

# THE NICHE

The Student -Faculty Newsletter of The Department of Biology  
The College of William & Mary

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## JOAN WILSON AWARDED PRESTIGIOUS NATIONAL SCIENCE FOUNDATION GRADUATE FELLOWSHIP

Senior Biology major Joan Wilson has just been awarded a National Science Foundation Graduate Fellowship --one of the most prestigious fellowships available to an American student going on to graduate study in the sciences. From 6,309 applicants for the three-year awards in all areas of science, only 850 students were selected.

The NSF Fellowship, unlike most graduate awards, is given directly to the student who takes it with her to the graduate school of her choice. Joan, whose award was one of just 63 in the area of Biochemistry, Biophysics and Molecular Biology, will enter Stanford University's Ph.D. program in Biological Sciences this Fall.

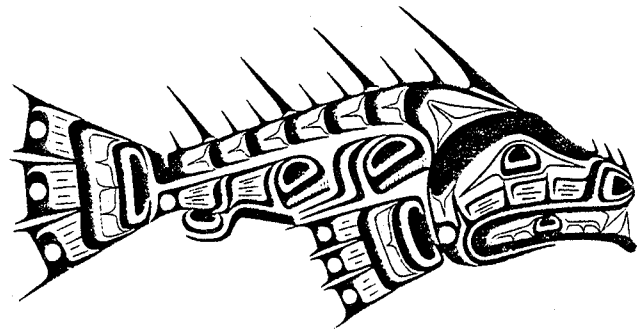
This year Joan has been doing Honors research in molecular biology with Dr. Kim Reece and will defend her Honors Thesis, "The Development of Techniques for Restriction Fragment Length Polymorphism Analysis of Rhodophytan Nuclear DNA," this month.

## DEPARTMENT SEARCHES FOR FACULTY LEAVE REPLACEMENTS

Mitchell Byrd, Jack Brooks, and Carl Vermeulen will be taking next year off for research. Vermeulen will be in San Diego, California; Brooks will be in Australia; and Byrd will be working around the state of Virginia. Eric Bradley will be on leave one semester.

**SPRING PBK BIOLOGY INITIATES**  
Congratulations to the following Biology majors elected to Phi Beta Kappa this spring: Garth Barbee, Anne Courter, Kristin Drennen, and Ted Lovko.

The Department is seeking to hire replacements for these four faculty members. Animal Physiology, Vertebrate Biology, and Ornithology will be offered at their usual times next year, but the time for Microbiology is undetermined. Comparative Anatomy will not be offered next year.



## BIO CLUB COMPLETES SUCCESSFUL YEAR OF ACTIVITIES

Kicking things off with a seminar at Lafayette High School for the James City Co. science fair, the Clayton-Grimmes Biology Club has been extremely busy this semester. During the science fair, club members gave a number of talks on recycling, predator-prey relationships, and ecological concepts; demonstrating the balance of populations and resources with a rousing game of "Oh, Deer!". Members also served as judges, awarding a special prize in the environmental science category. The highlight of the afternoon came when Ms. Jamie Doyle presented two outdoor naturalist books to an outstanding science fair participant. On the other side of the desk, clubbers hosted some great lecturers including "Volcano hopping in Guatemala" by Dr. Hall, "Galapagos Island Adventure" with Dr. Grant and "Colonial Nesting Species" by Prof. Beck. Dr. Bradley also spoke on the undergraduate research program. In early April three clubbers presented a Spring show-and-tell at the Montessorri pre-school, complete with mushrooms, Equistem, goldfish, and the ever present college woods frog.

Education programs were not the only projects clubbers participated in. The club has also been involved with taking over Millington Hall recycling as a pledge project for the Campus Conservation Coalition. Every Saturday, newspapers, glass, plastics and cardboard are toted to the Williamsburg Recycling Center. The club would like to thank Professor Thomas, who started the recycling in the Biology Department, for all of her help lugging glass and cans to the center.

The Biology Club would like to wish a fond farewell to past president, senior advisor and fearless leader, Jamie Doyle.

"HOW TO PROFIT FROM THE COMING ENVIRONMENTAL CATASTROPHE." The bright blue words jump out from the cover of National Review. How to WHAT? In tiny print below it: "just kidding". Another April first magazine cover. The joke was funny, but it makes a point: it will be hard for anyone to profit from extensive environmental destruction.

The media has made certain that April 22, 1990 will not pass by unnoticed. "Earth Day" is already plastered across the front of many magazines, TV is getting ready to broadcast shows with an all-star cast, and the newspapers, no doubt, won't be left out. Worldwide demonstrations have been planned for the twentieth anniversary of Earth Day.

The Clean Air Act and the Resource Conservation and Recovery Act, among other policies, were direct effects of Earth Day 1970. The reauthorization of these this year by President Bush should be ensured by the demonstrations on Sunday. But Earth Day 1990 must go beyond legislation. Clean air, land, and water can't be legislated. And it certainly can't be achieved by attacking only large companies. In order to clean up the world and keep it clean, individuals must be held responsible for the contributions they make to the earth's garbage and pollution.

The problem with the environmental movement is that most people consider it someone else's problem, someone else's responsibility. The increasing heaps of garbage in search of a final resting place seem to have little to do with the single bag of it you threw out this morning. A single industrial disaster commands hours of media coverage and the attention of millions of angry people, but the tiny non-industrial disasters, those less obvious tragedies, go on, creating problems that tend to go unnoticed.

For example, the Exxon Valdez oil spill, a recent environmental tragedy, is dwarfed in comparison to the amount of oil dumped each year by individuals changing their own car oil. This spilled oil, which makes its way into the ground and then the water, totals 22 Valdez oil spills per year. That's a phenomenal amount of environmental damage coming from the hardest to control source - the individual.

Earth Day 1990 is about individual choices which can help save our planet. On this twentieth anniversary of celebrating our Earth, resolve to make a difference!

Participate in a weekend of activities sponsored by the Campus Conservation coalition. On Saturday, April 21, there will be Comprehensive recycling (glass, aluminum, newspaper, cardboard, ledger paper, and plastics) at the William and Mary Hall parking lot. Recyclers will receive free pine tree seedlings. Also, Earth Day T-shirts will be on sale (\$10) and educational packets on low-impact lifestyles will be available at the parking lot. Sunday seminars on Environmental topics will be held at the Williamsburg Regional Library, starting at 1:30 pm. For further information and additional activities, see the Earth Day pamphlet posted on the Bio Club bulletin board in Millington.

## **DR. GREGORY PHILLIPS ACCEPTS HOWARD HUGHES MOLECULAR BIOLOGY POSITION**

Dr. Gregory Phillips, currently at Princeton University, will be joining the Biology Department some time this summer as the Howard Hughes Medical Institute Molecular Biologist. This new position was made possible by a grant from the Institute and will be a permanent addition to our faculty. A student committee was involved in the selection process and met with Dr. Phillips when he came to Williamsburg to give a research seminar.

Phillips is working on the role of heat shock proteins and the mutation *prIF* in protein export in *E. coli*.

He will teach Molecular Biology of the Gene next Spring.



April 21st and 22nd

## **SCIENCE AND TECHNOLOGY GOVERNOR'S SCHOOL ON CAMPUS THIS SUMMER**

Over one hundred of Virginia's best high school science students will be on campus the month of July to participate in the Governor's School. Students choose from among Biology, Chemistry, Geology, and Physics. The four-week program includes lectures, laboratories, and discussion sessions dealing with ethical issues in science.

The Biology portion of the program will be directed by Professors Broadwater and Wiseman with help from graduating senior Joan Wilson.

## FACULTY PLAN WIDE VARIETY OF SUMMER ACTIVITIES

Besides teaching both Biology 101 and Ecology in summer school, **Greg Capelli** will be supervising students working on Lake Matoaka as part of the College's efforts to plan for the Lake's future. Capelli will also be finishing development of a new course on the evolutionary basis of ethics and related sociobiological considerations, as well as writing several chapters for a new zoology textbook.

**Norman Fashing**, on campus most of the summer studying mites, will spend four weeks in Europe. After attending the International Congress on Acarology in Ceske Budejovice, Czechoslovakia, he will spend time in the Swiss, Austrian, and Italian Alps.

Working with graduate student **Chris Dassler**, **Joe Scott** will be turning his attention to a search for the recently discovered contractile protein centrin in red algae. Scott will also be participating in the annual meeting of the Phycological Society of America.

**Bruce Grant** will spend the first part of the summer trapping moths (*Biston betularia*) in New England and/or Michigan as part of his peppered moth geographic survey. The second half of the summer he will be teaching Evolutionary Genetics at UVA's Mountain Lake Biological Research Station, while continuing his moth trapping in western Virginia.

From July 8th through August 10th, **Martin Mathes** will be teaching in the College's Cambridge, England program (Applied Botany 106). Interested students can enroll in the program until June 1st. Call Mathes for information at 221-2238.

**Eric Bradley** will be working with three graduate students on their thesis research and will be preparing for his research leave. He will be visiting several laboratories engaged in research on endorphins and enkephalins.

**Carl Vermeulen** will begin a year-long sabbatical in the Biology Department at the University of California, San Diego, in La Jolla. He will be working on various aspects by which surface proteins protect *E. coli* from host immune defenses during the course of disease. The work will be supported in part by a grant from the National Institutes of Health.

After a May trip to the Bodega Bay Marine Laboratory in California, **Charlotte Mangum** and undergraduate **Ken Callicott** will begin a summer's work on hemocyanin polymorphisms in fiddler crabs. The two of them will spend most of the summer running around the Chesapeake Bay and Eastern Shore in her 12 foot skiff. Mangum will also spend a few research weeks in June at the Marine Biological Laboratory in Woods Hole, Massachusetts.

In May, **Gus Hall** will spend three weeks in central Turkey with a group of British naturalists, birding and botanizing in the Upper Euphrates Valley and adjacent mountain ranges. The last two weeks of August will find Hall and several col-

leagues in Venezuela, making educational videotapes on the tepuis and rain-forest.

During the early summer **Jack Brooks** will be leading a six-week camping tour of eastern and central Australia for eight William and Mary students. Afterwards Brooks will be spending four to six weeks in western Australia before beginning four months of research at Flinders University in Adelaide, S.A. He will be studying certain aspects of lizard ecology.

**Sharon Broadwater** and **Lawrence Wiseman**, with graduating senior **Joan Wilson**, will spend all of July teaching the biology portion of the Governor's School in Science and Technology. Following that, Wiseman plans to visit Jack Brooks in Australia.

## BIOLOGY SENIORS PICNIC WEDNESDAY

Biology seniors, graduate students, and faculty are invited to a picnic at Lake Matoaka Shelter on Wednesday, April 25th, at 4 PM. Food and drinks will be provided by the Department.

**GOOD LUCK ON FINAL EXAMINATIONS!!**

**GOOD LUCK TO ALL OUR GRADUATES!!**

## DISENROLLMENTS KEPT TO A MINIMUM

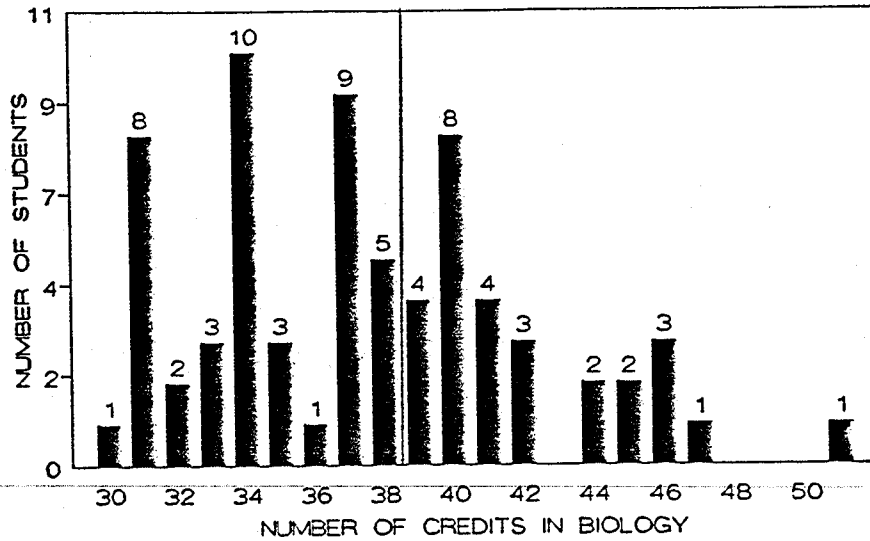
There were fewer than 10 disenrollments of Biology majors in Biology courses for next Fall as Ecology expanded to three sections. In March, 661 upper-level biology course requests (not counting Human Anatomy) were made; because of space limitations in laboratories, 64 students, almost all non-majors, were disenrolled.

Three courses with overenrollments were Ecology (111 requests, 77 enrolled), Vertebrate Biology (68 requests, 48 enrolled), and Animal Physiology (54 requests, 44 enrolled). Genetics accepted all 192 students, although some had to be moved from one laboratory section to another.

If you were disenrolled from Ecology, it will, as usual, be offered Spring semester. Ecology will also be offered in second session summer school (see Dr. Capelli). Because we have not yet hired the replacement faculty to teach Vertebrate Biology and Animal Physiology (see story below), if you were disenrolled from those two courses and must have them, please see the Department Chairperson (Room 104) who is developing two "wait lists."

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*Biology Department Newsletter  
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William and Mary Biology graduates, 1989: the number of credits students took in Biology (note well: up to eight credits in chemistry can be counted toward major).

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TO: