren; and a brother.

**Therald Moeller**

Therald Moeller, former professor of chemistry at the UI, died Nov. 24 at Winter Park, Fls. He was 79.

Moeller taught landscape architecture at the UI for 27 years. He was an Army infantry officer in England and France during World War II, and a member of the Royal Air Force before he was discharged in 1946.

Survivors include his wife, Ethel; two daughters; and four grandchildren.

Memorial contributions may be made to the Therald Moeller Chemistry Endowment Fund, UI Foundation.

**Stevenson Moore III**

Stevenson Moore III, professor emeritus of entomology, died Nov. 18, at his home in Treasure Island, Fls. He was 69.

Moore was a UI faculty member for 32 years. He was a member of the American Entomological Society and several fraternities.

Survivors include his wife, Irma; two sons; two daughters; and seven grandchildren.

Moore was a UI faculty member for 32 years. He was a member of the American Entomological Society and several fraternities.

Memorial contributions may be made to Hospice of the Florida Suncoast, 300 E. Bay Drive, Largo, FL 33770; or an organization of the donor’s choice.

**Allen S. Weller**

Allen Stuart Weller, dean emeritus of the College of Fine and Applied Arts at the UI, died Nov. 16 at his home at Savoy. He was 90.

Weller joined the faculty at the UI in 1947 as a professor of the history of art. He served as head of the department of art from 1948 to 1984 before becoming dean of Fine and Applied Arts from 1984 to 1991. He presided over the creation of the Krannert Art Museum and the Krannert Center for the Performing Arts and retired as the dean of Krannert Art Museum in 1974.

Weller continued to keep an office at the museum and had just completed work on a book titled, “Lorado Taft: The Chicago Years,” which will be published by the UI Press.

He was a major in the Army Air Forces during World War II. He served in North Africa and Italy and received the Legion of Merit.

He is survived by his wife, Rachel; a son; two daughters; two grandchildren; and three great-grandchildren.

Memorial contributions may be made to the Ricker Library or Krannert Art Museum.

**Memorials**

Memorials may be made to First Presbyterian Church of Urbana.

Memorials may be made to the Voluntary Fund, UI Foundation.

Memorials may be made to the University of Illinois Library.

Memorials may be made to Hospice of the Florida Suncoast, 300 E. Bay Drive, Largo, FL 33770, or an organization of the donor’s choice.

**Inside Illinois**

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Grant to fund research to make smaller, faster transistors

B y J a m e s E. K l o o p e l

Researchers at the UI have received a $3.2 million grant from the Defense Advanced Research Projects Agency to explore new concepts in fabricating next-generation electronic components. The research grant—to extend over four years—will promote the development of new device architectures and advanced materials and interweaving of new heterostructure materials and patterning capabilities into the present technology," said Ilesanmi Adesida, a UI professor of electrical and computer engineering and a researcher in the university’s Microelectronics Laboratory. “Through the use of advanced di-electrics, metal silicides and heterostructures, we can significantly reduce the size of the transistor and create ultra-fast, ultra-dense integrated circuits.”

During the past 50 years, the electronics industry has been “extremely creative in shrinking the size of the transistor, but there are physical limits to how far you can go with current silicon technology,” said John Tucker, a UI professor of electrical and computer engineering and a researcher in the university’s Beckman Institute for Advanced Science and Technology. “There is growing concern in government and industry that we will soon encounter a fundamental ‘device barrier’ that will very effectively block further attempts at size reduction. Our goal is to find a way around that barrier.”

To break through this device barrier, Adesida and Tucker have teamed with T.C. Shen, research scientist at the Beckman Institute; Murray Gibson, associate director of the Frederick Seitz Materials Research Laboratory at the UI; T.-P. Ma and Bernie Meyerson, both researchers at the University of California, Berkeley; and John Reutter, a UI professor of computer science.

The research team is focused on developing a single silicon crystal. To create electric potentials that can be manipulated to control the flow of current, various regions of the crystal are doped with impurities. The random nature of the doping process, however, presents an obstacle that limits the transistor’s size.

“As components get smaller and smaller, it is becoming increasingly difficult to control the placement and distribution of these dopants,” Tucker said. “Soon there will be only a countable number of impurities beneath the gate that controls the current in a transistor. And as that number inevitably fluctuates from transistor to transistor, each transistor will have slightly different proper-
ties, resulting in varying device performance.”

To break through this device barrier, Adesida and Tucker have teamed with T.C. Shen, research scientist at the Beckman Institute; Murray Gibson, associate director of the Frederick Seitz Materials Research Laboratory at the UI; T.-P. Ma and Mark Reed, both electrical engineering professors at Yale University; and Khalid Ismail and Berne Meyerson, both research scientists at the IBM T. Watson Research Center. The researchers are pursuing two parallel paths, each designed to eliminate the transistor doping process.

Although both techniques are technically capable of creating extremely tiny transistors, the relative merits of the two have yet to be determined. ▼
Live from the newsroom: Students get real-world experience

By Shannon Vliec

University of Illinois

Karyl Nelson of Batavia, Ill., operates the camera while Jack Penning III of Champaign, Ill., takes on the role of the anchor in a UI-7 broadcast. The students produce the newscast as part of the Broadcast News Editing class (Journalism 382), the final required course in the broadcast journalism sequence at the UI. Over the course of the semester, the students in each lab produce a live 30-minute newscast that appears weekly on UI-7, the university’s cable-access channel.

Broadcast News Editing is the final required course in the broadcast journalism sequence at the UI. Students in the class attend a one-hour lecture and four-hour lab each week; the class is divided into two lab sections, each with about 10 students.

Over the course of the semester, the students in each lab produce a live 30-minute newscast that appears weekly on UI-7, the university’s cable-access channel introduced in March and available to the Champaign-Urbana public. The weekly newscast, which opens each local newscast, the student-produced newscasts include coverage of the day’s top stories as well as sports and weather.

Students do all the reporting, interviewing, scripting, writing and producing for the newscast as well as all the editorial and technical jobs.

In November, Rick Kaplan, the president of the Cable News Network (CNN) and a UI alumnus, spent a week with the class, serving as executive producer of the two lab newscasts.

Kaplan has worked as a news writer and producer for “CBS Evening News With Walter Cronkite,” the first producer for “Nightline,” the executive producer for “World News Tonight With Peter Jennings,” and the executive producer for “PrimeTime Live.” He has won 34 national Emmy awards.

“He’s legendary in our profession,” Dampier said.

Kaplan began visiting the Journalism 382 class in 1991, and since then he has served as a senior broadcast journalism major from Metamora, Ill., got the opportunity to see Kaplan in action when she worked as a volunteer camera person.

He acted as a guide; he didn’t take control but encouraged and directed everyone in the class to pursue their own ideas, and he helped them put those ideas together in the best form,” Swords said.

Swords, who is taking Dampier’s class this semester, is looking forward to working more closely with Kaplan. When Kaplan was on campus last year, she had the opportunity to sit in on a lecture he gave to the Journalism 382 students about how to arrange a newscast; he also held a question-and-answer session with students.

“With so many schools here, you can learn from him. One of the great things about the class is that this outstanding figure in journalism is willing to come and share what he knows with us,” she said.

Stephanie Henning, a senior in broadcast journalism from Mount Carmel, Ill., also is taking Dampier’s class this semester. She concedes she initially was a little worried because neither of her classmates would be able to live up to Kaplan’s expectations.

“I was nervous about it, but Brian, who is much more seasoned than I, helped calm my fears. He told me it was something to be excited about rather than nervous,” Henning said.

Beginning to produce live assigned texts on newswriting and television production and become reacquainted with broadcasting equipment that they were taught to use in earlier classes. They also learn how to use a new editing system – Avid non-linear digital editing, which is “at the forefront of technology in editing,” Dampier said.

In their first few lab sessions, the students practice reporting live from the scene of breaking news. The department of journalism does not own a remote satellite truck to cover stories live, so Dampier has his students simulate the experience in the lab. The students then produce a taped, 10-minute news segment, and then advance to a 30-minute taped news program before producing the live broadcast.

Each live broadcast contains six minutes of public-service announcements so that the newscast has commercial breaks like any other commercial station.

“Try to make it as close to the real world as possible,” Dampier told them. “You’re learning, and you’re going to make mistakes because I’ve worked in that business a long time,” said Dampier, who has taught at the UI for two years.

Before that, he served as an executive producer and producer for “Chicago Tonight With John Callaway” on WTTW-TV and as a producer at WBBM-TV, both in Chicago. He also has worked as a reporter for WISH-TV in Indianapolis, WHAS-TV in Louisville, Ky., and KATV-TV in Little Rock, Ark.

Throughout the semester, the students rotate through a variety of editorial and production positions on the newscast, such as producer, assignment editor, anchor, sports broadcaster, technical director, audio person or camera operator.

“The two key roles I want them to learn are the editorial ones – producer and assignment editor – but many of them want to do some on-air work or try out other jobs,” Dampier said.

It’s important for the students to be able to fill in for seniors who are gone because many of them won’t start out in the field as reporters or anchors but as camera people or in other roles, he said.

Although they are given as much preparation as possible, it’s difficult to fully prepare the students for the demands of a live broadcast. On a good day, the newsroom can work like a well-oiled machine. On a bad day, it can be chaotic.

“There are lots of things that can go wrong during a newscast, like having two minutes of black at the end of the newscast because it has ended earlier than it should have, or having the anchor speak to the wrong camera or speak of the cuff without realizing his or her microphone is on,” Swords said.

Lab newscasts air on Tuesdays and Thursdays from 5:30 to 6 p.m. Although the labs are supposed to last from 1 p.m. to 5 p.m., the students actually spend far more time there. Students are encouraged to arrive as early as they can, and they do so, because it has ended earlier than it should have, or having the anchor speak to the wrong camera or speak of the cuff without realizing his or her microphone is on,” Swords said.

Part-time work not always route to full-time job

By Mark Reutter

The recent strike at United Parcel Service focused public attention on the lower wages and lack of benefits of part-time package sorters. But what’s going on among the 36 million other Americans who work in non-standard jobs?

“We really don’t know,” says Marianne Ferber. The professor emerita of economics at the UI has been doing research on “temps,” part-timers, on-call workers and independent contractors. Often dubbed the “contingent work force” because they work under terms that differ from regular, full-time employment, they constitute a rapidly growing segment of the labor market.

“Part-time workers have long been a feature of the U.S. labor market,” Ferber said. “This is also the category we have the least information about.” In 1950, part-time workers comprised 16 percent of the labor force; by 1995 they had increased to nearly 20 percent – a total of 24 million people.

For many employers, using temps and independent contractors also has become an attractive alternative to hiring full-time workers. Today some 1.2 million people supplied by temp agencies work on an “as needed” basis, while single-client independent contractors currently number about 8.3 million.

One myth about non-standard work, Ferber said, is that it is a route to a permanent job in the same organization. In fact, this is not a typical development. On the other hand, independent contractors and other non-standard workers are not uniformly paid lower wages than full-time workers. “An important predictor of wages is level of education,” she said. “Well-educated contingent workers are typically paid well, though even they do not get nearly as good health and retirement benefits as regular full-timers.”

Yet men who work part-time tend to earn lower wages relative to full-time men, while this trend does not seem to affect part-time women. Ferber said this finding, based on longitudinal studies of national employment data, “is consistent with the hypothesis that employers tend to judge men in non-standard employment unfavorably because their careers do not conform to the usual notions of traditional male behavior, while women are not expected to be strongly committed to their careers whether they work full-time or not.

Ferber’s study, “Contingent Work,” was published by the Radcliffe Public Policy Institute in Cambridge, Mass. The co-author was Jane Waldfogel, a professor of social work at Columbia University.  

http://inside.illinois.edu/
Journalism

(Continued from page 4)

“...at first they’re a little bit worried about being graded like that. They’re used to competing individually and they’re very good at that,” Dampier said.

“But if you think about how newspapers and television stations are judged, they’re judged by how the entire team works together.”

After observing the class last year as a camera person, Swords understands that putting together a quality newscast requires a concerted effort on the part of everyone involved.

“In television, every person in the newsroom plays an integral part in the newscast. You really have to depend on other people—the people who run the TelePrompter or the people who run the computer graphics. If they’re not on their toes, then the whole newscast looks bad,” she said.

Fortunately, the students in the class have the advantage of knowing each other from previous classes in the major. Most of them have taken the broadcast news sequence of classes together, and have already worked collaboratively in those classes.

“We work well together,” Henning said. “We know each other’s strengths and weaknesses. I know what they will and won’t expect me to do."

In addition to producing the newscasts, the students write and produce three television news packages, which are the taped stories that anchors cut away to during a newscast. Each student covers an editorial beat and produces packages based on events that occur on that beat. The best of these television packages are used during the student newscasts.

To complement Kaplan’s visit, Dampier also brings in several guest speakers from local stations, many of whom are former students of the Journalism 382 class.

A camera person and full-time reporter discuss the challenges of live-shot reporting, and an assignment editor and a show producer talk about what they do in a typical day.

In addition to guests from local stations, Dampier also brings in Steve Sweitzer, the news operations manager at WISH-TV, the CBS affiliate in Indianapolis. WISH-TV is the station where Jane Pauley, now an anchor of the Today show, began her career.

Dampier also brings in Steve Sweitzer, the news operations manager at WISH-TV, the CBS affiliate in Indianapolis. WISH-TV is the station where Jane Pauley, now an anchor of the Today show, began her career.

Sweitzer also discusses the future of the media industry, specifically television, and what changes he sees on the horizon, such as how the Internet will affect broadcasting and what changes he sees on the horizon, such as how the Internet will affect broadcasting and what changes he sees...
Banning chemicals to protect ozone may aggravate global warming

By James E. Kloeppe1

Some of the chemicals being phased out to protect the ozone layer offer offsetting benefits, such as reducing global warming, an UI researcher says. “By independently addressing the issues of ozone depletion and global warming, we are jeopardizing desirable options for one effect based on lesser – or even inconsequential – impacts on the other,” said Don Wuebbles, director of the Environmental Council at the UI and a professor of atmospheric sciences. “We need to stop looking at these issues as they are separate from one another, and start considering them together when we determine environmental policy.”

In the Nov. 7 issue of the journal Science, Wuebbles and colleague James Calm, an engineering consultant in Great Falls, Va., write that the regulatory actions on certain chemicals – imposed by both the Montreal Protocol and the U.S. Clean Air Act to protect the ozone layer – will have little impact on stratospheric ozone while contributing unnecessarily to global warming.

“Most of the chemicals responsible for ozone depletion are also greenhouse gases,” Wuebbles said. “Some of the CFC replacements would have survived the ban if the global warming regulations had been implemented before the ones for ozone,” Wuebbles said. “With keener awareness of the more limited options to reduce global warming, the framers of the Montreal Protocol and the U.S. Clean Air Act might have been more cautious in rejecting chemicals with minimal impacts and offsetting benefits.”

There are many other chemicals that also have special uses, small impacts, and where the replacements for them would cause other problems or costs, Wuebbles said. “In such cases, it might make more sense to reconsider current policy and allow the continued use of some chemicals.”

Scholars write primer on risk in volatile derivatives market

By Mark Reutter

Two UI professors have written a primer on assessing risk in the volatile derivatives market, the world’s fastest-growing trading network.

“Risk Measurement, An Introduction to Value at Risk,” a paper by Thomas J. Linsmeier and Neil D. Pearson, professors of accountancy and finance, respectively, in the College of Commerce and Business Administration, is a no-nonsense guide for fund managers and investors.

“Our paper introduces the concept and methodology of ‘value at risk,’ which is a new tool for measuring a company’s exposure to risk in the derivatives market,” Pearson said.

Derivatives refer to any number of financial contracts that derive their value from the value of other assets. They are neither stocks (a company) nor commodities (cotton or gold), but a set of delivery contracts involving securities and commodities that are commonly traded.

They became popular after the Bretton Woods system of fixed currency exchange rates was abandoned by the United States and other industrial nations in 1973. The explosive growth of world markets in the last decade created a demand for new financial instruments to act as a hedge against fluctuations in foreign currencies and interest rates.

The value of derivatives traded worldwide rocketed to $70 trillion in 1995 – up from $7 trillion in 1989 – and continues to expand in sight,” Linsmeier said. They include futures, forwards, swaps, options and more complex derivatives such as structured notes and collateralized mortgage obligations (CMOs).

“Derivatives are ideal to make offsetting bets to ‘cancel out’ the risks in a portfolio because many of them can be traded quickly and with low transaction costs, while others can be tailored to customers’ needs,” the UI professors wrote in their paper.

But the same instruments “also are ideal for making purely speculative bets,” they warn.

The down side of derivatives became apparent in 1994 when significant changes in interest rates and commodity prices caught Procter & Gamble, Japan Airlines, Metalgesellschaft and other multinationalals with exposed portfolios. In addition, rampant speculation in structured notes resulted in massive investment losses for Orange County (Calif.).

“Value at risk,” developed largely in response to the 1994 debacle, measures the probable loss of value expected if a portfolio of stocks, bonds and other securities holds its value but the market moves against it for a range of possible rates.

The chief ways of computing risk are historical simulation, Monte Carlo simulation and variance-covariance.

In their paper, Linsmeier and Pearson examine the advantages and disadvantages of the methods and describe how they can be supplemented with stress testing.

The UI professors helped write the accounting and disclosure rules enacted by the Securities and Exchange Commission to enable investors and managers to better evaluate the risk of derivatives.
Researchers find estrogen is vital to male fertility

By Jim Barlow

Testosterone may be the hormone that makes a man, but it is estrogen – the so-called ‘female’ hormone – that gives sperm its reproductive punch, a team of researchers report in the Dec. 4 issue of the Journal of Andrology.

Estrogen is vital to male fertility – specifically to sperm count. That discovery, coupled with the debate over declining sperm counts worldwide, means “we must be concerned about the potential for environmental chemicals to influence male reproductive function,” said Rex A. Hess, a professor of veterinary biosciences at the UI and principal author of the Nature report.

“If there is a normal function for estrogen in males, there is a need for research to determine this function as required for normal fertility, then it is logical to hypothesize that chemicals that interfere with estrogen receptors may interfere with fertility,” Hess said. “Until now, there has been no known function for estrogen in the male. We have had nothing to focus on. Now we can ask the question: Does this chemical or that chemical interfere?”

Potential environmental influence on fertility, such as exposure to pesticides and industrial chemicals, has sparked controversy since 1992, when Cleveland University researchers concluded that sperm counts were declining around the world. In late 1997, a research team led by Sharon Swan of the California Department of Public Health reached a similar conclusion after reanalyzing the data from the 61 studies used in the Copenhagen findings.

The Nature paper focuses on the regulatory role of estrogen-induced fluid reabsorption during the transfer of sperm in fluid from the testes through the efferent ductules – a series of small tubes that act like kidneys, producing concentrated semen instead of urine – to the epididymis, where sperm mature and are stored.

“We have found that estrogen regulates fluid reabsorption in the efferent ductules of the male,” Hess said. “It is important for the uptake of water, ions and proteins from the fluid that carries the sperm. The efferent ductules are responsible for reabsorbing nearly 90 percent of the water from this fluid. Without the reabsorption, the sperm would remain diluted and therefore incapable of normal maturation in the epididymis.”

The paper is part of three collaborative studies done over seven years on male estrogen – funded in part by the U.S. Department of Agriculture and the UI by a team that includes Janice Bahr, a professor of physiology, molecular biologist David Bunick and Hess.

In another study, published in the December issue of the Journal of Andrology, the researchers report that the number of genes that express estrogen receptors in the efferent ductules of rats – when operating normally – is 3.5 times greater than the estrogen receptor message in the female reproductive tract.

“This means you have a target for estrogen, and there are plenty of targets for the estrogen to bind to,” Hess said. “It was surprising to find the prominence of estrogen receptors in the efferent ductules. We knew it would be there, but finding so much was unexpected.”

The Nature findings resulted from studies of estrogen function in the reproductive tracts of mice, including genetically produced mice whose estrogen receptors were non-functional. In mice, the female hormone is intimately involved in regulating fertility in the male, because if you block the estrogen receptor’s function as we’ve shown here, you will have infertility. It is very likely that this will be a similar finding in humans.

Coauthors of the paper in the Journal of Andrology are Hess, Bunick and Bahr, along with Ki-Ho Lee of the UI department of veterinary biosciences, Julia A. Taylor and Dennis B. Lubahn of the departments of biochemistry and child health at the University of Missouri at Columbia; and Kenneth S. Korach of the National Institutes of Health National Institute of Environmental Health Sciences at Research Triangle Park, N.C.

Coauthors of the paper in the Journal of Andrology are Hess, Bunick, Luhahn, Bahr, Daniel H. Gist of the department of biological sciences at the University of Cincinnati and Amy Farrell and Paul S. Cooke of the UI department of veterinary biosciences, and Jeffrey T. ferris of the Ben May Institute for Cancer Research at the University of Chicago.

New materials remove corrosive gas in coal-gasification process

By James E. Kloppe1

Advanced coal-gasification processes are emerging as the most promising technology for converting coal into electricity, but the process generates sizable quantities of hydrogen sulfide, a highly corrosive gas that damages pipes and turbines. Chemical engineers at the UI and the Illinois State Geological Survey are developing materials that remove the hydrogen sulfide and convert it into economically valuable byproducts.

“A typical coal-fired power plant is about 33 percent efficient at generating electricity, while a coal gasifier is up to 50 percent efficient,” said Mark Cal, a UI professor of environmental engineering who also is a chemical engineer with the Survey. “Higher efficiency means that fuel can be conserved and greenhouse-gas emissions like carbon dioxide and acid-gas emissions like sulfur dioxide and the nitrogen oxides can be reduced. To achieve maximum performance in coal-gasification plants, an efficient and economical by-product of converting the hydrogen sulfide from the hot coal gas must be found.”

Cal and his colleagues – environmental engineering professor Mark Rood, Survey scientist Anthony Lizio and graduate student Brooke Stricker – are developing carbon-based sorbents that can remove the hydrogen sulfide efficiently.

“While the use of carbon for hot-gas cleanup has had significant potential, previous research has focused mainly on metal-based sorbents such as zinc ferrite, zinc tinate and various copper oxides,” Cal said. “Each of these sorbents suffers from at least one major deficiency that prevents its widespread use.”

Carbon offers several advantages over metal-based sorbents, Cal said. “Carbon provides excellent resistance to chemical and physical degradation in the harsh coal gas environment. Carbon adsorbs large quantities of hydrogen sulfide, and can be used as an active support for metals – such as copper and zinc – which can enhance the adsorption process. And, carbon is inexpensive.”

In their recent study, Cal and his colleagues developed a number of carbon-based sorbents and tested the ability of each sorbent to remove hydrogen sulfide under different operating conditions. The regenerated by-product of the most promising sorbents also was assessed.

“We’ve shown that these relatively inexpensive materials can very effectively remove hydrogen sulfide from the hot coal gas stream,” Cal said. “As an added bonus, the hydrogen sulfide that collects on the sorbent can be easily converted into commercially valuable products, such as solid sulfur and sulfuric acid.”

Cal presented the team’s findings at the September national meeting of the American Chemical Society in Las Vegas.
Registration for art classes begins Dec. 8

The UI School of Art and Design is sponsoring art classes for children and adults.

Students in preschool (minimum age 4 1/2) through 12th grade may participate in the 11-lesson class that begins Jan. 31 and ends with an open house May 3. The registration fee is $65 per student; course offerings vary. The Studio Spectrum for adults college-age and older is offering three non-credit courses. "Beginning Watercolor" will be offered Thursdays, Jan. 29 to April 21. "Multi-media Watercolor" will be offered Thursdays, Jan. 29 to April 23. "Introduction to Drawing" will be Mondays, Jan. 26 to April 20. All classes meet from 6:30 to 9 p.m. The registration fee is $90.

Classes for both programs will be at the School of Art and Design. No classes will be held over spring break. Registration will be Dec. 8 through Jan. 16. You may register in person, from 8 a.m. to 4 p.m., with Carole Smith in 142 Art and Design Building. For further information, registration forms, or required and recommended materials lists for the Studio Spectrum classes, call Smith at 333-1652.

Conference discusses health-care issues

The UI Law Review and Institute of Government and Public Affairs will sponsor a conference to discuss the issues raised by "Mortal Peril: Our Inalienable Right to Health Care," a book by University of Chicago law professor Richard A. Epstein. The conference will be from 8:30 a.m. to 4:30 p.m. Dec. 6 at the Law Building.

Epstein argues that the nation’s health system is imperiled by a preoccupation with providing "inalienable rights" to health-care patients. He calls for the elimination of government-subsidized health care, such as Medicare, and replacing it with a free-market system.

Responding to his book will be members of the UI faculty specializing in health care and public policy, including Robert Rich, Elizabeth Cavendish, Richard Kaplan and Russell Korobkin. Additional speakers are from Stanford University, Indiana University at Indianapolis, Valparaiso University, University of Alabama, University of California at Los Angeles and Wake Forest University. The conference will conclude with remarks by Epstein and an open discussion. The conference is free except for a $10 charge for the luncheon. Advance registration is recommended. Inquiries should be directed to Russell Korobkin, 244-8446 or korobkin@law.uiuc.edu, or Thomas Ulen, 333-4953 or tulen@uiuc.edu.

Family Festival is Dec. 7 at KAM

The Krannert Art Museum and the Saturday School program at the UI’s College of Fine and Applied Arts is offering an afternoon of fun for all ages from 3 to 5 p.m. Dec. 7 at the Krannert Art Museum.

Acclaimed storyteller Janice Harrington will perform a new audience-interactive piece, "Trunk Show," that explores one family’s memories in the larger context of African-American history. Also featured will be percussion by Rocky Maffit and Chad Dunn, and movement art by Kate Kuper.

On display in the Link Gallery will be the Saturday School students’ art plus Krannert Art Museum’s new exhibitions, including: "Arnaldo Roche-Rabell: The Uncommonwealth," "A Lifetime of Beauty: Paintings by Marajen Stevick Chingino" and "Contemporary Art Series #14: Yong Soon Min.

Admission is free. For further information call 333-1861.

Holiday work schedule

Dec. 24: One-half day excused
Dec. 25: Christmas Day/holiday
Dec. 26: Designated holiday
Jan. 1: New Year’s Day/holiday
Jan. 3: Martin Luther King Day/holiday
Dec. 29, 30 and 31 are work days. Campus functions are expected to operate normally on these days. Campus employees will be expected to work unless specifically excused.

Paycheck distribution

Academic employee paycheck checks will be distributed Dec. 24. To provide additional security during the holiday period, departments are to return all undistributed paycheck checks to Check Distribution in 100 Henry Administration Building by Dec. 24. Check Distribution will be open 9 a.m. to noon Dec. 24. Departments must notify Campus Mail by 11 a.m. on that day if they have any paycheck checks to be returned. Employees may pick up returned paycheck checks in person at Window A in 100 Henry Administration Building by presenting their i-card.

University parking meters or rental lots will not be enforced from noon Dec. 24 through Jan. 4. During these times, meters and rental lots will be available for unrestricted use. This does not apply to 24-hour departmental and handicapped rental spaces, which will continue to be enforced for the exclusive use of the renter.

The Motorist Assist Program operated by Campus Parking will be available from 7 a.m. to 5 p.m. Dec. 29, 30 and 31. This service will not be available Dec. 24-26, and Jan. 1 and 2.

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Kraner Art Museum

Kraner Art Museum galleries will close at 4 p.m. Dec. 21 and will reopen at 10 a.m. Dec. 27. Galleries close again at 4 p.m. Dec. 31 and reopen at 9 a.m. Jan. 6. The Palette Cafe will be closed from 3 p.m. Dec. 19 and will reopen at 8 a.m. Jan. 12.

Kraner Center for the Performing Arts

The Kraner Center ticket office will close at 6 p.m. on Dec. 23 and will reopen at 10 a.m. Jan. 5. Intermezzo closes at 3:30 p.m. Dec. 23 and reopens at 7 a.m. Jan. 5. The Promenade Gift Shop closes at 6 p.m. Dec. 23 and reopens at 10 a.m. Jan. 5. Tours end Dec. 19 and resume Jan. 6.

Garage and Car Pool

Dec. 23: Open 6:30 a.m.-2:30 p.m.
Dec. 24 and 25: Closed
Dec. 26: Open 6:30 a.m.-11:30 p.m.
Dec. 27 and 28: Open 6 a.m.-5 p.m.
Dec. 29: Open 6:30 a.m.-11:30 a.m.
Dec. 30: Open 6:30 a.m.-11:30 p.m.
Dec. 31 and Jan. 1: Closed
Jan. 2: Open 6:30 a.m.-11:30 p.m.

World Heritage Museum

Closed Dec. 21 through Jan. 4. Resumes regular hours Jan. 5.

Museum of Natural History

Closed Dec. 21 through Jan. 4. Resume regular hours Jan. 5.

Indoor recreational facilities

Hours vary for campus indoor recreational facilities. Contact the Division of Campus Recreation or the specific facility for information about holiday hours.

Building opening and heating

Buildings will be heated and ventilated according to the usual vacation and holiday schedule.

Dec. 22 and 23: Open 7 a.m.-5:30 p.m.
Dec. 24: Open 7 a.m.-1 p.m.
Dec. 25-28: Closed
Dec. 29-31: Open 7 a.m.-5:30 p.m.
Jan. 1-4: Closed
Jan. 5-18: Open 7 a.m.-5:30 p.m. Mon.-Fri., Closed Sat./Sun.
Jan. 19: Closed
Jan. 20: Resume normal schedule ▼

Russian Folk Orchestra performs Dec. 14

The UI Russian Folk Orchestra, the largest Russian orchestra in the United States, will perform at WILL-FM’s Second Sunday Concert at 2 p.m. Dec. 14 at the Krannert Art Museum and Kinkead Pavilion.

The free concert will be broadcast live on WILL-FM (90.9) with host Brian Mustain.

The orchestra’s repertoire emphasizes music from Slavic and East European countries and includes selections by Dmitri Shostakovich, Nikolai Budashkin and Vasily Andreev. Co-sponsored by the School of Music and the Center for Russian and East European Studies, the orchestra is mainly composed of different sires of balalaikas and domras (traditional Russian-stringed instruments), and bayans (accordion). Many pieces also include parts for flute, oboe, percussion and piano.

Orchestra members include UI students, and faculty members and musicians from the Champaign-Urbana community. Lisa Ochoa, a self-taught balalaika player who also plays domra, mandolin and percussion, conducts the orchestra.

O&M offers help for holiday cleansups

The Operation and Maintenance Division’s building operation section again will provide free clean-up following departmental holiday parties. The purpose of this service is to ensure that trash and food scraps do not remain in buildings during the holiday period. Departments are asked to give one to two weeks notice when requesting this service. Department personnel also should complete an initial cleanup of major items. Requests can be sent to Kip Mecum, 203 Garage and Carpool, MC-813, or faxed to 333-3711.

(See Briefs, page 9)
O&M holiday shutdown tips

UI’s Division of Operations and Maintenance is requesting that faculty and staff members follow these shutdown tips in preparation for the holiday season. If these guidelines are followed, the potential for damage to facilities from severe weather is greatly reduced.

• Close and lock all windows and doors; close blinds and curtains.
• Turn off all unnecessary laboratory services, including gas, air, vacuum and water.
• Turn off fume hood fans that are not needed. Consider consolidating chemical storage in fewer hoods.
• Leave all radiator valves turned on to ensure adequate heating and to avoid freeze damage.

O&M personnel will check all areas Dec. 19 for obvious problems. However, O&M employees cannot alter operations of fume hoods or lab services since they must preserve the use is intentional.

Children’s holiday party Dec. 14

The Illini Union Faculty-Staff Social Committee presents its annual Children’s Holiday Party Dec. 14 in the Illini Rooms of the Illini Union. The party features Santa Claus, a cappella singers, woodland characters, storytellers, activities, crafts, refreshments and more. Tickets are $1 for children and $2 for adults and can be purchased at the Illini Union Ticket Central or the Assembly Hall box office. If tickets are still available, they will be sold at the door.

The Children’s Holiday Party is limited to the families of students, faculty and staff members, and retirees of the UI. A UI ID is required to purchase tickets.

Cats’ presented Dec 12 and 13

The Assembly Hall will present the most successful and longest running musical of Broadway history: Andrew Lloyd Webber’s production of “Cats.” Performances will be at 8 p.m. Dec. 12 and at 2 and 8 p.m. Dec. 13. For more information, contact the Assembly Hall box office at 333-5000.

Belgium faculty exchange

International Programs and Studies is sponsoring a faculty exchange with Katholieke Universiteit Leuven (KUL), Belgium’s largest university. The exchange enables UI professors from all disciplines to receive financial support to visit KUL for one to three months for research collaboration. Deadline for fall 1998 appointments is Feb. 2 and for spring 1999 is Nov. 2, 1998. Application forms, guidelines and additional information may be obtained at 328 International Studies Building or at KUL programs and faculty members is available at International Programs and Studies and at the KUL homepage at http://www.kuleuven.ac.be/kuleuven/KUL_en.html.

Morrow Plots

(Continued from page 1)

Collision of liquids at high speed can drive chemical reactions

By James E. Kloppe1

When a liquid moves fast enough, gas bubbles form and collapse. This process – called cavitation – is responsible for the pleasant bubbling sound of streams and rivers, and for the stealth-defying sound of propellers on submarines. Chemists at the UI have discovered that in addition to making noise, high-velocity liquids also can drive chemical reactions.

“By colliding two streams of liquids together at a combined speed of 450 mph, we can break some of the strongest chemical bonds,” said Kenneth Suslick, a UI professor of chemical sciences. “With water, for example, the oxygen-hydrogen bond ruptures. The fragments can recombine to form hydrogen peroxide and other highly reactive intermediates that can destroy contaminants in the water.”

Some contaminants can be destroyed directly by the implosive collapse of the bubbles. Other less volatile contaminants can be destroyed through secondary reactions with some of the fragments, such as free hydroxyl radicals – both of which are extremely reactive. “This raises the possibility of using turbulent liquid jets as a simple way of purifying water contaminated with low levels of industrial waste,” Suslick said.

The jets are made by pumping liquids at very high pressures through very small holes drilled in gemstones. “Only gems are hard enough to take the pressure without cracking or eroding,” Suslick said. Currently, liquid jets are used industrially for making emulsions (such as cosmetic lotions) and for cutting extremely hard materials.

“The chemistry of turbulent liquids comes from ‘hydrodynamic cavitation,’ which causes the formation, growth and implosive collapse of small gas bubbles in the moving liquid,” Suslick said. “This is very similar to the effects of high-speed ultrasound in a liquid, where the collapse of sound-driven bubbles generates intense local heating, forming a hot spot in the cold liquid with a transient temperature of about 9,000 degrees Fahrenheit, the pressure of about 1,000 atmospheres and the duration of about a billionth of a second.”

Any turbulent flow can cause cavitation in liquids, Suslick said. “But generated gas bubbles don’t necessarily generate chemistry. The bubbles have to collapse pretty intensely to create the required heat and pressure. By colliding two liquid jets, we can concentrate the collisonal energy in the bubbles.”

There are only a few ways to force chemical reactions: heat, light, radiation and ultrasound are the common ones. Suslick said, “so it’s not very often that we find a new way to drive chemistry, especially one as simple as fast-moving liquids.”
**Genetics debate suffers from misinterpretations**

By Jim Barlow

Genetics and intelligence have academia coming apart at the seams, with the debate over “The Bell Curve” still hot three years after the book’s release—providing “a tragic example of how science can be misleading even to itself,” says a UI geneticist.

“An essential element of appreciating a book like ‘The Bell Curve’ is knowledge of the subject matter,” said Jerry Hirsch, professor emeritus and guest editor of a special issue of the journal Genetica (mailed to subscribers Oct. 24) devoted to “Uses and Abuses of Genetics in Society.” “First-hand familiarity of the material under discussion is an element seemingly lacking in the commentary that has appeared.”

The issue goes beyond the best-selling 1994 book by Harvard University psychologist Richard J. Herrnstein (who has since died) and political scientist Charles Murray, Hirsch said. It is a criticism of the field of genetics, a “misapprehension of much of academic research for shoddy quality control in the literature.”

“The misunderstanding of genetics has been almost universal, especially from a behavioral point of view,” said Hirsch, who has studied Drosophila genetics for 40 years. “It has been terribly mishandled.”

The debate over racism has split his own field. He noted the 1995 resignation of then President Enrico Rundberget of Finland from the Behavior Genetics Association after outgoing President Gladys Whitney argued that there was a racial basis for different murder rates between U.S. cities.

In Genetica, Hirsch says he refused the basic premise of “The Bell Curve” in 1975. Herrnstein and Murray, he said, completely accepted the writings of Arthur R. Jensen of the University of California at Berkeley, who claimed that the genetic determination of intelligence had been proven. In a study, referred to in the Congressional Record, Herrnstein showed that Jensen had distorted and misrepresented many of the 159 references in a 1969 paper. “The Bell Curve” lacks merit, Hirsch said, because it does the same thing.

In an interview Genetica article, Gordon M. Harrington of the University of Northern Iowa challenges some of the 25 points made by 52 experts who endorsed “The Bell Curve” in a December 1994 opinion piece in the Wall Street Journal. The entire analysis and careful scrutiny was done.

Jensen and the authors of the “Bell Curve,” he said, before careful academic scrutiny was done. Heredity refers to what parents transmit genetically to offspring. Heritability is a statistical concept used in agricultural genetics—"where you have control over breeding." “It assumes random mating— including incest in an equilibrium population and other important limiting conditions,” Hirsch said. “It is not a measure of so-called nature-nurture ratio—what proportions of human intelligence are due to nature and to nurture—even if they are in no way the same thing. Heritability estimation appeals to the racist. Calculate a nurture-nurture ratio, and you’ve got genetic inferiority. That’s absolutely wrong.”

“Abuses of Genetics in Society.” “First-Hand familiarity of the material under discussion is an element seemingly lacking in the commentary that has appeared.”
calendar of events

4 Thursday
“Heine’s Jewish Lovers.”
James M. Clagethorpe, UI. 7:30 p.m. Reading room, Levis Faculty Center. Germanic Languages and Literatures.

6 Thursday
“The Particle Zoo and Industry: Patterns of Enterprise.”
Gregory Hall. 7:30 p.m. 228 Natural History Building. Geology.

7 Thursday
David Rodriquez, University of Minnesota. 7:10 p.m. 110 Gregory Hall. History.

11 Thursday
“Organizing Women: Problems and Prospects in the Middle East and North Africa.”
Valentine Moghadam, Islamic Studies. 2 p.m. 101 International Studies Building. History, South Asian and Middle East Studies. Women in International Development, and Religion.

12 Friday
“Sesame Street Live!”
5 p.m. Assembly Hall. Admission charge.

13 Saturday
“Sesame Street Live!”
7 p.m. Memorial Room, Smith Hall. Admission charge.

14 Saturday
“Sesame Street Live!”
8 p.m. Memorial Room, Smith Hall. Admission charge.

15 Saturday
“Sesame Street Live!”
8 p.m. Colwell Playhouse, University of Illinois. Admission charge.

17 Tuesday
“Cats.”
5 p.m. Memorial Room, Smith Hall. Admission charge.

21 Tuesday
“Cats.”
7 p.m. Memorial Room, Smith Hall. Admission charge.

22 Monday
“Mirror, Mirror.”
5:15 p.m. Krannert Center. Admission charge.

23 Tuesday
“Sesame Street Live!”
8 p.m. Memorial Room, Smith Hall. Admission charge.

27 Friday
“Why They Couldn’t All Be Black.”

30 Sunday
“Cats.”
7 p.m. Memorial Room, Smith Hall. Admission charge.

4 December
“Sesame Street Live!”
7 p.m. 100 Memorial Room, Smith Hall. Admission charge.
7 Sunday
Women's Basketball, UI vs. Maquoketa. University Union Bookstore. 7 p.m. Admission charge.
8 Monday
Men's Basketball, UI vs. University of Maine. 7 p.m. Assembly Hall. Admission charge.
12 Friday
20 Saturday
Men’s Basketball, UI vs. University of Texas. 1 p.m. Assembly Hall. Admission charge.
Women’s Basketball, UI vs. DePaul University. 7 p.m. Huff Hall. Admission charge.
4 Thursday
Holiday Cookie Hour, 7:30-9 p.m. 244-1289, or David Harley, or Deborah Claus, for more information. Call 333-7586 or e-mail July. 333-8342.
5 Friday
"Joining Hands in Celebration." 7-8:30 p.m. Illini Union Ballroom.
Display booths showing how different cultures celebrate the holidays. For more information, call 333-3660. Admission charge. Illini Union Board.
6 Saturday
Saturday Safari: "Animals on the Run." 9:30-10:30 a.m. 231 University Union Bookstore. This class is designed for 3-year-olds. Pre-registration and deposits are required. Deposits will be returned if the class is canceled. More information is available in the second-floor gallery of the Museum of Natural History or call 333-2400 for more information. Monday through Friday. Call 333-7586.
Open Forum for Contemporary Art, 2 p.m. Kramar Art Museum and Gallery. Arnaldo Roche-Rabell and Young Noir Ming-Ming visiting artists. Carmen McCarthy and Leslie Brothers, UI, Kramar Art Museum.
Book signing, 3 p.m. Author’s signing, second-floor Union Bookstore. Paul Tyambue Zeleza, UI, will talk and sign copies of his latest work, "Manufacturing African Studies and Citizens." For more information, call 333-2050. Illini Union Bookstore.
7 Sunday
Getting Ready for Kwanzaa. 2:30-3:30 p.m. World Heritage Museum. Featuring Blackman, Motherland Art and Design. Activities will present a workshop to teach participants about the symbolic meaning of Kwanzaa, a festival of family, roots and community. World Heritage Museum.
Family Festival and Saturday School Open House, 1-5 p.m. Kramar Art Museum. Janice Harrington, storyteller, will perform an audience-interactive piece. "Jack and the Beanstalk." A Horseradish will be percussion by Rocky Muff and Chess, and movement art by Kate Kaper. Saturday School Open House will be on display in the Link Gallery. Kramar Art Museum.
International Dinner Series: Mexican, 6-7 p.m. 333-3670. Cosmopolitan Club, 307 E. John St., Champaign. Delphine Mei Varaporn Siraprapasiri will present a King's (i.e. of the world) served with holiday cookies. For more information, call 333-7586 or e-mail http://africa.lsi.uiuc.edu/~figa/ucd.html or call 328-0728 for schedule.
8 Monday
"Joining Hands in Celebration." 7-8:30 p.m. Illini Union Ballroom. Display booths showing how different cultures celebrate the holidays. For more information, call 333-3660. Admission charge. Illini Union Board.
12 Friday
13 Saturday
Children's Book Reading: "House." 10 a.m. Author’s corner, second-floor Union Bookstore. Children of all ages are welcome. For more information, call 333-2050. Illini Union Bookstore.
14 Saturday
Children's Holiday Party: "A Wonderfunderland." 10 a.m.-noon. Illini Union. Featuring a visit from Santa Claus, No Strings Attached. A tagged capella singers; woodland characters, storytellers, activities, crafts, and refreshments. For more information and tickets, call 333-5000. Admission charge. Illini Union Faculty-Staff Social Committee.
"Letting Others Have Your Way." 9 a.m.-1 p.m. Third floor, Lakeview Center. Registration required; call 333-8342. Human Resources Development.
17 Wednesday
18 Thursday
19 Tuesday
20 Wednesday
23 Saturday
26 Monday
All-University Lectures: "Intermezzo: The Crockerland Harvesting the Past," David; UI Varsity Men's Glee Club, Barrington Coleman; UI Women's Glee Club, Joe Grant; and the UI Concert Choir, Chester L. Alves.
30 Saturday
30 Saturday
30 Saturday
"Bring your lunch and have a picnic in Robert Allerton Park." Ongoing. Group tours: call 333-2127. Park visitors are welcome to join in the singing of familiar carols and each choral performance presents a few selections. This year, the massed choirs, led by Barrington Coleman present Daniel Parker's "Christmas Festival." This year's participants (and conductors) include the UI Chorus, Timothy Newton; Illini Women's Chorus, Seong-Kyun Moon; UI Black Chorus, Ollie Watts Davis; UI Varsity Men's Glee Club, Barrington Coleman; UI Women's Glee Club, Joe Grant; and the UI Concert Choir, Chester L. Alves.