

Better Test Scores, Rankings Mark Class of '11

Academic credentials show continued improvement; total number of applications more than double those of 1995

By John D. Harvith

The number of freshman applicants is to the University's Pittsburgh campus continues to climb, and the academic credentials of incoming freshmen remain on an upward trajectory, the University announced today.

Freshman applications for the Class of 2011 reached a total of 19,056—861 more than the 18,195 applications received for the freshman class that entered in fall 2006, and nearly 2.5 times the size of the applicant pool in 1995, when 7,825 students applied.

The percentage of students in the fall 2007 entering class graduating in the top 10 percent of their high school classes increased significantly, to 48 percent this fall from 43 percent in 2006, while the number in the top 20 percent increased to 74 percent from 72 percent in 2006.

The mid-50 percent Scholastic Aptitude Test range for incoming freshmen this fall increased by 20 points, to 1170-1330 from 1150-1310 in fall 2006, this increase coming at a time when SAT scores nationally have declined slightly. (The range is based on mathematical and critical reading scores only; a third component, writing, was added to the SAT test in 2005.) This range indicates that 25 percent of the incoming class had scores higher than 1330, and 25 percent had scores lower than 1170.

The SAT range represents a substantial increase from 1995, when the weighted range was 1010-1200. (The College Board recentered its test scores in 1995, and this range reflects the recentered scores, making it comparable to subsequent years.)

This year's freshman class numbers 3,419, virtually the same size as last year's entering class of 3,420, and yet with academic credentials far superior to the 1995 entering class.

"These numbers again reflect the increased recognition by high school seniors that the University of Pittsburgh offers a uniquely rich environment in which to pursue academic excellence," said James V. Maher, provost and senior vice chancellor at Pitt. "And our commitment to providing an excellent education is evidenced by the superior caliber of students seeking degrees at the University."



Incoming first-year students, shown during Freshman Convocation on Aug. 23 at the Petersen Events Center, have substantially higher class ranks and test scores than their counterparts in 1995.

GSPIA Hosts Casey for Film Screening, Q&A on Nuclear Terrorism

By Jason Togyer

As the film *Last Best Chance* ended on Tuesday, the audience in William Pitt Union's Assembly Room sat in complete silence.

It wasn't because the short (45 minutes) film was poorly received. In fact, it's well done; Hendrik Hertzberg of *The New Yorker* called it "entertaining."

Instead, the audience seemed a little dazed by the film's brisk (but thankfully fictional) depiction of a successful terrorist plot to obtain nuclear weapons.

And when a girl sitting near the front of the room began to shiver and rub her arms, it wasn't just because the air conditioning had unexpectedly turned on.

The chill in the room was caused by the frightening plausibility of the filmed scenarios.

"This isn't some far-off hypothetical

situation," said U.S. Sen. Robert P. Casey Jr., who introduced the film and moderated a question-and-answer session afterward. "It's all within the realm of possibility. This is Al Qaeda's objective, and it could be the objective of some other groups as well."

Casey's visit was hosted by Pitt's Graduate School of Public and International Affairs (GSPIA), the GSPIA Student Cabinet, and the Matthew B. Ridgway Center for International Security Studies.

Panelists for the Q&A session included William W. Keller, director of the Ridgway Center and Wesley W. Posvar Chair and Professor of International Affairs in GSPIA; Carie Lemack, cofounder of Families of Sept. 11; and Michael Hurley, a counterterrorism advisor to Nuclear Threat Initiative (NTI).

NTI is a nonprofit group, headed

by CNN founder Ted Turner and former U.S. Senator Sam Nunn, that works with governments and private organizations to stop the proliferation of nuclear, chemical, and biological weapons and improve security procedures on existing weapons stockpiles.

Casey was introduced by Pitt Chancellor Mark A. Nordenberg, who noted his own long friendship and close working relationship with the Pennsylvania U.S. senator. Casey previously served as the state's auditor general and treasurer.

After praising the senator's support of higher education, Nordenberg mentioned that Casey's great-uncle Jack Harding (CAS '26) was an outstanding Pitt football player of the 1920s and among the Univer-



New Service Links Library Patrons to Pa. Collections

By Sharon S. Blake

The University Library System (ULS) has launched a new online service that allows researchers, students, genealogists, and the general public to search digital collections created by Pennsylvania libraries, museums, colleges and universities, and historical societies.

The goal of the Pennsylvania Digital Library (PADL) is to serve as a gateway to documents, photos, e-journals, electronic dissertations, conference proceedings anything available online in a digital format—created by Pennsylvania libraries and cultural heritage institutions.

The site can be found online at http://padl.pitt.edu.

^dOur digital library staff has done a wonderful job of creating a tool that will allow all citizens of Pennsylvania to quickly and easily access book, historical photos, and other material," says Rush Miller, ULS director and Hillman University Librarian

PADL harvests the descriptive information about the material held in the numerous digital collections scattered across the Commonwealth. It indexes this descriptive information so it can be searched, free of charge. Any Pennsylvania organization seeking to register its digital collections with PADL can visit the Web site for instructions.

Currently, PADL holds materials from Bryn Mawr College, Drexel University, Haverford College, Indiana University of Pennsylvania, Penn State University, the State Library of Pennsylvania, Swarthmore College, Thomas Jefferson University, Villanova University, and Pitt.

Ed Galloway, coordinator of the ULS Digital Research Library, said PADL has the potential "to become an important resource for scholars, students, and the general public to easily determine what digital collections exist in Pennsylvania that might meet their research needs."

PADL was created by the ULS in cooperation with the Pennsylvania Advisory Committee on Collaborative Digitization and is part of the Pitt's extensive D-Scribe Digital Publishing Program.

D-Scribe can be found online at www. library.pitt.edu/articles/digpubtype/.

Casey Hosts Film, Q&A on Nuclear Terrorism | Pitt Advances in Global Higher Ed Ranking

Pitt Chancellor Mark A. Nordenberg (left) and Sen. Robert P. Casey Jr.

Continued from Page 1

sity's first Varsity Letter Award winners. 'I guess that was enough Pitt exposure for a proper upbringing," Nordenberg joked, earning an appreciative laugh from Casey and the audience.

The chancellor's remarks leavened an otherwise serious discussion of what he called "an issue of critical importance."

Filmed and scripted along the lines of TV dramas like 24 and NCIS, Last Best Chance, produced by NTI in 2005, depicts the theft of weapons-grade nuclear material from a South African university laboratory, a military base in Russia, and a research facility in the former Soviet republic of Belarus.

With little success, U.S. and Russian authorities frantically work to track the material or foil the terrorists who purchased it, but as the film closes, two crude but effective bombs are entering the United States via the Canadian and Mexican borders, and a third is on its way to the United Kingdom.

Keller said the film correctly shows that it's easier to control weapons-grade nuclear material at the places where it's stored than to track it once it's been stolen.

Securing and protecting nuclear facilities inside the former Soviet bloc, North Korea, and other countries does present diplomatic and logistics problems, he said. But Keller said it would take a financial commitment to create an effective global tracking and security program for nuclear material.

'If we can lock up all the gold in Fort Knox, we can lock up all of the fissile material," Keller said.

A lack of political will is the problem, Casey said, adding that "neither Democrats" nor Republicans" have made nuclear proliferation an issue in the 2008 elections.

The next U.S. president, he said, must exercise leadership by calling for a global inventory of nuclear material, increasing the punishment for people caught smuggling weapons-grade material, and stopping the development of new nuclear weapons.

University students and faculty members can help by leading the discussion and pressuring political leaders to develop programs to control nuclear material, Casey said. "We've all got to do a lot more," he said

The danger is increasing, Keller said, as developing nations turn to atomic power to fill their needs for more electricity.

Keller, who teaches a course on nuclear proliferation and its links to terrorism, said he's doing his best to focus students on the need to "get involved" in the problem. "The bad news should not overshadow the good news," Casey said. "We have a chance to get it right, and to do what we can.



Pitt's School of Engineering dedicated the RFID Center of Excellence Nov. 16. The center, housed within engineering's Swanson Institute for Technical Excellence, was made possible by a gift from alumnus John A. Jurenko (BSEE '56). The center is directed by Marlin Mickle, the Nikolas DeCecco Professor of Electrical and Computer Engineering at the University of Pittsburgh and an internationally recognized pioneer in radio frequency identification. Pictured, from left: William Stanchina, chair of Pitt's Department of Electrical and Computer Engineering; Mickle; Jurenko; and Pitt's U.S. Steel Dean of Engineering Gerald Holder.

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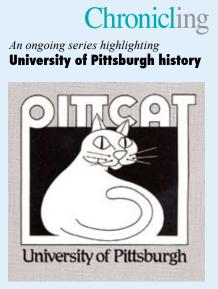
The University of Pittsburgh maintained its position of ninth among U.S. public universities and advanced from 32nd to 28th place among all U.S. universities in the "Times Higher-QS World University Rankings 2007," the latest

edition of a ranking of the world's top 200 universities by The Times Higher Education Supplement (THES) and Quacquarelli Symonds, a global company that provides educational and career information and networking

In addition, Pitt placed 77th among all universities worldwide in the rankings, up from 88th in 2006.

For the 2007 rankings, Pitt tied in the categories of "public universities," "all U.S. universities," and "all universities worldwide" with Purdue

University. In those same categories, Pitt placed ahead of the University of Maryland, Vanderbilt University, Case Western Reserve University, Rice University, the University of Virginia, the University of Southern California, Ohio State University, Indiana University, the University of Min-



November 1987— Pittcat, the University's recently developed automated card catalog, was "a key bridge between the book-bound campus of the past" and the "new world of electronic information retrieval," according to Pitt Magazine.

Already, 500,000 volumes from Pitt's library system were indexed by the database, and by the end of 1988, an additional 400,000 of the University's 3.5 million volumes were to be cataloged. Access was available from any computer connected to Pitt's "Campus of the Future" network.

Anne Woodsworth, director of University Libraries at the time, told Pitt Magazine that while traditional services remained important, "we're slipping into an era where a lot of information is not in print form. Access to that information is critical to the library's traditional information-dissemination function.'

But bricks and mortar weren't being neglected. To mark the 20th anniversary of Hillman Library in 1987, the Henry L. Hillman Foundation and the Hillman Foundation contributed \$1.5 million toward renovations. As the magazine noted, the improvements helped Pitt's largest library "keep up with new technology while also preserving yesterday's prime data storage material—namely, books."



nesota, the University of North Carolina, the University of Notre Dame, and Washington University in St. Louis, among others.

The other institutions in the top 10 public U.S. universities ranking besides Pitt and Purdue are the Uni-

versity of California at Berkeley, the University of Michigan, the University of California at Los Angeles, the University of Texas at Austin, the University of Washington, the University of Wisconsin at Madison, the University of California at San Diego, and the University of Illinois.

The rankings are based on the opinion of 7,000 active academics and graduate recruiters, alongside quantitative

data on research impact, staff and student numbers, and universities' levels of internationalization. An independent Londonbased newspaper that reports specifically on higher education issues, THES was formerly a division of News International, publisher of The Times of London.

Steelers Owner to Discuss Memoir at Pitt Book Center

Steelers owner Dan Rooney will sign and discuss his new book, Dan Rooney: My 75 Years With the Pittsburgh Steelers and the NFL (Da Capo Press, 2007), at noon Wednesday in the University of Pittsburgh Book Center

The son of Steelers founder Art Rooney, Dan Rooney has spent more than 50 years with

the team. During his tenure, the Steelers have won the AFC Championship six times and the Super Bowl five times. In his autobiography, Rooney talks about growing up on Pittsburgh's North Side, his father, and



his own role in shaping the National Football League.

The book was published to coincide with the team's 75th anniversary. For more information, call 412-648-1453. —Anthony M. Moore

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Happenings



The Chairs and The Bald Soprano, Studio Theater, Nov. 28 through Dec. 28

www.cmoa.org.

Readings

chealth.pitt.edu.

www.haa.pitt.edu.

Mattress Factory, India: New Installations, Part II, through Jan. 20, 500 Sampsonia Way, Northside, 412-231-

3169, www.mattressfactory.org.

Lectures/Seminars/

"Relationalisms," Gordon Belot, Pitt professor of philosophy, 12:05 p.m. Nov. 27, 817R Cathedral of Learning,

Choices: John Cutlers Quiet Legacy,"

Nov. 27, G23 Parran Hall, Pitt Graduate

"Bernini Pittore: Thoughts About Recent Publications on Gian Lorenzo Bernini as a Painter," Ann Sutherland Harris, Pitt professor of history of art and orbitations near 1 a m. Nov 28, 202

architecture, noon-1 p.m. Nov. 28, 203

Frick Fine Arts Building, Department

of the History of Art and Architecture,

Pittsburgh Symphony Orchestra Heinz Hall

Nov. 30 through Dec. 1

Ward Cates, president of research at Family Health International, 3:30 p.m.

School of Public Health, www.publi-

Pitt Center for Philosophy of Science, 412-624-1052, www.pitt.edu/~pittcntr.

"Sexual Health and Personal

Concerts

Men's Glee Club Fall Concert, 8 p.m. Nov. 30, Synod Hall, 125 N. Craig St., Pitt Department of Music, Oakland, 412-624-4125, www.music.pitt.edu.

Pittsburgh Symphony Orchestra, Music of Gaiety by Maderna, Folk Songs by Berio, Mystery Piece, and Feste Romane by Respighi, 8 p.m. Nov. 30-Dec. 1, Heinz Hall, 600 Penn Ave., 412-392-4900, www.pittsburghsymphony.org.

Heinz Chapel Choir Christmas Concert, various times Dec. 1-9, Heinz Chapel, Pitt Department of Music, 412-624-4125, www.music.pitt.edu.

Cherryholmes, 7:30 p.m. **Dec. 1,** Bromeley Family Theater, Pitt-Bradford, 814-362-5027, www.upb.pitt.edu.

Chatham Baroque and Calvary Choirs, Lessons and Carols for Advent, 5 p.m. Dec. 2, Calvary Episcopal Church, 315 Shady Ave., Shadyside, Music at Calvary, 412-661-0120, www. calvarypgh.org.

Exhibitions

Hillman Library, *Cat Bird*, through Dec. 3, Ground Floor, 412-648-8191, Pitt Department of Special Collections, www.library.pitt.edu.

Regina Gouger Miller Gallery, Patri-

cia Maurides, Michelle Stitzlein, and Julie Stunden, through Dec. 21, Purnell Center for the Arts, 5000 Forbes Ave., Oakland, Carnegie Mellon University, 412-268-3618, www. cmu.edu/millergallery.

The Andy Warhol Museum,

Andy and Oz: Parallel Visions, A National Gallery of Australia 25th Anniversary Exhibition, Georgia O'Keeffe and Andy Warhol, and Elusive Signs: Bruce Nauman Works With Light, all **through Dec. 30**, 117 Sandusky St., Northside, 412-237-8300, www.warhol. org.

Wood Street Galleries, Workin' Down Under, through Dec. 31, 601 Wood St., Downtown, 412-471-5605, www.woodstreetgalleries.org.

Senator John Heinz Pittsburgh

Regional History Center, Points in Time, Glass: Shattering Notions, and Discovery Place, **through Dec. 31**, 1212 Smallman St., Strip District, 412-454-6000, www.pghhistory.org.

Carnegie Museum of Art, Picturing Childhood: Pictorialist Family Photography, c. 1890-1940, through Jan. 13, On a Grand Scale: The Hall of Architecture at 100, through Jan. 27, and Design to Be Lit, through Feb. 10, 4400 Forbes Ave., Oakland, 412-441-9786 ext. 224,

"TDP-43 Proteinopathies: A New Class of Neurodegenerative Diseases," Virginia Lee, professor of pathology and laboratory medicine at the University of Pennsylvania, 4 p.m. **Nov. 28,** S-100 Biomedical Science Tower, Pitt Department of Pathology, http://path.upmc.edu.

"Engaging Science to Bridge a Chasm: Ethics and Belief in the Policy Debate Over Using 'Spare Unwanted IVF Embryos' for Stem Cell Research," Gerard Magill, professor of health care ethics at Duquesne University, noon-1 p.m. Nov. 29, School of Law, 3900 Forbes Ave., Pitt Center for Bioethics and Health Law, 412-648-1320, www. pitt.edu/~bioethic.

"The Dynamical Nature of Proteins: Understanding the Physics of Enzymes," Robert Callender, professor of biochemistry at Yeshiva University, 4 p.m. Nov. 29, 12B Chevron Science Center, Pitt Department of Chemistry, www.chem.pitt.edu.

Lecture, Douglas A. Lauffenburger, professor of bioengineering at Massachusetts Institute of Technology, 4 p.m. Nov. 29, 1102 Conference Center, Scaife Hall, Pitt McGowan Institute for Regenerative Medicine Seminar Series, www. mirm.pitt.edu.

"Global Sea-Level Changes Over the Past 100 Million Years," Kenneth G. Miller, professor of geology at Rutgers University, 4-5 p.m. Nov. 29, 11 Thaw Hall, Pitt Department of Geology and Planetary Science, www.geology.pitt. edu.

"MegaMoney for Nanomaterials: Research Funding Seminar," 7:30-9:30 a.m. Nov. 30, 102 Mervis Hall, Pitt Small Business Development Center, 412-648-1542, www.sbdc.pitt.edu.

"No Man's Land: Central Europe and the Symbolic Geography of the Avant-Garde," Tyrus Miller, professor of English and comparative literature at the University of California, Santa Cruz, noon Nov. 30, 139 Cathedral of Learning, Pitt Department of French and Italian Languages and Literatures, www. frenchanditalian.pitt.edu.

"Why Is There a Universe AT ALL, Rather Than Just Nothing?" Adolf Grünbaum, Pitt professor of philosophy, 3:30 p.m. Nov. 30, 817R Cathedral of Learning, Pitt Center for Philosophy of Science, 412-624-1052, www.pitt. edu/~pittentr.

Coal Mining Symposium, presented by Nicholas Ciotola and Joseph D'Andrea, 8 a.m.-3:30 p.m. **Dec. 1,** Senator John Heinz History Center, 1212 Smallman St., Strip District, part of *The Darkest Month* exhibition, Dec. 1 through June 8, 412-454-6000, www.pghhistory.org.

Paul Zelinsky, children's author, 10:30 a.m. **Dec. 1,** Carnegie Library Lecture Hall, 4400 Forbes Ave., Black, White, and Read All Over Series, 412-622-3114, www.pittsburghlectures.org.

"Challenges of Race, Poverty, and Sprawl," Sala Udin, president and CEO of Coro Center for Civic Leadership, noon-1:30 p.m. Dec. 3, School of Social Work Conference Center, 2017 Cathedral of Learning, Pitt Center on Race and Social Problems, 412-624-7382, www. crsp.pitt.edu.

Miscellaneous

Kids Holiday Crawl, holiday festival, 11 a.m. Dec. 1, throughout Pittsburgh Cultural District, Downtown, 412-456-6666, Pittsburgh Cultural Trust, www. pgharts.org. **CarKids: Sleigh Ride,** 11-11:45 a.m. **Dec. 1,** Car and Carriage Museum, Frick Art and Historical Center, 7227 Reynolds St., Point Breeze, www.frickart.org.

Glass Ornaments, holiday workshop for families, 12:30-3 p.m. **Dec. 1**, Frick Art and Historical Center, 7227 Reynolds St., Point Breeze, 412-205-2022, www. frickart.org.

Armchair Travels: Algeria, film presentation and guest speaker, 3-5 p.m. **Dec. 1**, Large Print Room, Carnegie Library of Pittsburgh, 4400 Forbes Ave., 412-622-3151, www.carnegielibrary.org.

Pitt PhD Dissertation Defenses

Maria del Pilar Melgarejo Acosta, Department of Hispanic Languages and Literatures, "El lenguaje de la regeración: producción del discurso politico en Colombia y México," 3:30-5:30 p.m. today, 1309a Cathedral of Learning.

Alicia DeFail, School of Engineering, "Poly(lactide-co-glycolide) Microspheres and Hydrogel Delivery Systems for Soft Tissue and Cartilage Tissue Engineering Applications," 4 p.m. today, 16th Floor Conference Room, Biomedical Science Tower.

Sanjaya Dhakal, Department of Epidemiology, "Fat Partitioning and Subclinical Cardiovascular Disease Among Women in Menopausal Transition," 11 a.m.-1:30 p.m. Nov. 27, 523A Crabtree Hall.

Shanna Lorenz, Department of Music, "Japanese in the Samba: Musical Citizenship, Race, and Migration in Japanese Brazil," 1 p.m. Nov. 27, 114 Music Building.

Leonard Huggins, Graduate School of Public and International Affairs, "Comprehensive Disaster Management and Development: The Role of Geoinformatics in Linking Mitigation and Disaster Recovery in the Eastern Caribbean," 3-5 p.m. Nov. 29, 3200 Posvar Hall.

David W. Nauen, Center for Neuroscience/Neurobiology Graduate Program, "Mechanisms of Spike-Timing-Dependent Potentiation Identified Through Investigation of Activity at Individual Synapses," 10 a.m. Dec. 3, 1495 Biomedical Science Tower.

Debra M. Wolf, School of Nursing, "Effect of Patient-Centered Care on Patient Satisfaction at Hospital Discharge," 11 a.m. **Dec. 3,** 331 Victoria Building.

Opera/Theater/Dance

The Chairs and **The Bald Soprano** by Eugene Ionesco, 8 p.m. Nov. 28 through Dec. 2, Studio Theatre, B72 Cathedral of Learning, Pitt Department of Theatre Arts, 412-624-7529, www.play.pitt.edu.

This Wonderful Life, 8 p.m. **through Dec. 16**, O'Reilly Theater, 621 Penn Ave., Downtown, Pittsburgh Public Theater, 412-316-1600, www.pgharts.org.

Murderers, 8 p.m. through Dec. 16, Lester Hamburg Studio, 57 S. 13th St., City Theater, South Side, 412-431-2849, www.pgharts.org.

University Special Events

Osher Lifelong Learning Institute

Open House/Information Session, 10 a.m.-noon **Nov. 28**, 4th Floor, Cathedral of Learning, Pitt College of General Studies, 412-624-7308, www.cgs.pitt. edu/osher.

Pitt Volunteer Pool, Big Brothers and Big Sisters, information session, noon **Nov. 28**, 710 Alumni Hall, 412-624-7709, stz@pitt.edu.

Pitt-Bradford Open

House, 4-6 p.m. Nov. 28, Community Education Council at Elk and Cameron Counties, 4 Erie Ave., 814-834-9329, vogt@upb. pitt.edu.

Nationality Rooms Slate Holiday Open House

Music, dance, food, crafts highlight Sunday program



By Patricia Lomando White

Folk singers and dancers will fill the Cathedral of Learning's Commons Room with song and gaiety on Sunday during the annual Nationality Rooms Holiday Open House.

Events will continue from noon until 4 p.m., and various Nationality Room committees will offer ethnic foods and crafts for purchase.

Each year, the 26 rooms that encircle the Cathedral of Learning's Commons Room are trimmed to reflect their ethnic heritages, including such decorations as Lithuanian geometric straw ornaments, Polish paper cutouts, German gingerbread cookies, a French crèche, and a hand-carved Austrian manger scene.

For the open house and during holiday tours, guides in native costume adapt their daily presentations to include descriptions of holiday traditions celebrated throughout the world.

In addition, open house attendees will be able to view traditional performances and demonstrations by the Pittsburgh Chinese and Ren Wen Chinese schools, Grecian Odyssey Dancers, Natya Bhasah School of Dance, Young Filipino Americans of Pittsburgh, Scandinavian Folk Dancers of Pittsburgh, as well as dancers from Irish, Ukrainian, and Latin American groups.

An intricate bobbin lace weaving demonstration will be held in the Cathedral's Croghan Schenley Room.

Participants and sponsors include Pitt's African Heritage, Austrian, Chinese, Czechoslovakian, Finnish, German, Greek, Indian, Irish, Italian, Japanese, Korean, Polish, Swedish, Syria-Lebanon, Ukrainian, Yugoslav, Latin American, Philippine, Swiss, Thai, Turkish, and Welsh groups, along with Quo Vadis and the Pitt Women's International Club and Women's Association.

The Nationality Classrooms are gifts to the University from Pittsburgh's ethnic groups. Built between 1938 and 2000, each room is designed in an architectural style appropriate to the country for which it is named.

The holiday tours run through Jan 18. The rooms are closed Dec. 24, 25, and 26, 2007, and Jan. 1, 2008. Admission is \$3 for adults and \$1 for children ages eight to 18. Children under eight are admitted free. For the complete tour schedule, visit www. pitt.edu/~natrooms/pages/holiday_info.html.



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Something Fishy in Pittsburgh: Studies Suggest Water Pollution Still Pervasive



By Clare Collins

New research at the University of Pittsburgh suggests that pollution in the region's rivers continues to present a health threat to residents who use the local water supply and eat fish caught here.

What's more, buying fish at the supermarket might not be any safer. One study found that fish caught in Lake Erie and sold commercially in Pittsburgh contained levels of arsenic and selenium almost twice as high as those from the Allegheny and Monongahela rivers, and levels of mercury two-to-four times higher.

Three separate Pitt studies were presented to the American Public Health Association during its annual meeting Nov. 7 in Washington, D.C.

The principal investigator of all three was Conrad Volz, assistant professor of environmental and occupational health in Pitt's Graduate School of Public Health.

Experts consider the studies significant because fish are thought to be reliable indicators of unsafe water. Fish consume fatsoluble chemicals from the water in which they swim and concentrate the toxins within their own bodies.

In the first study, researchers reported that extracts taken from channel catfish caught in the Allegheny and Monongahela caused breast cancer cells to multiply. The fish were caught in areas where sanitary sewers often overflow during rainstorms, releasing raw, untreated sewage directly into rivers.

The study suggests the fish are absorbing chemicals that mimic the actions of the female hormone estrogen, and that those chemicals are making their way into the local water supply, Volz said.

Researchers think the chemicals are accumulating in the fish because "vast quantities" of human waste containing pharmaceutical byproducts are running into local rivers from untreated sewage, Volz said.

About 16 billion gallons of raw sewage reach Pittsburgh rivers each year, he said, "with major implications for public health."

In the study, Volz and colleagues found that exposing extracts of catfish to human breast cancer cells caused them to multiply, if those cells were rated as receptive to estrogen. Cells that were rated nonresponsive to estrogen did not change.

Extracts of fish caught in areas heavily polluted by industrial and municipal wastes resulted in the greatest amount of cell growth, Volz said.

The next step in the research is to identify the specific chemicals and their sources in both local water and fish, he said. "These findings have significant public health implications, since we drink water from the rivers where the fish were caught," Volz said.

Coauthors of the study include Pitt researchers Yan Liu, Christopher Price, Mary Elm, Devra Davis, Maryann Donovan, and Patricia Eagon.

In the second study, Volz and his colleagues reported that white bass caught on the Canadian side of Lake Erie contained significantly higher levels of mercury, arsenic, and selenium than fish caught near active and former steel mills in Pittsburgh.

Researchers asked local anglers to catch 45 white bass at two locations near Pittsburgh; the researchers then compared them to 10 white bass purchased at local markets.

According to study results, mercury levels in store-bought fish were 2.2 to 4.8 times higher, while arsenic levels were 1.7 times higher and selenium levels were 1.9 times higher.

"We were surprised by our results since we had hypothesized that levels of contaminants in fish would be higher in specimens caught near once heavily polluted sites," Volz said. "These results indicate to us that purchasing fish from a local market cannot guarantee food safety."

According to Volz, the results may indicate that sediments in Lake Erie are still being contaminated by coal-fired power plants.

Burning coal in power plants produces toxic byproducts such as mercury, arsenic, and selenium that can contaminate rivers both directly and indirectly through air pollution and water runoff.

In their report, Volz and his colleagues recommend a more rigorous testing program for commercial freshwater fish, "with particular attention to fish entering the U.S. from other countries," he said.

Coauthors of this study include Nancy Sussman, Devra Davis, Maryann Donovan, Jeanne Zborowski, and Yan Liu, all of the University of Pittsburgh.

Additional support came from Sean Brady of Venture Outdoors and fishing instructor Karen Gainey.

instructor Karen Gainey. In the third study, researchers concluded that emissions from coal-fired power plants travel far upstream, contaminating water supplies many miles away. The study found higher levels of mercury than the Evironmental Protection Agency (EPA) recommends, along with elevated levels of selenium in channel catfish caught both around Pittsburgh and near Kittanning, Armstrong County.

Fish caught near Pittsburgh had 3.1 times more mercury than recommended. Surprisingly, fish caught near Kittanning were significantly worse, containing 19 times more mercury than recommended by the EPA.

Fish caught near Kittanning also had higher levels of selenium than those caught in Pittsburgh.

The risk of developing neurological disorders from eating catfish with the levels of mercury found near Kittanning are fiveto-eight times higher than those considered "acceptable" by the EPA. Volz said.

"acceptable" by the EPA, Volz said. He said anglers should be "concerned" about eating fish caught in areas close to coal-fired power plants, and that the general public should be told about the risks.

All of the studies were funded by grants from the Highmark Foundation, the DSF Charitable Trust, and the Heinz Endowments.

Coauthors of the third study include Yan Liu, Nancy Sussman, Tiffany Green, Jim Peterson, Charles Christen, Maryann Donovan, Devra Davis, Patricia Eagon, Kelly McMahon, and Ravi Sharma, all of the University of Pittsburgh; along with Sean Brady of Venture Outdoors; local angler Paul Caruso; and Myron Arnowitt of Clean Water Action.

PUBLICATION NOTICE The next edition of *Pitt Chronicle* will be published Dec 3. The deadline for submitting information is noon Nov. 28. Items for publication in the newspaper's Happenings events calendar (see page 3) should be submitted to chron@pitt.edu. Happenings items should include the following information: title of the event, name and title of speaker(s), date, time, location, sponsor(s), and a phone number and Web site for additional information. Items may be faxed to 412-624-4895 or sent by campus mail to 422 Craig Hall. For more information, call 412-624-1033.