

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

Biology In the News: Couple arrested for Possessing Toad Drug

by Matt Downs, Senior
Biology Major

Yes, a toad drug. The drug, bufotenine, is derived from venom produced by the toad *Bufo alvarius*. Glands on the back of this type of toad secrete a substance that, when dried, can be smoked to cause psychedelic effects similar to that of LSD.

Literature confiscated from the couple's home in Angels Camp, California, lead authorities to believe that there is a growing number of new enthusiasts for the drug. However, this drug is not new by any means.

Ethnopharmacologists trace its use back to ancient times. In the 1950's the Pentagon and Central Intelligence Agency supported research of bufotenine to develop brainwashing agents according to an article in the August, 1990, *Scientific American*. In one experiment, bufotenine was injected into 4 inmates of an Ohio prison. The subjects experienced hallucinatory effects "reminiscent of LSD and mescaline" as well as nausea, chest pains, and a purple coloration of the face.

The drug was outlawed by the Drug Enforcement Administration in the late 60's.

In the 1930's, some toads were exported to Australia to help control the beetle population in cane fields, hence its common name, the cane toad. Now, the toad population has grown so large, that in parts of Northeast Australia indigenous amphibians have been driven out and other wildlife and pets have been poisoned. Some dogs have even been diagnosed compulsive toad lickers, according to Glen Ingram, a herpetologist at the Queensland Museum.

Even if cane toads did live this far north, it would not be wise to lick them; when two teens from New Mexico did, they had to be hospitalized. Another youth from Australia died after he ate the eggs of a cane toad.

Maybe the princess in the famed fairy tale kissed a cane toad instead of a frog, and

hallucinated about the handsome prince.

Editor's note: A follow-up article published in the St. Cloud Times (30 April, 1994) indicated that the couple avoided jail by agreeing to attend drug education classes.

Trees in the Park

Dominic Ackerman, Senior, Biology Major, presented a seminar to the CSB/SJU Biology Department summarizing the results of his Honors thesis research. Dom's thesis, entitled "Survey of Woody Plants of 100 Acres Quarry, Waite Park, MN", was a floristic survey to provide a baseline set of data for a detailed botanical survey of the park that will be completed during the summer. Quarry Park, is a 200 acre parcel of land just south of the KFC in Waite Park. This area is being developed into a county park and will open to the public in a few years. Now, data are being collected to be used to develop a suitable landscape plan so that the park can be developed in an ecologically sensitive manner.

Biology Club Officers for 1994-95

by B.J. Krenner, Junior
Biology Major

At the Biology Club meeting on April 28th, the officers for next year's Club were elected. The results of the election were as follows: Co-Presidents - Beth Clysdale and Meghan McKeon (both Junior Biology Majors); Secretary - Michele Kieke (Junior, Biology Major); Treasurer - Sean Singewald (First year, Pre-med); and Public relations - Jason Wesenberg (Junior, Biology Major). The co-editors of BioFeedback next year are Bill Checkal (Sophomore, Philosophy Major) and Bernadette Steele (Junior, Biology Major). Jason Wesenberg says the Biology Club hopes to bring in more speakers and possibly do some campus improvements next year.



VOL. 16 NO. 6
April 1994

Health Care Forum

by Chris Dabbling, Senior
Biology Major

Gina Soriya (Senior, Biology major), Gwen Maue (Senior, Nursing major) and I attended a public forum entitled, "The Coming Changes in Minnesota's Health Care System: How Will It Affect the Consumer?" that was held at St. Cloud Technical College. The forum was sponsored by the St. Cloud Times and The League of Women Voters and featured Rep. Dave Gruenes (IR-St. Cloud), Rep. Lee Greenfield (DFL-Minneapolis), and MN Health Care Commission Executive Director Mike Scandrett along with a panel of local citizens. The panel was comprised of family practitioner Dr. George Schoephoerster, retired nurse Charlotte Fisher, and Stearns County Social Services director Terry VanderEyck.

Although the speakers did a good job of describing the goals of MN health care, like universal coverage and affordability, no one could plainly state how these goals can be achieved. Sadly, after listening to these speakers' initial comments and broad, confusing answers to questions and real-life stories from the general audience, we left feeling the subject of health care to be a convoluted mess. Go figure.

If anyone would like to write about either the state or national health reform debate, Biofeedback would be happy to accept his or her submission.

Those "Lousy" Males

by Steven Katras, Sophomore
Pre-med

On April 12, Dr. Dale H. Clayton from the Zoology Department at the University of Oxford, England, gave a seminar entitled, "Coevolutionary Ecology of Feral Pigeons and their Feather Lice". In his talk Dr. Clayton discussed how female feral pigeons will chose to mate with males which have low loads of feather feeding lice. This is thought to be so because the display times of males who have low levels of lice are higher than males with high levels of lice. "Lousy" males are thought to have lower display time because of the energy lost by the lice damaged plumage. The conclusion is that males with lowest levels of lice have the highest fitness.

Another interesting part of his talk was the method he used to obtain data; for instance,

he and his assistants tossed nets over and overpass in which groups of pigeons were living. Then they went into the overpass and caught the birds one by one. In addition, they placed tiny bits in their mouths to prevent the experimental birds from removing lice.

Diatoms and History

In March, Dr. Virginia Card, from the Ecology Program at the University of Minnesota, visited the Biology Department to present a seminar describing her research on Big Watab Lake. Dr. Card used fossilized diatoms in the sediments of this lake to reconstruct a climatic history of central Minnesota. Among the interesting finds of her work was that the diatom record seemed to indicate that a large storm passed through the area mixing up the lake bottom sediments. The date for this storm correlates with historical records of a big tornado that roared through the area.

Alumni News

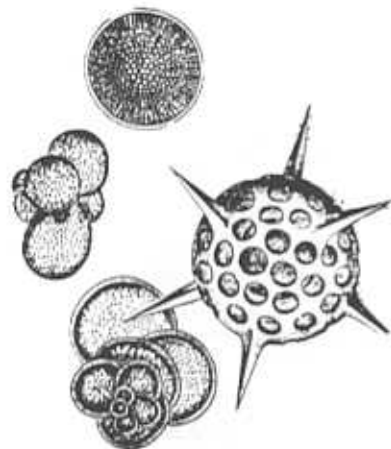
Joe McLaughlin (SJU '93) writes that he is currently teaching Biology, Health and Physics in Belize. He is "finding it an enjoyable challenge". You can write to Joe at The Catholic Mission, Benque Viejo del Carmen, Belize, Central America. You better write quick because he may be returning stateside soon.

Chris Nelson (SJU '92) and Meg Dohohue (CSB '92) were married and are now in graduate school at Colorado State University, Fort Collins. Chris is doing molecular genetics work on wheat. He is looking for "a molecular tag identifying a resistance gene for Russian wheat aphid". Meg is doing entomological work on the same critter.

Karla Gengler (CSB '93) is well into her first year in the Botany graduate program at The Ohio State University. She is involved in molecular systematics on a genus of Chilean composites (sunflowers). She writes that the town is "Buckeye nuts..." and she is "glad that [she] went to a small undergraduate college! I simply cannot imagine being an undergraduate here. The lines, the lines, the hellish lines!"

Karate Chopping Thesis

John Conzemius, Senior Biology Major,



recently presented the results of his Honors thesis to the CSB/SJU Biology Department. The title of this thesis was, "An Electromyographical and Force Analysis of a Shotokan Karate Punching Technique" or subtitled, "Is karate all it's cracked up to be"? John, a member of the CBS/SJU Karate Club, decided to team up his interest in karate with his Honors project. He constructed a device that enabled him to measure the force and speed of a karate punch. The simple conclusion from his work is that if you get punched from a second or third don Black Belt you're less likely to see the punch coming and more likely to feel it than if you were punched by a white belt.

Wolfe Earns DES Graduate Fellowship

Kelly Wolfe, Senior Biology Major, was recently awarded a graduate fellowship by Delta Epsilon Sigma, the Catholic Women's Honor Society. Kelly is planning on studying the ecology of prairie plants at Iowa State University, Ames. Congratulations Kelly!

Sci-Fi Movies Invade Biology Department

by Bernadette Steele, Junior Biology Major

During this past J-term, Dr. J. Poff instructed a class entitled, "Insects and Science Fiction". As a part of the curriculum of this course, the class viewed a special movie written, directed and produced by Dr. Poff. This was no ordinary movie; it was a science fiction thriller called, "The Queen of the Ant People".

The cast included Joan Strong, Elizabeth Hennemann, Jackie Benning, Nicky Wagner and Jackie Friedrich, as well as two giant paper mache ants and various ant parts. The movie was filmed north of Rockville at a farm and down in Dr. Poff's basement where he established the ant colonies. Dr. Poff used his own camera and the editing tools at the St. John's campus.

The premiere of the movie took place during J-Term. Family members of the cast were invited to take part. Everyone seemed to enjoy it, and they all wanted copies of the movie - everyone reasoned that it would be most fun about 20 years down the road. Will "The Queen of the Ant People" be show

again? Dr. Poff said that is a possibility so keep tuned an announcement of another showing.

Dr. Poff thanks the actresses and actors. They were dedicated and put in a lot of time and worked hard. All in all, it was a good experience and fun!

Staff Changes in the Biology Department

Next year will see several changes in the CSB/SJU Biology Department. The biggest change is that Dr. N. Zaczkowski will retire after more than 30 years of service to the institutions. According to Sister Phyllis, Nick started at St. Ben's in 1960. At the time, CSB and SJU were much more separate than they are today. In fact, there were separate biology departments for the two schools. Nick was one of the first male faculty members at CSB.

Dr. Holly Adrian will join the department in the Fall. She will serve as Dr. Zaczkowski's "replacement" (obviously we will never be able to "replace" Dr. Z.). Dr. Adrian will come to us from Purdue. She is an aquatic ecologist who specializes in the ecophysiology of fresh water algae.

Dr. Rodell will be on sabbatical during the fall term. He is planning to study at the University of Minnesota. Dr. Knox will be on sabbatical during the spring term and she will also be working at the U. She plans to study the molecular genetics of *Arabidopsis thaliana*, the plant molecular biologists version of *Drosophila*. We won't see too much of Dr. Knox in the fall either because she has been assigned the task of planning for the renovation of the SJU Science Center. If you have any ideas, contact Dr. Knox.

Dr's Marianna Wood and Jimmie Hughey will be leaving us next year as well. We will be looking for replacements for them during the next few weeks. Thanks to Dr. Wood and Dr. Hughey for their hard work and teamwork during the past few years. Good luck to both of you after you emerge from behind the "pine curtain".



BIOFEEDBACK

BIOFEEDBACK is a monthly publication of the Biology Club and the Biology Department at Saint John's University and the College of Saint Benedict. Send contributions for publication to one of the editors at:

Biofeedback

c/o Biology Dept.
Saint John's University
Collegeville, MN 56321

Editor:	Chris Dahling, Senior Biology Major
Editorial Staff:	Tracy Champagne (Junior, Natural Science Major) Elizabeth Clysdale (Senior, Biology Major) John Conzemius (Senior, Biology Major) Gina Soriya (Senior, Biology Major) Joe Sullivan (Senior, Biology Major) Cyndi Forsman-Earl (First year, Biology Major)
Faculty Editor	Dr. S.G. Saupe
BioClub Officers	
Co- Presidents:	Tim Haeg, Senior Biology Major Kelly Wolfe, Senior Biology Major
Treasurer:	Brett Stolzenberg, Senior Biology Major
Secretary:	Joe Sullivan, Senior Biology Major
Public Relations:	Jessica Jachimiec, Senior Biology Major

P A G E F O U R

A Story About Dr. Z.

by N.L. Ford
CSB/SJU Biology Department

About 20 years ago Nick and I took our January Term classes on a field trip to the University of Minnesota's Cedar Creek Research Station north of the Twin Cities. During our visit we hiked into Cedar Bog Lake, a famous locality in the history of community ecology. While there Nick encountered a shrub he could not identify. As is usually done in such cases, the plant taxonomist broke open a piece of twig to look at the pith color and sniff it for any distinctive odors. The next day Dr. Z's nose told him the identify of the shrub. Ask him about it.

Who is Dr. Z?

by Steve Katras, Sophomore
Pre Med

Recently I learned that Dr. N. Zaczkowski is going to retire at the end of this year. Unfortunately, I never got to meet Dr. Zaczkowski so I decided that I'd ask students and faculty what he is like.

"Dr. Zaczkowski is the kindest, most gentle professor I have had." (Matt Downs, Junior, Biology Major)

"He is a real botanist, he has chloroplasts running through his veins. Dr. Zaczkowski loves his discipline which is very admirable". Dr. C. Rodell (CSB/SJU Biology Department)

"He has an endless knowledge of plants which he is always willing to share". Kelly Wolfe (Senior, Biology Major)

"Nick would rather be in the woods than any other place I can think of". Sister Phyllis Plantenberg (CSB/SJU Biology Department)

"Dr. Zaczkowski gives 100% effort during class. He gets students interested in what he is teaching". Chad Musing (Sophomore, Natural Science Major)

"Dr. Z. has a terrifically uplifting and positive outlook on life; he is model to us all". Dr. S. Saupe (CSB/SJU Biology Department)

Sister Jeanne Marie Reflects on Dr. Z.

by Matt Downs, Junior
Biology Major

S. Jeanne Marie is a biology faculty member from New Richland, MN and a former student of Dr. Zaczkowski.

Sister Jeanne had Aquatic Ecology with Dr. Z in the early '70's here at St. John's. When asked about the class Sister Jeanne remembers the projects they had to do and the many field trips that were taken. For one project, Sister Jeanne and a friend took a canoe out on Watab Lake in the middle of November with their winter coats on!

Not too long before she had this class she remembers the consolidation of the two Biology departments which occurred in the fall of 1970. Before this, Dr. Z. taught at St. Ben's and was the only male biology professor. The other bio profs were Sister Phyllis Plantenberg, the late Sister Mary Grell and the late Sister Remberta Westkaemper.

Sister Jeanne has taught biology here for more than four years and describes Dr. Z. as a friendly person who has a great memory, especially for students. As a professor, she describes him as very knowledgeable about plants, of course, but also about wildlife and the environment not only here, but throughout all of Minnesota. She In short, Sister Jeanne describes Dr. Z. as a "very kind, nice person". I have to agree with her.

Editor's Note

The editors want to thank everyone who has written for BioFeedback during the past year. We especially thank Greg Becker, SJU Public Affairs, for his excellent work in formatting the newsletter. And, Ann Arndt, Liola Dold and Suzette Sutherland and assistants in the Natural Science Division office deserve much thanks for typing, copying and folding BioFeedback. We'll see you next year. Have a great summer!

Biofeedback

c/o Biology Dept.
Saint John's University/College of Saint Benedict
Box 3000
Collegeville, MN 56321-3000