Department News

Biology News Returns

After a year-long absence, Biology News is back in production. That’s not to say all the news over the last year was lost – back issues, including Summer 2007 through Summer 2008, are available at http://www.ewu.edu/x41768.xml. See page 5 for a list of key articles/information covered in these issues.

New Faculty/Appointments

There are a lot of new faces in the Biology Department this year. With retirements, resignations, and reappointments eight faculty were hired. See page 3 for details.

Faculty Grants

Ross Black, professor of biology, was contracted by the Kalispel Tribe to conduct research on Frater, Nile, and Brown Lakes. Rebecca Brown, assistant professor of biology, received two grants: (1) Turnbull National Wildlife Refuge Adaptive Management from the U.S. Fish & Wildlife Department; and (2) Cow Creek Native Plant Propagation from the Department of Ecology. Graduate student John Getz will conduct much of the field research associated with this grant.

Donald Lightfoot, associate professor of biology (retired), received a grant from Spokane Community College for a Biotechnology Education Infusion Program.

Heather McKeen, senior lecturer of biology, has a grant from the Higher Education Control Board to expand teacher preparation through Teaching/Learning with Inquiry, which focuses on hands-on learning activities.

Allan Scholz, professor of biology, received two grants: (1) Lake Roosevelt fisheries research for the Spokane Tribe of Indians; and (2) Bull Trout movement in the Albeni Falls Dam trail race for Battelle Memorial Institution.

It’s Rock Science!

When do biologists do geological science? When they are assigned to teach integrated science. Most of the regional science teachers involved in the MSP (Math/Science Partnership) Waterforce Grant were trained as biologists before they entered 7-12th grade teaching. Consequently, regional teachers – including EWU biology alumni, Lori Buratto, Brandon Hopkins, and Ali Bartlett, along with Mike Allen (natural science major) – were enthusiastic about participating in the Waterforce summer workshop with follow-up field trips throughout the academic year. The workshops, led by the Department of Biology’s education specialist, Heather McKean, afford teachers the opportunity to learn geological processes through inquiry-based education. Geology instructors included Chuck Strout from the EWU Department of Geology, along with Erin Cunningham Rudders and Dave Stasney from Spokane Community College.

The Waterforce Summer Academy took place for one week in June. It began with teachers making observations of Latah Creek to determine how water moves earth materials. They formulated hypotheses based on their observations that were then tested on stream tables in the lab.

(continued on page 2)
After establishing the principles of erosion and deposition, teachers determined the identity of rock samples they had gathered in the field. Teachers then visited various sites in the region where they observed evidence of flood activity of a catastrophic magnitude that supports the theory of the Ice Age Missoula Floods. On the follow-up field trip to Deep Creek on Halloween day, teachers were asked to record evidence with their cameras that would help them identify the geological processes that occurred in the canyon and determine a sequence of events. Teachers used evidence of pillow basalt, granitic boulders and clay sedimentations to piece together a sequence of events.

This is the last year of the five-year MSP grant that focuses on inquiry-based education. Through workshops and field trips, regional science teachers learn skills to encourage students to incorporate the inquiry process — gathering information and data through sight, sound, touch, taste, and smell; asking questions to uncover facts; contextualizing this new knowledge; and seeking resolutions to questions or issues. In addition to learning about the force of water on earth materials, teachers participating in these workshops studied the water quality of local streams. They learned various techniques for assessing water quality, including invertebrate identification and how to measure dissolved oxygen, nitrate and phosphate levels, and flow rate.

Excited about project successes, McKean says, “The biggest change I have seen in our group of teachers is that they are now comfortable doing inquiry in the classroom. They are sharing tales of how they have changed traditional activities to be inquiry based. My favorite part is hearing teachers talk about energizing their students. My hope is that we have made some inroads into changing the science classroom to being one where students do science instead of answering questions in the back of the book.”

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Brown Returns to Sweden

In September, Rebecca Brown, assistant professor of biology, returned to Sweden to coordinate a writing workshop with renowned riparian ecologist, Dr. Christer Nillson of Umeå University. The goal of the workshop was to write a multi-author review paper about hydrochory (seed dispersal by water) in riparian systems. The work was funded by an EWU Faculty Grant for Research. Brown went to Sweden two years ago to present her research on hydrologic alteration (the effect of dams or other structures on the flow regime of rivers and subsequent effects on riparian and aquatic ecosystems).
2008-09 Faculty Appointments

The Biology Department has hired eight full-time faculty – four tenure-track, one lecturer, a visiting assistant professor, and two quarterly faculty. Also, starting Fall quarter, some current faculty will have additional teaching assignments for WWAMI/RIDE (see related story below).

**Thomas Hancock**, assistant professor of biology, will teach Mechanisms of Cell Physiology for WWAMI/RIDE. He continues teaching anatomy and physiology courses for biology majors and Muscle Physiology at EWU.

**Joanna Joyner-Matos**, assistant professor of biology, takes **Dona Boggs**' place (who retired Spring 2008) and will teach anatomy and physiology courses to biology majors.

**Sid Kasuga**, professor of biology, will teach Immunology for WWAMI/RIDE, along with Histology, Virology (co-taught with **Prakash Bhuta**), and Elementary Medical Microbiology in the EWU Biology Department.

**Luis Matos**, quarterly faculty, is covering Genetics and Molecular Biotechnology classes taught by **Don Lightfoot**, who retired Spring 2008.

**Robin O’Quinn**, assistant professor of biology, assumes a permanent position she held last year as visiting assistant professor of integrative biology. She will primarily teach the introductory biology series for majors and Biological Investigation.

**Brian Sardella**, assistant professor of biology, will primarily teach anatomy and physiology courses for biology majors.

**Suzanne Schwab**, professor of biology, will teach medical mycology for WWAMI/RIDE. She will continue teaching the introductory biology series for majors, Cell Biology, Mycology, and botany courses at EWU.

WWAMI/RIDE Programs Utilize EWU Biology Faculty

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Hollister-Stier Textbook Assistance Awards

The following students earned textbook awards for Fall quarter:
Darlene Brumley
Alicia Caldejon
Thania Montero-Abreu
Elmera Peyman
Kevin Skinfill
Kelly Tougas

Congratulations! Thank you, Hollister-Stier, for your generosity in helping our students.

Watch for the Winter 2009 Biology News ... Faculty research, seminar presentations, and more.

Contact Us

Biology News is a quarterly publication of the Eastern Washington University Department of Biology. To contribute items of interest – news, features, alumni updates – please contact:

Sue Murphy, Operations Manager
EWU Biology Department
258 Science Building
Cheney, WA 99004
PH: (509) 359-6809
FAX: (509) 359-6867
sue.murphy@ewu.edu

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Summary of Content in Recent *Biology News* Issues

All issues of *Biology News* can be accessed at [http://www.ewu.edu/x41768.xml](http://www.ewu.edu/x41768.xml). For a list of all articles in all issues, go to [http://www.ewu.edu/x21796.xml](http://www.ewu.edu/x21796.xml). A summary of items included in recent issues:

**Summer 2007**
- Faculty Awards (Sid Kasuga, Peggy O’Connell)
- Computer Lab Grant
- Faculty Comings & Goings (Craig Miller, Dona Boggs)
- Faculty Grants (Ross Black, Peggy O’Connell, James Hallett, Al Scholz)
- Outstanding 2006-07 Students
- 2007 Graduates
- 2007 Symposium Awards
- 2007-08 Scholarship Recipients
- Alumni Update – Dawn Maghakian (MS, 2005)

**Fall 2007**
- Faculty/Staff Comings & Goings (Dona Boggs, Robin O’Quinn, Carissa Gusman)
- Faculty Grants (Steve Hayes, Al Scholz)
- EPOC & the Desert Iguana (Tom Hancock research paper published)
- Biology Faculty Selected for Library Grant (Prakash Bhuta, Karen Carlberg, Peggy O’Connell, Robin O’Quinn participate in grant project on increasing student research skills)
- Biology Department Seminar Series (bi-monthly presentations on a variety of biology topics)
- Hollister-Stier Textbook Assistance Awards – Fall 2007

**Winter 2008**
- Inland NW Aquatic, Riparian, and Wetland Symposium (sponsored by the Biology Department and the Society for Ecological Restoration, NW Chapter, and organized by Becky Brown and Camille McNeely)
- Elwha River Research (Becky Brown and graduate student Cara Hulce research related to dam removal / plant colonization patterns on deposited sediments)
- Science Olympiad Club Holds Invitational Tournament (formation of new club devoted to promoting Science Olympiad – an organization that seeks to improve K-12 science skills)
- MESA Students Visit (Secondary Biology Education and Elementary Natural Science majors teach about the nervous system and stream invertebrates)
Spring 2008
Faculty Retirements (Dona Boggs, Don Lightfoot, Haideh Lightfoot)
New Faculty Hires (Andrea Castillo, Brad Fillmore, Joanna Joyner-Matos)
Science Olympiad State Tournament (EWU hosts 2008 Science Olympiad state tournament for middle school and high school students)
Faculty Grants (Al Scholz)
Riparian Ecology Class (Becky Brown teaches experimental class; students prepare research report, Proceedings (available online)
Students Present at NCUR (four of Tom Hancock’s students – Alicia Ewing, Brandee Gregory, Krista Morrow, and Brittany Ruppenthal – present at the National Conference on Undergraduate Research on the effect of dietary capsaicin and exercise on body fat in Sprague-Dawley rats)
Symposium Presentations (list of presenters at 2008 EWU Student Research and Creative Works Symposium, along with abstracts; Awardees are identified)
WSU Funds EWU Student in Biotechnology Research (senior Sara Studeman is hired to continue work she started in a class laboratory project)
Hollister-Stier Textbook Assistance Awards – Spring 2008

Summer 2008
Faculty/Student Awards & Recognitions (Robin O’Quinn, Graduate Student Claudine Richardson, Biology Department Student Employees, Jordan Harris-Frances B. Huston Award Recipient, Steve Hayes)
Outstanding Seniors 2007-08
2007-08 Graduates
Improving Student Research Skills (follow-up to Fall 2007 article identifying what Prakash Bhuta, Karen Carlberg, Peggy O’Connell, and Robin O’Quinn accomplished as part of the Library grant for improving student research skills)
2008-09 Scholarship Recipients
Alumni Update – Jim Hedgecock (BS, 2006)

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