A Note From The Chair:

“We wish to suggest…”

It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us.” So begins the final paragraph of Darwin’s Origin of Species. Darwin wrote in a time when scientific prose was often lavish and stylized. Even the title of his seminal book was more elaborate than would be likely today: On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life. Effective communication remains a centerpiece of the skill set required of any scientist. Yet students reading modern research articles may quite reasonably come to believe that scientific writing is dry, full of technical jargon, and formulaic.

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Bio Students in the News

Wright State Biology students shine in many ways. Here are some of the amazing things they are doing on campus and across the globe.

U.S. – Brazil Consortium Biomedical Research Experience

Four Wright State University undergraduate students travelled to Brazil during the Fall 2012 semester. Liz Landis, Christina Culler, Theresa Fennell and Jonathan Ali spent their time at the University Federal de Minas Gerais in Belo Horizonte, Brazil. The purpose of this program is to train U.S. students in translational biology and to foster the development of cultural competencies and broaden scientific horizons. Students pay the standard WSU tuition rate for a semester and receive course credit for the experience and in addition they receive a stipend for living expenses and round trip airfare.

Theresa Fennell noted that this was “the most amazing experience of my life” and truly enjoyed everything that Brazil had to offer. Liz Landis documented the experience in her blog: http://landisea.wordpress.com/. This is a wonderful glimpse into their time in Brazil. Please visit Liz’s site to learn more her trip and how her opportunity to play ‘host’ess lead to a unique use of bacon.

BIO CLUB Clean-Up

Bio Club members organized a wetlands clean up event at the Beavercreek Wetlands with the help of Professor Emeritus Dr. James Amon this past Fall Semester 2012. Contact Bio Club President Audrey Johnson at johnson.967@wright.edu to learn more about the club and opportunities to join in their activities.
Spring 2013 Departmental Seminar Series
Seminars will be held in 206 Fawcett Hall at 1:25 p.m.

Feb. 8  Jason Weinberg, Univ. Michigan  Host: Dr. Excoffon
“Mouse Models of Adenovirus Pathogenesis: Eicosanoids, Neonates and More”

March 4  Jeff DaCosta, Boston U.  Host: Dr. Peters
“A genomic assessment of evolutionary history and population structure of brood parasitic indigobirds”

March 11 Cindy Harley, U. Minn  Host: Dr. Schen & Dr. Hartzler
“You can’t always get what you want. But if you crawl sometimes, you might just find, you get what you need”

March 18 Bob Ricklefs, U. Missou  Host: Dr. Bahn
“Regional and historical perspectives on ecological communities”

March 25 Robert Espinosa, Cal. Northridge  Host: Dr. Hartzler
“Speciation and phylogeny of austral South American lizards”

April 1  Chet Cooper, Y.S.U.  Host: Dr. Krane
“Morphogenesis of the Pathogenic Fungus, Penicillium marneffei: A Molecular Perspective”

April 8  W. Krasov, U. Michigan  Host: Dr. Excoffon
“Title: TBA”

Good Luck & Congratulations Jacqui Neal!

Jacqui Neal has been with the Department of Biological Sciences as an undergraduate student, a graduate student, an academic advisor and as a program director. We are very proud to announce that Jacqui is now working exclusively for the Pre-Health Program as the Director of that program. While Jacqui no longer works for Biology she will always be a part of our gang. The Department wishes her the best and we sincerely thank her for her years of hard work and dedication with our Bio students, faculty and staff. Jacqui’s office is now located in 106 Oelman Hall in the College of Science and Mathematics Dean's Office. She can be reached via email at jacqueline.neal@wright.edu or by phone at 775-3180. We look forward to watching the Pre-Health Program grow and to continue to succeed under Jacqui’s terrific leadership.

Congratulations and best wishes Jacqui!
Dr. John Stireman recently had the honor of having a newly discovered species of wasp named after him. *Ilatha stiremani* is a large colorful wasp that lays its eggs inside a parasitic fly, which he has spent his career studying. Researching these bugs could lead to information that could help control insects on crops without using pesticides, which is a practice that is in demand. This is an honor and the Department wishes to congratulate Dr. Stireman. Nice work John!

**Wasp Named After WSU Professor!**
Indeed, the Introduction to Journal-Style Scientific Writing from Bates College (http://abacus.bates.edu/~ganderso/biology/resources/writing/HTW_general.html), which appeared as one of the first links when I googled “guide to scientific writing,” includes advice such as, “Write briefly and to the point. Say what you mean clearly and avoid embellishment with unnecessary words or phrases. Brevity is very important,” and, “Precise word use is critical: Scientific terminology carries specific meaning… A critical function of technical terminology is to say a lot with a few words, i.e., economy. It all sounds very boring! Of course, use of that precise writing style can still result in some intriguing sentences. A recent paper describing several new species of wasps (Proc. Entomol. Soc. Wash. 114: 293-328, 2012) notes that Aletha stiremani (named for our own John Stireman) is “a solitary koinobiont endo-parasitoid of cyclorrhaphous Diptera.” Doesn’t that make you want to run for the dictionary?

Already 60 years ago, Otto Loewi, the “father of neuroscience,” lamented the standardized style of scientific prose. (Some things have changed since then, though; in the same 1954 essay (Ann. Rev. Phys. 16: 1-11), Loewi asks “whether the time available for teaching medical physiology suffices to include some cellular physiology.”) Loewi was a creative individual; he received the 1936 Nobel Prize in Physiology or Medicine for discoveries in neurotransmission, based in part on experiments that came to him in his sleep. Loewi noted that, “A scientific worker nowadays rarely finds it possible to publish papers which have a personal touch… In general, …the ordinary papers which fill the scientific journals… contain a short introduction, detailed reports on the methods and experiments and such conclusions as can be safely drawn from them. Usually the style too is impersonal… This routine form of publication is perfectly appropriate for the information of scientists familiar with the fields concerned. It is doubtful, however, whether the merely factual content of papers, unless their importance is self-evident, helps much to inspire and educate students.”

Of course, exceptions to these generalities do appear occasionally. A famous example is the one-page paper in which Watson and Crick first described their model for the double helical structure of DNA. That paper begins, “We wish to suggest a structure for the salt of deoxyribose nucleic acid (D.N.A.). This structure has novel features which are of considerable biological interest.” The unusual first person style (“We wish to suggest…”) and the understated conclusion (“…considerable biological interest”) attract the interest of the reader to what Watson and Crick knew perfectly well was an important discovery.

If you think about it, though, the skills that are key to success as a scientist—the ability to look deeply into a question, to think creatively, and to communicate in a clear and compelling way—also lend themselves to what might seem a completely opposite field of endeavor—writing fiction. A well known example of someone who contributed to both science and literature is Vladimir Nabokov. Best known as author of Lolita and inventor of Humbert Humbert, Nabokov also was an accomplished lepidopterist who made lasting discoveries in butterfly biology. As noted in Wikipedia, the evolutionary biologist Stephen Jay Gould suggested that Nabokov's dual contributions “both stemmed from Nabokov's love of detail, contemplation, and symmetry.”

A more recent novel--Flight Behavior--also happens to deal with butterflies and was written by an author—Barbara Kingsolver—who also spans biology and literature. Kingsolver (http://www.kingsolver.com/) completed her Masters degree, and initiated PhD studies, in Ecology and Evolutionary Biology at University of Arizona. She made the transition to novelist first by doing science writing for the university and then by winning a short story contest. Kingsolver has risen to great acclaim: she won the 2011 Dayton Literary Peace Prize for her body of work, and Flight Behavior, her most recent book, is currently #17 on the New York Times bestselling fiction list (and #5 on the LA Times list). That book harkens right back to her roots as a biologist. The framework for the book is a shift in the migration of monarch butterflies induced by climate change, so that they overwinter in Tennessee rather than Mexico. The story chronicles the impact of that shift on a local family and community—including their interaction with the biologist who comes to study the phenomenon. Another contemporary author who made the shift from biologist to novelist is Diana Gabaldon (http://www.dianagabaldon.com/). Dr. Gabaldon completed her PhD in marine and behavioral zoology at UCLA in the early 1980s. She began technical writing, mostly about the emerging technology of personal computers and realized her pleasure in writing and her talent for research might lend themselves to writing historical fiction. Her Outlander series has sold millions of copies.

The message here is not that you should aspire to be a best-selling author. Rather, it is to recognize that success as a scientist entails a wide array of skills—technical, creative, analytical, interpersonal—and that, among these, effective communication is key. Build those skills, and who knows where they may lead you. As Darwin famously penned later in that final paragraph of The Origin, in his own compelling prose (though in a different context): “There is grandeur in this view of life, with its several powers…”

Dr. David Goldstein, Chair
Semesters are here!

The semester change has come and gone but that doesn’t mean it is over. We understand that you might have questions, and it is possible that we may even have answers! There are numerous resources available for you to learn more about the change and the best resource is your academic advisor. Meet with us to discuss your degree plan and the best path for you to achieve success.

Important Dates:
Feb. 25 - March 1, 2013: Spring Break
April 19, 2013: Last Day of Spring Semester Classes
April 22-26, 2013: Finals Week
April 27, 2013: Spring Graduation
May 6, 2013: First Day of Summer Semester Classes
Aug. 26, 2013: First Day of Fall Semester Classes
Dec. 6, 2013: Last Day of Fall Semester Classes
Dec. 9-14, 2013: Finals Week

Wright State University

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Please call the Advising Line at (937) 775-4226 to schedule an appointment with an advisor.

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THE BIOLOGUE IS A STUDENT NEWSLETTER THAT CONTAINS IMPORTANT INFORMATION FOR STUDENTS IN THE DEPARTMENT OF BIOLOGICAL SCIENCES. PLEASE EMAIL COURTNEY.SMITH@WRIGHT.EDU WITH QUESTIONS OR COMMENTS.

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