A Note from the Chair...

BOOKS!... Remember them?

I recently read a quote in the Chronicle of Higher Education from a student (Sarah) who was participating in a Technology Forum designed to learn about the habits and attitudes of “millenials” (your generation) relative to technology and communications. Sarah said, “My dad is still into the whole book thing. He has not realized that the Internet kind of took the place of that.” I have to admit, I was taken aback by the quote. Although I still resist some aspects of modern communications (I have yet to give my life over to a Blackberry), I do read my share of on-line publications. And I appreciate their advantages over paper: they consume less space in the file drawer or on the book shelf; they don’t waste paper; they’re searchable by word or phrase; and oftentimes they’re even free of charge. But, even if it marks me as an old fogey (and I’m willing to admit that I’m reaching the age when I have to start accepting that label), I don’t mind saying that I remain firmly in the camp of Sarah’s dad. I like books! Books provide a sort of experience that I believe simply is not available with a computer. Even if you could have on-line access to all the books you want to read (and I know that Google is working its way through the University of Michigan libraries), it’s hard for me to imagine that many people will read through a several hundred page book on their computer. This is a case where the medium really is the message: a computer just can’t replicate the comfort of settling down with a good book. So, for the coming summer (and it is coming!), treat yourself to some of the following. You can buy them on-line. But read them by the pool, or sprawled on the grass under a tree, or in your favorite chair.

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David Quammen to speak on Darwin: 7:00 pm, April 5th

David Quammen, an award-winning science, nature and travel writer, will visit Wright State on April 5. Born in Cincinnati, Quammen graduated from Yale and was a Rhodes Scholar. Quammen’s writing has appeared in publications such as National Geographic, Outside, and Rolling Stone, and he is the author of several books on topics in biology, including “Song of the Dodo” (on island ecology), “Monster of God” (on large predators and their place in a human-dominated world), and “The Reluctant Mr. Darwin” (about guess who??). Quammen’s talk in the Student Union Apollo Room is entitled “Charles Darwin: The Secret Life of a Conservative Revolutionary.” A book signing will precede the presentation at 6 p.m.

Inside this Issue:

- Department welcomes new office assistant
- Diggs Biology Building dedicated
- Dr. Amon receives wetlands award
- Students & public lectures
- New PreMed advisor
- 3 Faculty awarded Research Challenge Grants
- Students in the News
- Important Spring quarter dates

The event is free and open to the public. Plan to attend!
The following are a few books on themes in biology or science that have crossed my attention in recent months. For some previous suggestions, see the Biologue from Spring, 2005, available via the “news and outreach” tab on the Bio Sci web site at www.wright.edu/biology.

**Song of the Dodo**, by David Quammen. You might want to read this one soon, before Quammen’s visit to Wright State in April. Or perhaps his visit will stimulate your interest. This book contains a series of essays on the biology of islands. (“I’m sure you know of dodos. Do you know where they lived?”) Islands have long been proving grounds for ideas in biology—the Galapagos Islands come immediately to mind—and they also are great destinations for adventure travel. Quammen has clearly had his share of adventures in pursuit of subject matter for his writing.

**Final Exam: A Surgeon’s Reflections on Mortality**, by Pauline W. Chen. We tend not to like to think about death. And it might be hard to really predict how death will affect us when it does enter our lives; The Year of Magical Thinking by Joan Didion is a recent book that vividly captures the altered reality that can descend when those close to us fall ill or die. But for those of you contemplating medical school, a consideration of death should probably be a necessary part of your education. Chen is a transplant physician, and Final Exam considers in a thoughtful way a variety of contexts in which a physician might encounter death. Going into medicine? Read this book.

**Why We Run: A Natural History**, by Bernd Heinrich. Heinrich is an animal physiologist and naturalist. He made his reputation originally through studies of insect physiology. More recently, his books recounting adventures with and studies of ravens, owls, and the world of winter have been widely read. But this particular book (Why We Run) takes up a different subject. Heinrich loves to run, and this book describes his own training and testing of strategies for a 100 km race, using the insights gained from studies of animal physiology, energy metabolism, and locomotion. Worth reading whether or not you think that running 100 km is a crazy thing even to contemplate!

**Stiff: the curious lives of human cadavers**, by Mary Roach. Our bodies may be sacred—but they’re also useful. This book recounts the diverse ways that corpses have been used over the years, from forensic studies of decay rates on The Farm to providing subjects for practicing plastic surgeons. Sometimes macabre, often funny, always interesting.

**Year of Wonders**, by Geraldine Brooks. In the modern Western World, major killers tend to be diseases of old age like cancer and heart disease. But antibiotics were developed less than a century ago, and even today a woman living in Zimbabwe has a life expectancy of just 34 years (34 years!!!) largely because of infectious disease (in this case, mostly because of AIDS). Year of Wonders tells the story of a town in 17th century England affected by bubonic plague (the black death). The experiences of this town ring eerily similar to the sorts of scenarios one hears being modeled today in preparation for the possibility of bioterrorist attack. Read the book, then check out www.zkea.com/archives/archive01008.html.

**The World is Flat**, by Tom Friedman. This is the book everyone has been talking about for the past year or two. Friedman is a writer and political columnist; his columns on Iraq, the Middle East, energy policy, and many other topics often appear in the Dayton Daily News. He argues that modern technologies and communications are fundamentally changing the face of the world economy in knowledge and goods. The implications for the US, if it wants to remain a world leader, are profound, and strength in science is the way to retain that leadership. How should you students, as emerging scientists, best position yourselves to succeed in a world where India and China, with a third of the world’s population, are avidly promoting education and training in the sciences? Worth your time to read and ponder!

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**New Office Assistant Joins Department**

**Jackie Goldenbogen** has recently joined our administrative staff and will be primarily responsible for managing faculty and departmental accounts. She previously worked for the government at Wright Patterson Air Force Base. When she’s not driving her two kids to dance or basketball practice, she enjoys reading or motorcycle riding with her husband. Jackie also plans on continuing her education at WSU and completing her degree. **Welcome to the Department, Jackie!**
Pete McIntyre receives Smith Fellowship:

Dr. Pete McIntyre is a post-doctoral fellow (“post-doc”) working in Dr. Yvonne Vadeboncour’s lab. Post-docs are common positions in the chain of advancement to careers in science, a time following attainment of the Ph.D. when a person immerses in research and develops as an independent researcher. Pete received his PhD at Cornell a year or so ago, and he was recently awarded one of four Smith Fellowships from the Society for Conservation Biology. His project, “Connecting fish management to ecosystem functioning: a nutrient-based approach,” will be largely based at the University of Michigan, but will also allow him to continue projects in collaboration with Wright State.

Pete recently interviewed for a faculty position at Berkeley. But for now, he is co-teaching the Biology of Selected Marine Environments course this quarter, so those of you accompanying him to the Duke Marine Lab will have a chance to learn about his work.

Roger Fecher: Honors Student wins prestigious award

Roger Fecher, a senior Biology major (far right in the photo, accompanying Honors personnel and Nobel Peace Laureate Wangari Maathai) serves on the 2007 Honors Institute Student team. The Honors program offers these competitive fellowships each year to junior and senior Honors students, who help research, plan and implement the annual Honors Institute. Roger helped to initiate a microfinance campaign, raising funds to help low-income workers in Malawi, consistent with this year’s Institute theme of Poverty.

More recently, Roger was named recipient of a Goldwater Scholarship, a prestigious national award established to “provide a continuing source of highly qualified scientists” (www.act.org/goldwater/). The scholarship will support his senior research project with Dr. Courtney Sulentic. Roger is just the fourth student in Wright State’s history to win a Goldwater; 2 of the 4 have been Bio majors.

Stefanie Ward goes Ph.D.

Like many of our students, Stefanie Ward entered Wright State intending to pursue medicine. During the course of her Biology program, she decided to gain some research experience and joined Stephanie Smith’s lab. That experience led to a summer research internship with one of Dr. Smith’s colleagues at University of Missouri--and the combination opened Stefanie's eyes to the rewards and excitement of a career in research. As a result, Stefanie switched her plans and applied to PhD programs. She has recently been accepted, among other places, to the PhD program at UC in Molecular Genetics, Biochemistry, and Microbiology, and she will begin her studies there in the Fall.

2006 Biology Honor Student Graduates:

UNIVERSITY HONORS
- Gerirose Givan: (Advisor: Scott Baird)
- Maria Leiter (Advisor: James Runkle)
- Darshini Trivedi (Advisor: Dawn Wooley)

DEPARTMENTAL HONORS
- Eusondia Barto (Advisor: Don Cipollini)

GENERAL STUDIES
- Dawna Donges, Katherine Moore, Jonathan Nieves, Karyn Pinson, Gavin Spitter, Shantelle Strait, Derek Thomas

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Faculty Members Awarded Research Challenge Grants

Dr. Paula Bubulya will investigate new functions for Bc12-like transcription factor (Btf) and Son protein. This pilot study could potentially reveal multiple cancer-related functions for these newly identified members of the gene regulatory machinery. Misregulation of both cell division and gene expression are two of the initial and most relevant characteristics adopted by cancer cells. We predict that Btf is completely absent in certain blood-related cancers, and we hypothesize that re-introducing Btf into lymphoid cells will reduce the growth rate of lymphoid cell lines. Also, Btf and son are likely to promote programmed cell death, a mechanism used by normal cells to self-destruct when they detect internal problems. Cancer cells can often evade these death signals and continue to grow, and this may occur if Btf (or Son) is absent. To learn more about how Btf and son may promote cell death cues, we will induce apoptosis in cells that do not have these proteins to determine how this affects cell death pathways.

Dr. Stephanie Smith was awarded funds to develop innovative tools for the genetic manipulation of Francisella tularensis, the causative agent of the debilitating disease of tularemia, and a member of the CDC’s notorious “select agent” list. This organism is one of the top three bacterial threats in the context of bioterrorism, behind anthrax and plague. There is therefore a great need to develop tools for its genetic manipulation, so that in the long run a safe and effective vaccine can be developed to protect against it. Chris Schooley will be working on this project to earn his Master’s degree in Biology, under Dr. Smith’s guidance.

One of the major advances in evolutionary biology in recent years is the recognition that the origins of the incredible diversity of life on earth lie largely in the interactions organisms have with each other. Yet, we know remarkably little about what might be described as “the ecology of diversification”. Dr. John Stireman’s project seeks to understand the process of adaptive diversification in a complex ecological system found across much of North America consisting of a gall-forming fly, its host-plant, a symbolic fungus, and its parasitic enemies. DNA analyses along with behavioral assays and ecological experiments will be used to determine the pattern of evolutionary radiation of flies and fungus, and the ecological and behavioral processes that are involved.

Jim Amon Wins Environmental Award

Congratulations to Dr. Jim Amon, who has been awarded the Beavercreek Chamber of Commerce Environmental Award for 2007. Dr. Amon has been a tireless worker with the Beavercreek Wetlands association, which he helped to found. He has promoted land conservation, community education, wetlands restoration, and research on wetlands processes in an effort to preserve this dwindling habitat and sustain a natural corridor in the midst of a rapidly growing community. Many of you have probably visited the Beavercreek Wetlands, you can easily do so at one of the several points of public access. And if you really want to learn more, think about taking Dr. Amon’s Wetland Biology class, offered in the summer quarter.
**Student Comments say: you, too, should attend more public lectures**

Hopefully you are noticing that, as Wright State moves into its 40th anniversary celebration, there have been a continuing series of excellent speakers visiting campus. In February, Dr. Joe Schwarcz, Canada’s “Mr. Science,” spoke on the topic of “Science in the age of Anxiety.” Schwarcz used an engaging lecture style and many examples from everyday life to drive home the point that scientific literacy and a critical mind can help to differentiate what is and what is not really worth worrying about. A number of BIO 111 students attended the lecture and provided feedback. **Comments from your fellow students make the point: you should start attending these lectures!** The following are a few excerpts from those student comments.

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--This lecture WAS both informative and entertaining, you were so right.

--I learned that one of my roommates got ripped off because she paid $30 to put her feet in rusty water because she thought that she was getting detoxified. The speaker was funny as well as informative.

--I came into this presentation thinking that it was going to be boring and a waste of time but it was the exact opposite, it was interesting and quite funny.

--The presentation helped shed insight on a variety of ‘scientific’ claims. I think that Schwarcz’ main point was that the public must maintain an open mind, but also that we as scientists have an obligation and opportunity to provide them with realistic, helpful information.

--I had intended to stay only long enough to pick up something to say in this e-mail but ended up staying.

--I found the lecture to be surprisingly entertaining, enjoyable and enlightening.

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**Spring Quarter Seminars**

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>March 26</td>
<td>Dr. David Goldstein</td>
<td>“Water, glycerol and aquaporins in a freeze-tolerant amphibian”</td>
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<tr>
<td>April 2</td>
<td>Dr. Jeffrey Stumpf</td>
<td>“Polyphosphate kinase regulates adaptive mutation and translesion synthesis by DNA Polymerase IV in Escherichia coli”</td>
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<tr>
<td>April 9</td>
<td>Dr. Emily Stanley</td>
<td>“Dammed and undammed: impoundments and removals in Wisconsin rivers”</td>
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<tr>
<td>April 16</td>
<td>Dr. Jason McLachlan</td>
<td>“Limitations on species range expansion in the face of climate change: Lessons from the last ice age”</td>
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<td>April 23</td>
<td>Dr. Jayne Robinson</td>
<td>“Phage SN-T and its ability to transfer 16S rRNA genes”</td>
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<td>April 30</td>
<td>TBA</td>
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<tr>
<td>May 7</td>
<td>Dr. Andre Landry, Jr.</td>
<td>“Tracking the recovery of the endangered Kemp’s Ridley sea turtle”</td>
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<td>May 14</td>
<td>Dr. John Nason</td>
<td>“Ecological and evolutionary dynamics in highly coevolved pollination mutualisms”</td>
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<tr>
<td>May 21</td>
<td>Dr. Allan Jamieson</td>
<td>“Death, drugs and dynamite: The science of forensic science”</td>
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**Seminars meet from 1:30-2:30 pm in room 105 BH. Snacks & drinks are provided. Everyone is welcome to attend!**
Mark Your Calendars!

Spring Quarter Schedule:

March 26  Spring Quarter 2007 Classes begin
April 2    70% refund period begins
April 10   Last day to withdraw and receive 70% refund
April 13   Last day to drop a class without a grade
May 11     Last day to drop a class without a grade of “W”
May 25     Last day to apply for August 2007 graduation
May 28     Memorial Day, University closed
June 2      Last day of Spring quarter classes
June 4-9    Final Exams for Spring Quarter
June 9      Spring Commencement Ceremony

Good Luck
Winter Graduates

John Angel   Chad Moser
Ryan Boone   Kali Spears
Amanda Vince Justin Weddle
Steven Baird  Jim McCormick
Leah Bischoff  Jason Broomhall
Dawn Douglass  Ameeya Gipson
Trisha Bachelder  Nathan Richards

If you are planning on graduating after summer or fall quarter, please see an advisor for graduation approval.

Application filing periods are:
Summer Graduation  March 2-May 25
Fall Graduation    May 26-August 21

Need Advising?  If you need to schedule an appointment with an advisor, please call 775-4226 or e-mail bioadvising@wright.edu. Make sure to include the name of the advisor of wish to meet with, along with your availability.

- Undergraduate Degrees:
  Jacqui Neal
- Graduate Degree:
  Laura Buerschen
- Clinical Lab Sciences:
  Bev Schieltz

The Biologue is a quarterly student newsletter that contains important information for students in the Department of Biological Sciences.