Inside:

THE WHISTLE

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Health Center director on risks associated with tuberculosis

Dr. Cindy Smith
director, Georgia Tech Student Health Center

Last week a confirmed case of active tuberculosis (TB) was recorded on the Georgia Tech Atlanta campus. The student was immediately placed under quarantine and is receiving the necessary antibiotic treatment. The student will not be allowed back to campus until it is certain that there is no danger of spreading the organism. While this news will impact a very, very small number of people on campus, it is important that everyone has factual information regarding tuberculosis.

For tuberculosis cases, thoroughness is more important than speed, as TB has a fairly long gestation period. Therefore, the Health Center will work with the student and the Fulton County Health Department to identify everyone who needs to be notified and possibly screened. Fulton County will organize times and locations for Mantoux skin testing of anyone they identify as having possibly been exposed. Georgia Tech has worked with Fulton County in the past regarding cases of active TB on campus.

As for the disease itself, it's important to understand the difference between active TB and a positive PPD, or skin test for TB. Active TB is characterized by a cough, usually productive of sputum, which may be bloody or blood-specked. Other symptoms to be aware of are night sweats and weight loss. This is the type that may be contagious and is

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A message from President Clough on campus emergency procedures

G. Wayne Clough

With increasing international tensions and talk of war and terrorism around the world, I want to take this opportunity to update you about Georgia Tech's emergency planning procedures. While I hope that we will never have to use them, I want to do everything possible to ensure the health and safety of everyone in the Tech community. Even with the recent lowering of the terrorist threat level, awareness and preparation are our best defense.

Georgia Tech's emergency planning processes have evolved considerably over the last few years. We have always had solid plans in place for health, crime, or natural or man-made emergencies on our campus. But since 9/11, the magnitude of our planning has changed by necessity. We have become keenly aware of the (albeit small) potential for larger scale emergency situations. It is a sad commentary on the society in which we live, but it is a reality that we must deal with nevertheless.

With the potential for war in Iraq and terrorism in the United States and abroad, Georgia Tech is in a higher state of preparation and awareness. We are in continuous contact with emergency planning officials at the local, state and national levels. Our Housing Department created an extensive emergency preparation process. Our research security is considerably more sophisticated with access control, identification of residents/visitors and control of parking. And I hope that everyone is combining a heightened sense of awareness with a sizeable dose of common sense.

While I want to emphasize that

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Predicting the weather for better crop yields in SW Asia

Jane Sanders
Research News

A recently devised method for forecasting monsoon-season weather in Bangladesh could improve agricultural production in south asia and equatorial Africa, according to a climate researcher in the School of Earth and Atmospheric Sciences.

The new technique produced 20- to 25-day forecasts of rainfall in the Ganges Valley of Bangladesh during the summer of 2002. The forecast closely mirrored actual precipitation for the season, according to U.S. State Department-funded research led by Professor Peter Webster and his students.

In the future, such forecasts could guide farmers in choosing optimal planting times and making other decisions, such as better water management, that affect crop production, Webster said.

He presented his findings at last month's annual meeting of the American Association for the Advancement of Science (AAAS).

"Forecasting weather a few days in advance is not particularly useful for agriculture," Webster said. "What is needed is a 20- to 25-day forecast. We are able to do that with our new method. We could have predicted the month-long break in the monsoon rains that lasted from the end of June to early July and which caused a $6 billion loss in crops in the Ganges Valley. If farmers had this forecast last summer, they could have changed agricultural practices, such as delaying the planting."

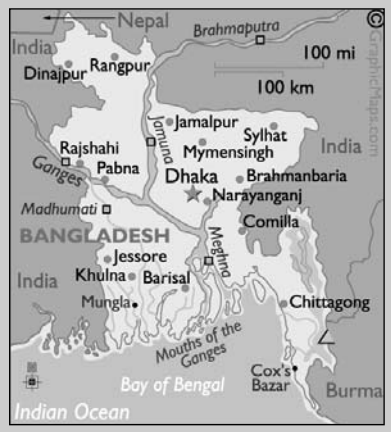
Webster's forecasting method is applicable to the rainy season of any monsoon region and adjusts for precipitation changes related to temporary climatic events such as El Niño and La Niña. Last year was an El Niño year and, as expected, it resulted in decreased rainfall on the Indian subcontinent.

The method — developed with graduate researcher Carlos Hoyos — is essentially statistical, but depends on a detailed knowledge of the dynamics of the atmosphere and the ocean, which produce monsoon variability on monthly time scales. Many years of theoretical modeling and experimental research in the Indian Ocean have given researchers an understanding of the physical nature of the oscillation. Meanwhile, much of what researchers understand about the nature of the variability comes from a research cruise Webster led in the Bay of Bengal in 1999.

Webster is now intent on making this type of forecast — and a future version for flood prediction — available to agricultural and other

Monsoon continued, page 2

At a glance: Bangladesh



Size: slightly smaller than Iowa.

Climate: tropical; mild winter (October to March); hot, humid summer (March to June); humid, warm rainy monsoon (June to October).

Geography: most of the country is situated on deltas of large rivers flowing from the Himalayas: the Ganges unites with the Jamuna (main channel of the Brahmaputra) and later joins the Meghna to eventually empty into the Bay of Bengal.

Hazards: droughts, cyclones; much of the country routinely inundated during the summer monsoon season.

Economy: nearly two-thirds of Bangladeshis are employed in the agriculture sector, with rice as the single most important product. Major impediments to growth include frequent cyclones and floods ... [and] a rapidly growing labor force that cannot be absorbed by agriculture.

Source: CIA Factbook, 2002

"QUOTE— UNQUOTE"

"There's all this talk about how international accounting standards are better. When I hear that it just makes me sick to my stomach because I think it's so wrong. There's more flexibility in the international standards. It makes it where it's easier to do the kinds of things you want to do. ...If they want to hide it, they're going to hide it."
—Charles Mulford, a professor in the DuPree College of Management, on why foreign companies that trade on U.S. exchanges — and their auditors — must be subject to American accounting rules. (Washington Post)

"It's beauty. Physics has standards of beauty just as mathematics does."
—David Finkelstein, a professor in the School of Physics, on new research that objects can propel themselves through space by exploiting the curves of space and time, as characterized in Einstein's theory of relativity. Noting its impracticality, the scientist who published these findings, Jack Wisdom, called the insight "a fun result." (United Press International)

Maple named to national board serving museums and libraries

Sean Selman
Institute Communications and Public Affairs

Terry Maple, a professor of animal behavior at Georgia Tech and president emeritus of Zoo Atlanta, recently took an oath of office as a member of the National Museum Service Board during a ceremony administered by U.S. Supreme Court Justice David H. Souter.

A researcher in the School of Psychology, Maple was one of 10 new board members nominated by President George W. Bush and confirmed by the U.S. Senate for the museum board. He will continue to raise funds and direct the new Center for Conservation and Behavior, a Georgia Tech research center dedicated to studying animal behavior and how zoos might help endangered species.

In all, there are 15 members of the National Museum Service Board, which advises the director of the Institute of Museum and Library Services (IMLS) and makes recommendations for the National Award for Museum Service, the nation's highest honor for extraordinary public service provided by America's museums.

"The National Museum Services Board takes an active part in championing the role museums play in our society," IMLS Director Robert Martin said. "Together, the board and the Institute have the responsibility to place a national spotlight on the outstanding work that America's museums do, and on the enormous

contributions they make serving our communities and sustaining our cultural heritage."

The IMLS is an independent federal agency and a primary source of federal grants for the nation's 15,000 museums and 122,000 libraries. Its grants and leadership help museums care for collections, expand public-education programs, partner with community organizations and use new technology. Congress established the National Museum Services Board in 1976. Members are selected from among citizens recognized for their broad knowledge, expertise or experience in museums or commitment to museums.

Until this past January, Maple was president of Zoo Atlanta, a post he had held since his appointment by then-Atlanta Mayor Andrew Young in 1984. At that time, prior neglect, mismanagement and lack of funds had led to the deaths of several animals, the loss of Zoo Atlanta's accreditation from the American Society of Zoological Parks and Aquariums, and the notoriety of being named one of the 10 worst zoos in the country by the Humane Society of the United States.

During his tenure, Maple helped turn Zoo Atlanta into one of the nation's finest, attracting national awards and an increase in annual visitors. In 1999, the year after two giant pandas arrived, the zoo hit an attendance record of 1 million visitors. It also became one of metro Atlanta's top attractions.

Maple remained on Georgia Tech's faculty during his tenure at the zoo, specializing in animal behavior in the School of Psychology. He will continue to work in that area while heading up the Center for Conservation and Behavior, said Gary Schuster, dean of the College of Sciences.

Maple is the founding editor of the professional journal Zoo Biology and is the author and editor of more than 120 scientific publications. He is an elected Fellow of the American Psychological Association and a former president of the American Association of Zoological Parks and Aquariums.

For more information...

School of Psychology
www.psychology.gatech.edu

Institute of Museum and Library Services
www.imls.gov

Georgia Tech

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Above, migrant farm workers plant rice in Bangladesh. Professor Peter Webster hopes his monsoon forecasting method will help farmers make informed planting decisions and increase crop yields.

government officials in Bangladesh and ultimately, other places where rainfall varies drastically within a season. He has received official government recognition to form an organization called Climate Forecasting Applications in Bangladesh (CFAB). With this group's help, Webster hopes to significantly improve crop yields.

"This 20- to 25-day forecast has the potential for creating a new green revolution," Webster said. "We had the first one in the '60s with hybrid crops that increased yields by 30 to 40 percent, but it was quite expensive as the new hybrid crops demanded the use of large amounts of pesticides and fertilizer. And there was a lot of pollution associated with this use. Our forecasting scheme could create a truly green revolution. It won't require any new pesticides or fertilizers and may reduce their use by application when they are most needed. Also, water managers could hold water in reserve for dissemination later."

Webster has another, more problematic goal for his research. He hopes, in time, that farmers in developing countries will become less dependent on having their children as co-laborers in the fields. Perhaps they will choose to have smaller families if they see their crop yields increase and gain confidence in the new forecasting technique, Webster said. Such choices could ease environmental, political and societal pressures related to large, dense populations in developing nations. The monsoon regions are already home to more than 50 percent of the world's population and are growing rapidly — at rates of 2 to 4 percent a year.

"It is our aim to reduce vulnerability to climate variability through this long-term forecasting," Webster said. "These issues are tied together. You won't be able to do anything about population growth until you decouple it with the need for a large population."

Women's Awareness Month: a calendar of events

March 18
"The World Through Gilman's Eyes"
An examination of the major influences on the life and writing of foundational feminist Charlotte Perkins Gilman, 3 p.m. in the Student Center Ballroom.

March 20
"The History of Women at Tech" with Marilyn Somers
Director of the Georgia Tech Alumni Association Living History Program, Somers will provide additional insight at the exhibit currently on display, 4 p.m. in the Library.

March 24
Take Back the Night
An opportunity to raise awareness about sexual violence and assault, followed by a march through the campus and a reception, 8 p.m. at the campanile.

March 27
Molly Ivins
Nationally syndicated columnist and political commentator visits Ivan Allen College as part of its Founder's Day Celebration, at 1 p.m. in the Student Center Ballroom.

March 28
"The Next 50 Years"
This town hall meeting will discuss the possibilities for women at Tech in the next half-century

March 28
50 Years of Women Celebration
A banquet dinner to celebrate the accomplishments and contributions of women over the last 50 years. There is limited space. For more information, e-mail gte353n@prism.gatech.edu.

Emergency, cont'd from page 1

we have received no indications whatsoever of any threat against Georgia Tech, I urge you all to be much more aware of your surroundings. Our emergency response process is triggered by a phone call to the GT Police Department. If you see anything suspicious, alarming or out of the ordinary, one should err on the side of contacting the GTPD. It will help to assure the safety of the entire Tech community and to improve the ability for anticipation and response.

In the case of an actual emergency, we will communicate with you through a variety of means. They include the main Georgia Tech home page (**www.gatech.edu**); a recorded line at the GTPD (**894-0500**); the main campus phone line (**894-2000**); the Georgia Tech Cable Network (**GTCN**), WREK Radio Station (**91.1 FM**); and radio and TV stations throughout the metro Atlanta area. If there is any discrepancy between any of those outlets, the Tech home page, if available, will have definitive information.

In addition to measures the Institute is taking, it's important for each employee to take precautions to ensure safety and the ability to communicate with family in a time of crisis. The links also provide some of that information, but take note of the following precautions and procedures:

• Keep enough emergency supplies in your office or car (medication, flashlight, batteries, comfortable shoes, bottled water, food, portable radio) for up to 72 hours.
• Post emergency procedures information in a visible location in your office.
• Become familiar with the quickest exit routes from whatever building you are in at the time. The best advice in case of an emergency is to remain in that building, unless directed to evacuate.
• Locate the nearest fire extinguisher and pull station.
• Register for or refresh your knowledge of CPR, first aid, crime prevention or other safety training courses.
• Prepare a plan for yourself and your family specifying what you will do, where you will go and how you will communicate in the event of an emergency.

This note is intended to inform, not alarm. The safety of each and every one of you is of paramount concern to me, your families and your friends. I want to ensure that each of you is aware of your surroundings and has the best information possible in case crisis strikes. But I want you to feel assured that people throughout Georgia Tech are doing everything they possibly can to ensure your personal safety.

For more information...

Federal Emergency Management Agency:
www.fema.gov

Department of Homeland Security:
www.ready.gov

Centers for Disease Control:
www.cdc.gov

TB, con't from page 1

usually spread through airborne respiratory droplets. Killed by sunlight and bleach, this organism is not particularly strong.

The PPD, or skin test, checks only for exposure to the organism. A positive skin test does not mean that an individual has active disease that could be spread to another person. Although those who receive positive skin tests are offered antibiotics, this is to ensure that they do not develop TB sometime in the future. About 10 percent of those with a positive skin test develop TB in the future. In those cases, it is usually many years later when their immune response is not adequate to protect them, whether due to aging or other diseases.

Someone with active TB is actively spreading the organism, usually through respiratory droplets. They are quarantined until they have been adequately treated with antibiotics and are no longer contagious. They will then continue to take antibiotics for an extended period of time, even though they are no longer infectious.

More information is on the Health Center's Web page, **www.health.gatech.edu**, under "Announcements," then "Tuberculosis." There is also extensive information on CDC's web page at www.cdc.gov.

If you decide to get a test from your private physician, it is important that you get a Mantoux test — not a Tine test — and ensure that test results are read at your physician's office within 48 to 72 hours. If they do not follow up within that time period, the test has no validity.

The Fulton County Tuberculosis Program will talk with anyone who has concerns about the testing. Their offices are located at 99 Butler Street, across from Grady Hospital.

IN BRIEF:

Homeland Security means changes at INS

When President George W. Bush signed the Homeland Security Act of 2002 into law, it marked the largest governmental reorganization in more than 70 years. Among the changes, the Immigration and Naturalization Services (INS) has been reorganized through the Department of Homeland Security (DHS). Effective March 1, the INS no longer exists and is now known as the Bureau of Citizenship and Immigration Services (BCIS).

As a result, the following business practices have been impacted:
• All future check requests are to be made payable to the BCIS (Bureau of Citizenship and Immigration Services).
• Filing fees have changed.
• New web address: www.immigration.gov

For additional information, refer to www.immigration.gov/graphics/homeland.htm

Illness claims GTRI researcher

On Feb. 7, George McDougal, a research engineer in the Electronic Systems Laboratory (ELSYS) of the Georgia Tech Research Institute, died after an extended illness. He was 52.

McDougal, or Mac, as he was known to his peers, began his career at Tech more than 30 years ago as a co-op trainee while still an undergraduate student. He was a national expert in testing electronic warfare systems and one of the key developers of the Electronic Combat Test Process — the approach adopted by the Air Force to apply scientific methodology to testing electronic combat systems before operational use.

ELSYS Director Bill Rogers said, "Mac had a determined, no-nonsense approach to getting the job done. He was highly efficient and motivated. Mac loved his work and the people he worked with. Mac tried to be gruff, but just couldn't pull it off after you knew him."

At various times in his career, McDougal served as a branch head, an associate division chief, an associate lab director, and finally as chief of the Systems Evaluation Division, managing about 100 researchers/students/support staff. Many of his co-ops became full-time GTRI employees after graduation.

McDougal was also active in his community, serving as a coach for little league baseball at Shaw Park, for basketball at J.J. Daniel Middle School and for the Special Olympics. He is survived by his wife, Margaret, and two sons, Chase and Adam.

Those who wish to make contributions in McDougal's memory may do so to Camp Glisson, 865 Camp Glisson Road, Dahlonega, Ga., 30533.

Pi Mile Road Race

On Saturday, April 12, the Alumni Association holds its annual Pi Mile Road Race — a 5-kilometer trek through campus for faculty, staff, students and alumni, as well as a 1-mile fun run. Early registration is before Friday, April 4, but participants may register up to the day of the race.

For more information, refer to www.gtalumni.org/pimile or call 894-7085.

For more information...

Federal Emergency Management Agency:
www.fema.gov

Department of Homeland Security:
www.ready.gov

Centers for Disease Control:
www.cdc.gov