



# B I O F E E D B A C K

Newsletter of the Biology Department and BioClub of Saint John's University and the College of Saint Benedict

## **Congratulations**

Chris Palmer, a senior biology major, has been awarded the National Scholar Athlete of the Year Award. He has also received the coveted Gagalardi Award. As many of you already know Chris is a member of the St. John's football team and has earned numerous awards both for his academic excellence and his poweress on the football field. Congratulations Chris!

Congratualtions go out to Lani Ulwelling for her winning design for the 95-96 Biology T-Shirt. Watch upcoming issues of Biofeedback for purchasing information.

## **The Wild Boy of the Pacific Northwest**

by Jim O'Neill

I wish to share my experience in the class known as the Biology of the Pacific Northwest, led by Dr. James Poff, during the summer of 1994. It was a month-long excursion/adventure that started and ended in Collegeville in front of a large red van. This metal behemoth was the vehicle that hauled 11 students, 1 professor, and a trailer full of supplies on a journey of over 6000 miles. This journey through 8 states took us to places such as Yellowstone National Park (where we sited the wild boy), Grand Teton National Park, the Bighorn Mountains, Mount Rainier, Mount St. Helens, Cache National Forest, the Olympic Peninsula (in Washington), Kaniksu National Forest, and Glacier National Park. We camped along the way in or near each of these places--a big part of the class included our interactions as a group "roughing it" together.

Each student had a personal research project in which he/she did the collecting at the designated sites along the way. My project entailed the collection of *Epilobium angustifolium*, or fireweed, at differing elevations and the comparison of the numbers of photosynthetic parts (leaves) to reproductive parts (flowers, seed pods) on each plant. We had four different "collection sites", each at a different elevation. My results indicated that there were more reproductive parts per leaf at lower elevations than at higher ones. One

interesting fact about fireweed is that it can range in size from a few inches to around 8 feet tall (making collection quite an interesting task)! Other people studied things such as dandelions, wasps, ants, butterflies, and various plant species. We each had to write a paper about our project and give an oral presentation at the end of the trip. We also kept a daily journal about our experiences during the month. While we were on the Pacific coast, our on-going projects were put on hold so that we could study tide pool ecology (and play in the ocean all day!).

Never again will I have the opportunity to see and explore so many amazing places in such a short time. I encourage anyone who even slightly enjoys nature to jump at the chance to be a part of the class during the summer of 1996.

## **What to do with a Biology Major**

Bob Lyngen

This question is often asked by biology majors. For the people who were not able to attend the discussion on this topic November 14th, you missed a very informative seminar. The main focus of this seminar was to explain some of the many careers that a biology major could go into. The five main careers that were discussed were: Physical Therapist, Independent Crop Consultant, DNR Wildlife Services, Athletic Trainer and Water Quality Coordinator. The most important aspect that all speakers stressed was getting involved in school and try to gain some exposure to the field in which you would like to study. Every speaker in attendance also could not stress enough that a person has to be able to communicate with others effectively and be able to think on your feet. Overall, this seminar was very informative on what to do with a biology major.

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## **A Look at Comparative Anatomy**

Most people at some time in their life have become attached to an animal or had a pet that had a special meaning to them. Most people while becoming attached to this animal have gone through the process of giving it a special name that fit its character. This too, is the case with the comparative anatomy students. I have heard of names that range from normal ones such as Barbara and Norma to the endearing ones such as "The Juice" and Carnage. Where people come up with the names for their "pets" differs from person to person. Such as the cat that was named Heather, who was named after another student in order to bug her. Besides naming just the cats there are also rare cases when a *Necturus* (mudpuppy) ends up with a name such as Sexy.

However, Comparative Anatomy is not just about naming pets, it is also about late night study sessions in the lab with the TA. At these times it is possible for any number of weird and strange events to occur, from karate and rubber band fights, to cats dancing and *Necturus* and snakes flying through the air. It is a wonder that the specimens actually make it to the lab practicals.

Looking back years from now I know that I will always remember Comparative Anatomy with a wrinkle in my nose and a smile on my face with fond memories of a cat named Dead.

## **Alumni News**

### **Where are They Now????????**

Shelly Kieke (Biology, 95) writes that she is pursuing graduate work in the Cell and Structural Biology (CSB) department at the University of Illinois, Urbana-Champaign. She is currently taking two classes, biochemistry and cell biology, and is involved in her first lab rotation which studies the lens *Xenopus*. She has met many new friends and reports the "everything" is going great.

Tanya Pratt (Biology, 95) reports that she was accepted into medical school at the University of the West Indies-Trinidad. She is thrilled and will begin next fall (1996). Congratulations, Tanya!!

Dominic Ackerman (Biology, 1994) is now a Peace Corps volunteer working in Costa Rica. He has been learning "... to collect and store seeds, when to plant various species...start...a nursery to learn about growth patterns and care."

Beth Clysdale (Biology 1995) is currently working for Bloomington School System and Bernadette Steele (Biology, 95) is happy in the Vet program at the University of Minnesota.

## **Note from the Editor**

Alums make great contact people and they usually are thrilled to help. So if you want inside information on a program contact an Alum in that program. You won't regret it.

## **The Biology Club**

Does an early morning trip out into the North woods blazing your own trail, climbing rocks (with and without ropes), eating apples, increasing your vocabulary, learning new spellings of words, and being chased by security personnel sound like fun to you? Well, back in October the biology club took a trip to Quarry Park where we did just this. We stood at the edge of quarries, peered out over them, and said, "Wow!" That was until the security people told us to stand away from the edge. Leaving this person we are told to go left at the fork in the road, however, we go right in order to see the catti. Next thing we know, security is in hot pursuit of us! Overall it was a fun and exciting day.

Please look for upcoming events in January and Spring Semester with the Biology Club.

## **What Do Road Kills Tell Us?**

by Sister Phyllis Plantenberg

On October 12th, while returning from Aberdeen, SD, I decided to keep a record of road kills. On the way out I had observed unusually large numbers of road kills, but I did not quantify them. The "kills" fit into four categories: skunks, raccoons, feathered but not identifiable, and furry but not identifiable. I counted 26 skunks, 4 raccoons, 7 feathered but not identifiable creatures, and 14 furry but not identifiable creatures on the road home. The total trip mileage equaled 222 miles. Twenty-three of the skunk kills occurred before we crossed into Minnesota at Ortonville, which was within the first 140 miles - about one skunk every 6 miles.

John Schneider's father carried out a road kill count from Minneapolis to Leech Lake (180 miles), but concentrated on raccoons only. His count equaled sixteen. That was approximately one raccoon every 10 miles. Now what can we surmise from road kills?

## **Chestnut Blight**

by Eric Ribbens

On October 21-22 I attended the annual meeting of the American Chestnut Foundation in LaCrosse, Wisconsin, and presented some of the results of my research (which was presented to the Bio department November 15). About 150 people attended, including most of the scientists in the United States who are actively researching aspects of chestnut biology. We visited a 50 acre stand of chestnut nearby, which has been infected by the chestnut blight, and saw some of the efforts underway to control this outbreak. In the 15 years that the ACF has been in existence, it has achieved some major breakthroughs in chestnut crossing (including being able to breed offspring in only 2 to 4 years!), and has funded extensive work investigating the chestnut blight. One of the latest foci of research examines a virus which infects the fungal blight, causing the blight to be less virulent. This virus is being introduced into the stand we visited, in the hopes that it will slow the spread and reduce the impact of this infestation. Although it is likely that in ten to twenty years a blight-resistant strain of chestnut will be developed, we know very little about its ecology.

## **Pelagic Stoichiometry, Linking Molecules to Ecosystems**

Kent C. Willette

This seminar by Dr. Robert Sterner was interesting to say the least. Robert Sterner touched on many issues such as: carbon:phosphate and nitrogen:phosphate ratios in lakes and of course, stoichiometry. He covered lot of ground in the one-hour seminar.

My favorite story was about when he spoke about taking Northern Pike out of one lake and transporting them to another. He joked about how angling them out of the lake was the hardest part. But, fish aren't the most important part of the study, zooplankton was, more specifically *Daphnia*. He said that *Daphnia* could double its body mass in one day but this only occurs when conditions are perfect. *Daphnia* is essential to a healthy lake and this was the main point of the seminar. The experiments were successful because they found *Daphnia* is very efficient, they don't waste any nutrients. All in all, a successful experiment and a interesting seminar.

## **Creature Feature**

Scott Peterson

Many people who are examining some lake samples, look under the microscope and ask what is the that long pearl like structure? What that person is looking at is probably *Anabaena*, a blue green algae. Did you know that some blue-green algae live in hot springs that can reach temperatures of 85 degrees Celsius. Blue-green algae belong to the kingdom Monera, and the Division Eubacteriophyta. The size of blue-green algae can range from spherical platelike colonies or just plain irregular cells. So if you are ever investigating a water sample and come across something that looks blue-green there is a good chance that what you are looking at is blue-green algae. Remember be careful out there some are toxic!

## **An Evening With Douglas Wood**

Stephanie Haen

Douglas Wood is a very talented man. He is an environmentalist and naturalist as well as a musician and poet. During his performance on Oct. 22nd he performed a variety of songs accompanied by either his guitar, piano or both, with help from George Mauer. He also read passages from his book, "Paddle Whispers" and he read the book "Old Turtle." My favorite song was "Earth is a Spaceship." This song reminded me of the Gaia hypothesis and the spaceship theory we discussed in class. One of the lines that I especially liked was "we are all intertwined by an invisible ring." This reminded me of many things such as the tragedy of the "Shared Commons" and the food chain. Overall, I believe Wood did an excellent job. I loved the way he explained the wonders of the world by using music and prose. This makes it not only inspiring but also very understandable for all people, young and old.

## **Where is Dr. Saupe?**

Dr. Steve Saupe will be on sabbatical for January Term and Spring Semester. During this time he will visit the lab of Dr. Ann Bell. University of Victoria Wellington, New Zealand. Among other activities, Dr. Saupe hopes to do a lot of writing and botanizing. He is also planning to learn about coprophilous fungi, those that live in herbivore dung. He will likely be studying an aspect of the local

## **BIOFEEDBACK**

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Send contributions for publication to one of the editors at:

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sheep population that is missed by your average visitor to New Zealand. You can keep in touch with him through his email (ssaupe@csbsju.edu).

## **Herbarium Update**

The Herbarium is looking mighty spiffy these days. If you've been in lately you'll notice that we are redoing the bulletin boards. We currently have displays featuring Linnaeus and trees. A third bulletin board highlighting plant biology at CSB/SJU is in the works.

We have done a lot of reorganizing of specimens. The entire collection was resorted according to the Cronquist system of classification. In addition to the actual sorting, we've also put in dividers separating families, prepared a new numbering system for the

families, and have color and numerically coded each genus folder.

Further, we've fixed the old upright plant drier and it now resides in the Botany Lab. We've removed the large wooden drier and will eventually get rid of the smaller one (unless we need lots of drying space).

There is still an incredible amount of work left to complete. For example, there is a huge backlog of plants to mount and file. An even more massive task is to computerize our holdings. We thank Dr. Jim Davis for programming a database management system that we will use for our database.

Several students deserve credit for their hard work. They include Christine Nelson, Erik Remus, Amy Hauptert and Becky Maly. We encourage you to stop by and enjoy the herbarium.

P A G E F O U R

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