

4-13-2007

A Day of Celebration of Student and Faculty / Staff Collaborations 2007

St. Norbert College

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Friday, April 13, 2007

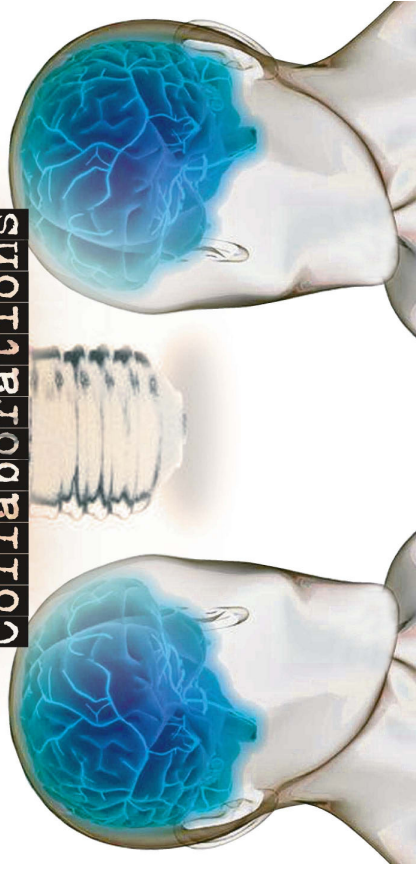
Projects: 9:00 a.m. - 3:00 p.m.

Reception: 3:00 p.m.

Student Union - 2nd Floor



**A Day of Celebration of
Student & Faculty/Staff
Collaborations**



On behalf of the
Office of Faculty Development
and the
Office of the Dean of the College,
we extend

A Big Thank You to:

All Participating Faculty, Staff and
Student Collaborators
Copy Center
Conference and Event Services

And We Especially Thank:

Stephanie Schauer ('10)
Faculty Development Office Assistant
Erica Fatigato ('09)
Faculty Development Office Assistant

*who started the process of assigning presentation
times and the production of this program
without the benefit of the Faculty Development
Office Manager's close guidance, making it
possible for the preparation of this event to
continue smoothly.*

This program is put together in
sequential order. Time(s), location, and
presentation type are listed at the top of
each page. Oral presentations and
performances will occur during the time
listed. Posters and other exhibits will be
displayed all day, but are listed according
to the time(s) members will be available
to discuss their projects.

A list of all students and faculty/staff
participating in A Day of Celebration of
Student & Faculty/Staff Collaborations is
available on the following two pages,
along with the page numbers where you
can find their projects. Some students
and faculty/staff may be involved in
multiple projects or presenting their
project more than once, and are
listed accordingly.

Student Participants

David Beck.....	17	Meredith Meier.....	31
Anne Berkovitz.....	20, 25	Theresa Miller	11
Tim Berto	16, 26	Holly Morpew	23
Troy Boisjoli.....	34	Stuart Ninabuck.....	23
Heather Brosig.....	29	Ryan Pavlik	10, 12
Andy Caldie.....	24	Mikaela Provost.....	14
Daniel Costello	6	Justin Richter.....	15, 33
Jonathan Daun	28	Allison Rick.....	13
Kyle Diederich	5	Alanna Rynish.....	18
Bridgette Flasch.....	24	JP Savaryn	22
Melissa Geier.....	20, 25	Stephanie Schauer	28
Samantha Goeben.....	27, 30	Andrew Schemmel	21
Gina Hilbert.....	24	Mike Thiel	23
Renata Jasinevicius.....	8	John Tracey	32
Stefanie Jochman.....	7, 24	Talentshia Vethanayagamony	15, 33
Emily Kapszukiewicz.....	29	Cassandra Voss.....	23
Kim Keil.....	22	Scott Werley.....	35
Casey Knuteson.....	9	Zachary Willis	23, 31
Rebecca Krus.....	31	Mikiko Yamada.....	19
Kalin LeBrun.....	23		
James Lindlof	16, 26		

Scott Werley, Sophomore Graphic Design Major
Jerry Donahue, Director of Career Services

SNC ALUMNI PROFILE DATABASE AND THREE YEAR GRADUATE SURVEY SUMMARY

The Alumni Profile Database is a continuation from last year's efforts to construct an index of profiles created by SNC Alumni. These summaries are directed toward prospective and current students alike, as well as parental figures, to provide solid examples of career options that are possible when holding a degree from St. Norbert College. The Three Year Graduate Survey Summary is a comparison of the data obtained from the graduate surveys of 2003, 2004, and 2005 (conducted by the Survey Center) to examine existing patterns and trends in the results. Additionally, graduate schools are listed per graduate class, giving a solid visible reference as to where SNC graduates are continuing their education after their time at St. Norbert.

Troy Boisjoli, Senior Geology Major
Tim Flood, Professor of Geology

**PETROGRAPHIC DIFFERENTIATION OF
 THE FIVE PHASES OF THE LOWER
 CRETACEOUS STAR KIMBERLITE
 SASKATCHEWAN, CANADA**

The Star Kimberlite is a 100 million year old diamond-bearing prospect located in central Saskatchewan, Canada. Five different phases of eruption comprise the kimberlite; Cantuar, Pense, Early Joli Fou, Mid Joli Fou and Late Joli Fou. Our goal was to determine if the phases can be differentiated based on petrographic analysis. A total of 25 thin sections were examined for mineralogy, 600 point counts per section, and texture. Based on our preliminary results, the Mid Joli Fou and the Late Joli Fou can not be distinguished from one another; the remaining three units are only marginally distinguishable from one another.



Only the curious will learn and only the resolute overcome the obstacles to learning. The quest quotient has always excited me more than the intelligence quotient.

Eugene S. Wilson



Faculty/Staff Participants

Anindo Choudhury..... 21, 32
 Kari Cunningham..... 16, 26
 Jerry Donahue..... 35
 Russ Feirer..... 15, 33
 Tim Flood..... 6, 34
 John Frohlinger..... 28
 Elizabeth Gordon..... 8, 9
 Jim Hodgson..... 13, 14
 Krissy Lukens..... 11
 Laurie MacDiarmid..... 23, 24, 31
 Bonnie McVey..... 5, 12
 Yoko Mogi-Hein..... 27, 30
 Colin Monpetit..... 22
 Elaine Moss..... 17, 18
 Marshall Moss..... 17
 Dave Pankratz..... 10
 John Pennington..... 7, 23, 24, 31
 John Phythyon..... 19
 Rick Poss..... 5, 12
 Kevin Quinn..... 20, 25
 Fred Schmidt..... 18
 Jason Senjem..... 29

1:40-2:50
10:00-10:50

Lounge
Lounge
Poster
Poster

A Day of Celebration

focuses on the valued tradition at St. Norbert College of collaborations taking place in labs, studios, and other scholarly or creative settings, resulting in a rich array of scholarly research and creative works.

This day features collaborative projects that evolved out of independent studies, class assignments, and casual interactions as well as those collaborations supported through Student-Faculty Development Endowment Grants or the Research Fellows Program.

*Co-sponsored by the
Office of Faculty Development
and the
Office of the Dean of the College*

Talentshia Vethanayagamy, Senior Biology Major
Justin Richter, Senior Biology Major
Russ Feirer, Associate Professor of Biology

INVESTIGATIONS OF RUBULOSE-1,5-BISPHOSPHATE CARBOXYLASE IN *MONOTROPA UNIFLORA*

Monotropa uniflora is a saprophytic dicot whose carbon fixation properties have gone relatively unstudied. In most plants, ribulose-1,5-bisphosphate carboxylase (rubisco) is responsible for turning inorganic carbon into highly reduced organic compounds. To determine if rubisco is utilized in this plant, which may be able to meet its nutrient requirements through a symbiotic relationship with a mycorrhizal fungus, *Monotropa* homogenates were analyzed for the presence of the rubisco protein. Results demonstrate that *Monotropa* expresses rubisco or a protein of similar size and abundance. A PCR-based strategy was used to confirm the presence of the genes for rubisco in both nuclear and plastid genomes. The primers used were designed to recognize consensus sequences located within the rubisco gene in other plant species. Results suggest that although *Monotropa* is achloroplastic, its genome contains genes that express rubisco.

John Tracey, Junior Biology Major
Anindo Choudhury, Associate Professor of Biology
 and Associate Academic Dean

Kyle Diederich, Sophomore Mathematics Major
Rick Poss, Professor of Mathematics
Bonnie McVey, Assistant Professor of Computer Science

DESCRIPTION OF A NEW SPECIES OF DIGENETIC TREMATODE FROM THE THREEPINE STICKLEBACK (*GASTEROSTEUS ACULEATUS*)

Little is known about the parasites of freshwater fishes of California. A new digenetic trematode of the genus *Plagioporus* was discovered from the intestine of the threespine stickleback from Lobos Creek, Marin County, California. Morphologically, its elongate shape most closely resembles *Plagioporus serotinus*, but it is unique in the size and position of its ovary and its large ventral sucker. In view of the lack of molecular work on the genus, ribosomal RNA gene sequences of this new species will be obtained and used to determine its genetic relationships with other species related to it.



The beginning of knowledge is the discovery
 of something we do not understand.

Frank Herbert



MEASURING THE DISKIVITY OF A PLANE REGION

In this presentation we will define the term Diskivity. Using that definition we will explore some simple examples illustrating how the Diskivity of a simple shape can be calculated. This presentation will also examine some of the limiting behaviors for the general forms of our simple shapes. Finally the presentation will investigate how the Diskivity of an object changes as its sides are doubled.



Daniel Costello, Senior Geology and English Major
Tim Flood, Professor of Geology

ORIGIN OF A MAFIC PEGMATITE WITHIN THE 1.1 BILLION YEAR OLD DULUTH COMPLEX, NORTHERN MINNESOTA

The Duluth Complex of Northern Minnesota is a layered igneous intrusion that formed due to rifting of continental North America roughly 1.1 billion years ago. The Complex formed due to multiple injections of mafic magma, which then formed numerous plutonic bodies. Near the base, two similar troctolitic units are separated by a 100 meter thick pegmatitic unit. The petrogenetic relationship between the two troctolites is uncertain. Preliminary petrographic and geochemical analyses suggest that the three units are syngenetic and formed due to fractional crystallization of a single source magma. The pegmatitic phase probably represents a concentration of volatiles during crystallization.

Rebecca Krus, Senior English Major

“The governess in James’s *The Turn of the Screw*”

Meredith Meier, Senior English Major

“Derailing the Fear of Homosexuality: *A Streetcar Named Desire*”

Zachary Willis, Senior English Major

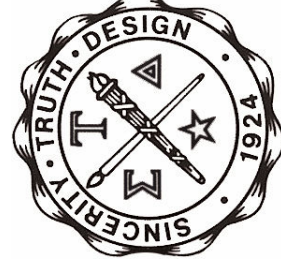
“James Bond: The Evolution of a Spy”

John Pennington, Associate Professor of English

Laurie MacDiarmid, Associate Professor of English

STUDENT PAPER PRESENTATIONS AT THE SIGMA TAU DELTA ENGLISH HONOR SOCIETY UNDERGRADUATE CONFERENCE (SESSION 2)

SNC Sigma Tau Delta members presented critical essays and creative writing works at the annual Sigma Tau Delta Convention in Pittsburgh, Pennsylvania (March 28-31, 2007). Students prepared for the convention by revising their works and practicing reading in front of a mock audience. At the conference, each student individually presented his or her critical or creative work on a panel with students from other chapters across the country.



1:40-2:50
12:20-1:30

Shield Room
Lounge

Lounge

Poster

Samantha Goeben, Freshman Elementary Education
Major and Mathematics Minor
Yoko Mogi-Hein, Adjunct Assistant Professor of Education
Human Relations Coordinator of Teacher
Education Discipline

TEACHING MATH WITH POKÉMON

A typical American child watches 21 hours of TV each week, making it the predominant leisure activity in his or her life (Nielsen Media Research). Can a popular Japanese cartoon character, Pokémon, help American kids learn math better? This project, supported by the St. Norbert College Research Fellows Program, reports an ongoing effort to evaluate the idea of incorporating Pokémon and a mix of animated adventure characters in teaching math for students in 3rd through 6th grade. Using Pokémon Learning League, a web-based educational multimedia, we studied the effectiveness of this alternative educational method of instruction with 1) one-on-one guided study/tutorial and 2) large-group lessons with multiple-grade students. We will present some results that will help parents, teachers, and administrators in finding the unique, alternative instructional strategies in using Pokémon as a math tool.

Stefanie Jochman, Senior English Major
John Pennington, Associate Professor of English

BEATRIX POTTER'S SUBVERSIVE IDEAL

Beatrix Potter's children's tales depict the tension found in her secluded life in the Lake District: the desire for an idealized pastoral landscape and the realization of the violent natural and social worlds that pervade her Arcadian vision. Potter's subversive ideal is seen in her complex tales that highlight this tension between her water-color landscapes and often dangerous tales. To argue for the existence of Potter's subversive ideal, our project will analyze Potter's stories, artwork, and life in the context of children's literature and literary theory.



Renata Jasinevicius, Senior Geology Major
Elizabeth Gordon, Assistant Professor of Geology

PALEOENVIRONMENTAL INTERPRETATION OF A LOWER PALEOZOIC STROMATOLITE REEF, NORTHEASTERN WISCONSIN

Ordovician strata recently exposed in Schaal Quarry provide an exceptional opportunity to examine three-dimensional architecture of an ancient reef that grew along the eastern margin of the Wisconsin Dome. Fossils are dominated by diverse stromatolite types. Four morphologies show systematic spatial-temporal distribution suggesting overall reef development was controlled primarily by water depth during marine transgression. The mound-like reef structure appears to have limited areal extent, similar to patch reefs in modern carbonate environments. Sedimentary facies changes associated with the evolving reef indicate physical-chemical parameters governed initial colonization of the substrate, whereas over time reef organisms controlled physical sedimentation.



Emily Kapszukiewicz, Freshman Political Science and
 Communications Major
Heather Brosig, Freshman Business and
 Communications Major
Jason Senjem, Assistant Professor of Business Administration

THE ROLE OF HUMAN RESOURCES IN SOCIAL ENTREPRENEURSHIP

This pilot study will begin to examine how human resource configurations affect improvisation in resource-constrained organizations pursuing a social mission. Based on interviews with non-profit organizations, we will apply an entrepreneurial human resource model to understand how these organizations find innovative ways to make do with the resources they have.



1:40-2:50

Shield Room
Lounge

Lounge

Poster

Stephanie Schauer, Freshman Mathematics Major and
Secondary Education Certification
Jonathan Daun, Freshman Business Administration Major
John Frohlinger, Associate Professor of Mathematics

MATHEMATICS OF THE SUDOKU PUZZLE

A Sudoku puzzle consists of a basic square and the numbers one through nine. Whether you are a first-time solver or a “puzzle addict,” Sudoku puzzles can be mind teasers. With our research, we are exploring the fundamental logic and mathematics behind the puzzles. We have created some techniques or approaches that eliminate possible entries for a particular cell. The mathematics we have applied so far include: functions, graph theory, set theory, line geometry, compositions, and non-repetitive cycles. Our long-term goal is to find a method for solving Sudokus without guessing.

	2	3						
8			6	9			3	1
4					2			
	1				5	7		
		2	8		9	5		
		7	3				4	
					3			4
9	8				4	6		7
							9	2

9:00-9:50

Casey Knuteson, Junior Geology Major
Elizabeth Gordon, Assistant Professor of Geology

PALEOENVIRONMENTAL RECONSTRUCTION OF CAMBRIAN SANDSTONES, CENTRAL WISCONSIN

Cambrian sandstones in Wisconsin are the deposits of marine and non-marine sedimentary environments, discerned partly by fossil association and sedimentary structures. Due to an absence of fossils, the origin of sandstones in Knuteson Quarry is less certain. Sedimentary facies characteristics (mineral composition, grain size, sedimentary structures) and subsurface correlation records collectively indicate these rocks are likely equivalent to lower lithofacies of the Mt. Simon Formation farther west. However, paleocurrent data does not fit azimuth patterns elsewhere. This discrepancy may be explained by localized currents deflected as a result of paleotopographic features close to the paleoshoreline along the Wisconsin Arch.

9:00-9:50

Lounge

Poster

Ryan Pavlik, Sophomore Computer Science and
Mathematics Major

Dave Pankratz, Associate Professor of Computer Science

SYNCHRONIZING LIGHT TO MUSIC AUTOMATICALLY - LIGHTSYNC

Imagine a complex set of lighting effects turning on and off in perfect synchronization with your music. Now, imagine that setting them up to do that is as simple as connecting some hardware, plugging the lights into a special outlet box, and playing your songs in your music library program. This is LightSync. We will explore the basic design of the light display, as well as algorithms used for automatically generating light tracks for music. We will also discuss which genres of music work the best with our automatic generation program, and why this might be. Live demos will be shown on request!



I'm of the mind that even people who have limitations,
if they have a curiosity, they will find a way to explore it.

Tish Grier



12:20-1:30

Lounge

Poster

1:40-2:50

Shield Room

Oral Presentation

Samantha Goeben, Freshman Elementary Education
Major and Mathematics Minor

Yoko Mogi-Hein, Adjunct Assistant Professor of Education
and Human Relations Coordinator of
Teacher Education Discipline

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12:20-1:30
10:00-10:50

Lounge
Lounge
Poster
Poster

10:00-10:50
Shield Room
Oral Presentation

Tim Berto, Senior Chemistry Major
James Lindlof, Sophomore Chemistry and
Mathematics Major

Kari Cunningham, Assistant Professor of Chemistry

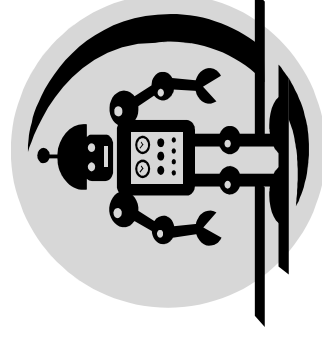
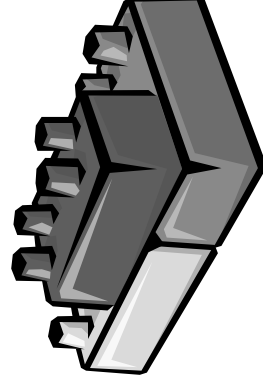
SUBSTITUTION AT V-CARBON ON 1,10-PHENANTHROLINE DERIVATIVES

Derivatives of 1,10-phenanthroline are being used as ligands for catalysts, the design of organic light emitting diodes (OLEDs) as well as chelates for a host of photochemically active ruthenium (II) and copper(I) complexes. This project is the design of “2,9 mixed” phenanthrolines, where there are two different substituents on the alpha carbons of this compound. We have a method for a 20% increase in reported yield for substitution at the 2 position of the 1,10-phenanthroline and the creation of the new 3,4,7,8-tetramethyl-1,10-phenanthroline derivatives.

Theresa Miller, Senior Education Major
Krissy Lukens, Instructional Technology Specialist

BUILDING 21ST CENTURY SKILLS 1 LEGO AT A TIME

As part of an independent study, Theresa researched and implemented the use of LEGO robotics into a 7th and 8th grade Math/Science Applications course. Working collaboratively, students were to design, program, and test their own robots and present their completed projects to their peers. While LEGO robotics addresses many of the state math and science standards, students are also building skills in self-direction, curiosity, creativity, risk taking, higher-order thinking and sound reasoning. Come see how LEGO robotics fosters these 21st century skills.



10:00-10:50

Lounge

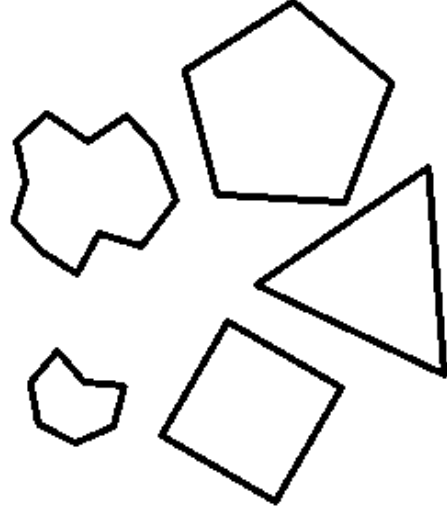
Poster

Ryan Pavlik, Sophomore Computer Science and Mathematics Major

Bonnie McVey, Assistant Professor of Computer Science
Rick Poss, Professor of Mathematics

COMPUTATIONAL INTERSECTION OF POLYGONS – INTUITIVE PROCEDURES AND PRACTICAL PROBLEMS

Any closed figure can be approximated as a polygon, so one of the steps in finding the area of intersection of two closed figures can be broken down to a search for points of intersection between polygons. We will consider finding these points of intersections and the resulting area of intersection for arbitrary polygons. We will elaborate on the approach of searching for where edges "cross," and will outline an intuitive approach. Finally, we will discuss practical problems in the implementation of the intuitive concept, as well as possible solutions.



12:20-1:30

Lounge

Poster

11:00-12:10

Lounge

Melissa Geier, Sophomore Business Administration and Economics Major

Anne Berkovitz, Sophomore International Business Major
Kevin Quinn, Associate Professor of Economics

PASSING ON SUCCESS? PRODUCTIVITY OUTCOMES FOR QUARTERBACKS CHOSEN IN THE 1999-2004 NATIONAL FOOTBALL LEAGUE PLAYER ENTRY DRAFTS

The scarce access to top entering players created by the NFL draft implies that mistakes in the evaluation of entering players' quality are costly. Consequently, teams spend considerable resources attempting to gauge players' likely future productivity. The primary question addressed by this poster session concerns how effective teams are at drafting players of the quarterback position, widely held to be the most competitively influential single position on the field. We have analyzed 78 quarterbacks who were drafted in one of the six NFL drafts held between 1999 and 2004 to determine their productivity in the NFL. We find that how highly a quarterback is chosen in the draft has a significant impact on his likelihood of seeing game action, but is very poorly correlated with his on-field productivity.

Andy Caldie, Senior English Major

“Humor and Horror: Alternative Visions of Death in James Joyce’s *Ulysses*”

Bridgette Flasch, Sophomore English Major

“Confronting Racism with Integrity”

Gina Hilbert, Senior English Major

“Consequences of Religious Syncretism in *Tracks*”

Stefanie Jochman, Senior English Major

“Words of Lead: Dickinson and the Civil War”

John Pennington, Associate Professor of English

Laurie MacDiarmid, Associate Professor of English

STUDENT PAPER PRESENTATIONS AT THE SIGMA TAU DELTA ENGLISH HONOR SOCIETY UNDERGRADUATE CONFERENCE (SESSION 1)

SNC Sigma Tau Delta members presented critical essays and creative writing works at the annual Sigma Tau Delta Convention in Pittsburgh, Pennsylvania (March 28-31, 2007). Students prepared for the convention by revising their works and practicing reading in front of a mock audience. At the conference, each student individually presented his or her critical or creative work on a panel with students from other chapters across the country.

Allison Rick, Junior Environmental Science Major
Jim Hodgson, Professor of Biology

DIET SPECIALIZATION IN LARGEMOUTH BASS

The ubiquitous phantom midge, *Chaoborus*, has a highly documented susceptibility to predation from obligate planktivores in north temperate lakes. We examined predation on midges by the oft-piscivorous largemouth bass in a small lake in Michigan’s Upper Peninsula, USA. Specifically, we examined distinctive foraging behaviors of pelagic (in the metalimnion and lower) and littoral (epilimnion) foraging bass. We determined forager location in the water column from body core temperatures (TB). This is particularly noteworthy because bass are diurnal, visual predators of the littoral zone, whereas *Chaoborus* are diet migrators occupying surface waters of pelagic zone at night. We tested the hypothesis that the diet of pelagic bass (TB of 17-20°C) differs from the littoral bass (21-29°C) and that there is a foraging preference for *Chaoborus*. It was found that pelagic foragers had significantly (P<0.001) more *Chaoborus* per gut (249.3) than littoral forages (68.4), that average individual diet consistency (22.3% diet overlap) was greater than diet consistency of random pairings (18.3%) and that >50% of bass stomachs contained more *Chaoborus* than the population mean.

Mikaela Provost, Senior Biology Major
Jim Hodgson, Professor of Biology

IMPACT OF LAKE SIZE ON DIET DIVERSITY OF LARGE MOUTH BASS

As lake size increases, habitat heterogeneity and prey refugia increase, diversifying species assemblages, and increasing food chain length. More prey species in large lakes may increase diversity of predator diets. Alternatively, increases in system size may support larger populations of optimal prey, thereby reducing the diversity of predator diets. We sampled largemouth bass (LMB) diets from four unexploited lakes of varying size (67.3 - 1.5 ha) in Michigan's Upper Peninsula to understand how lake size effected apex predator diets. We found that as lake size increased; diet diversity decreased (ranged from 0.70 - 0.53), mean number of prey taxa decreased (3.9 - 2.0) and the mean number of prey items decreased (82.1 - 4.3). Additionally, we found that diets containing only fish prey were greater in the larger lakes (>20%) than in smaller lakes (<9%), the percent of empty stomachs also increased in the larger lakes (25.5 – 10.9%). Our hypothesis asserts LMB will increase foraging optimization and narrow their diet breadth with an increase in lake size.

Kalin LeBrun, Junior English Major
 “Remember to Breathe” (poem)
Holly Morphew, Senior English Major
 “And this Kept the Cold Out” (poem)
Stuart Ninabuck, Junior English and History Major
 “Rooster” (short fiction), “Halo” (creative nonfiction)
Mike Thiel, Senior English Major
 “Hum Your Story” (poem)
Cassandra Voss, Junior English and Women's and Gender Studies Major
 “Don't Worry, I'm Not Sleeping There Tonight” (poem)
Zachary Willis, Senior English Major
 “Unseasonable Weather” (poem)
John Pennington, Associate Professor of English
Laurie MacDiarmid, Associate Professor of English

STUDENT CREATIVE WRITING PRESENTATIONS AT THE SIGMA TAU DELTA ENGLISH HONOR SOCIETY UNDERGRADUATE CONFERENCE (SESSION 3)

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11:00-12:10

Lounge

Poster

Kim Kiel, Freshman Biology Major
JP Savaryn, Senior Biology Major
Colin Montpetit, Assistant Professor of Biology

THE SEARCH FOR OBESITY FACTORS CONTROLLING METAMORPHOSIS IN FROGS: REVIEW, NEW DATA, AND FUTURE RESEARCH DIRECTIONS

The aim of ongoing investigations in our lab is directed toward testing the hypothesis that the timing and release of obesity signals control growth and development in vertebrates. To achieve this goal, we are currently developing a frog metamorphosis model to test the prediction that the obesity factors, leptin and neuropeptide Y, direct the initiation and completion of biological development in frogs. Current efforts in the lab include establishment of a frog population through breeding practices, validation of a thyroid hormone induced frog metamorphosis assay, and cloning and sequencing of gene coding for obesity factors (e.i. leptin and neuropeptide Y).

10:00-10:50

Lounge

Poster

1:40-2:50

Lounge

Poster

Talentshia Vethanayagamy, Senior Biology Major
Justin Richter, Senior Biology Major
Russ Feirer, Associate Professor of Biology

INVESTIGATIONS OF RUBULOSE- 1,5-BISPHOSPHATE CARBOXYLASE IN *MONOTROPA UNIFLORA*

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10:00-10:50
12:20-1:30

Lounge
Lounge
Poster
Poster

Tim Berto, Senior Chemistry Major
James Lindlof, Sophomore Chemistry and
Mathematics Major
Kari Cunningham, Assistant Professor of Chemistry

SUBSTITUTION AT V-CARBON ON 1,10-PHENANTHROLINE DERIVATIVES

Derivatives of 1,10-phenanthroline are being used as ligands for catalysts, the design of organic light emitting diodes (OLEDs) as well as chelates for a host of photochemically active ruthenium (II) and copper(I) complexes. This project is the design of “2,9 mixed” phenanthrolines, where there are two different substituents on the alpha carbons of this compound. We have a method for a 20% increase in reported yield for substitution at the 2 position of the 1,10-phenanthroline and the creation of the new 3,4,7,8-tetramethyl-1,10-phenanthroline derivatives.



Creativity can solve almost any problem. The creative act,
the defeat of habit by originality, overcomes everything.

George Lois



11:00-12:10

Lounge
Poster

Andrew Schemmel, Senior Biology Major
Anindo Choudhury, Associate Professor of Biology
and Associate Academic Dean

PHYLOGENETIC RELATIONSHIPS OF PARASITIC NEMATODES OF NORTH AMERICAN FRESHWATER FISHES

To date, genetic data are not available for most of the freshwater fish parasitic nematodes of North America. There has also been no phylogenetic analysis that includes these parasites. This study uses partial sequences of the 18S and 28S ribosomal genes to address the phylogenetic relationships of 8 species belonging to the most common genera in the three dominant families of nematodes to which most of North American forms belong. Results of this study indicate independent episodes of parasitism and host associations and both confirm and challenge aspects of previously accepted/hypothesized phylogenetic relationships.

11:00-12:10
12:20-1:30

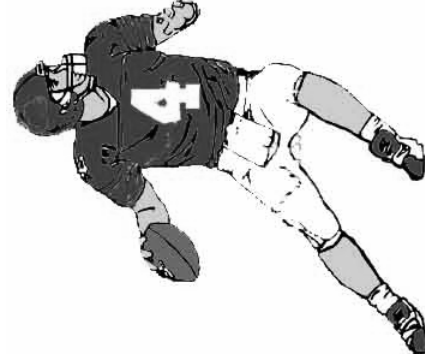
Lounge
Lounge
Poster
Poster

11:00-12:10
Shield Room
Performance

Melissa Geier, Sophomore Business Administration and Economics Major
Anne Berkovitz, Sophomore International Business Major
Kevin Quinn, Associate Professor of Economics

PASSING ON SUCCESS? PRODUCTIVITY OUTCOMES FOR QUARTERBACKS CHOSEN IN THE 1999-2004 NATIONAL FOOTBALL LEAGUE PLAYER ENTRY DRAFTS

The scarce access to top entering players created by the NFL draft implies that mistakes in the evaluation of entering players' quality are costly. Consequently, teams spend considerable resources attempting to gauge players' likely future productivity. The primary question addressed by this poster session concerns how effective teams are at drafting players of the quarterback position, widely held to be the most competitively influential single position on the field. We have analyzed 78 quarterbacks who were drafted in one of the six NFL drafts held between 1999 and 2004 to determine their productivity in the NFL. We find that how highly a quarterback is chosen in the draft has a significant impact on his likelihood of seeing game action, but is very poorly correlated with his on-field productivity.



David Beck, Senior Music Major
Elaine Moss, Adjunct Instructor of Music and Accompanist
Marshall Moss, Professor Emeritus of Music

ART IN THE GARAGE

As part of his coursework in Advanced Piano Literature, David Beck was asked by the newly formed Art Garage of Green Bay to design a Baroque night. In addition to lecturing on the style characteristics and representative composers of the time period, performances were done using the piano as a solo instrument and also as an accompanying instrument with vocalists and instrumentalists. This project will describe the process involved in designing the evening and will include performances on piano and our newly acquired harpsichord.



Alanna Rynish, Junior Music Education Major
Elaine Moss, Adjunct Instructor of Music and Accompanist
Fred Schmidt, Professor of Music

NOT SO FAR AWAY

While preparing for her junior saxophone recital, Alanna was looking for a piece that contrasted with her other pieces. *Far Corner*, composed by Wisconsin native Dan Maske, was just that piece. This piece was written for soprano saxophone and piano and is influenced by progressive rock. What also makes this piece stand out is the major piano role instead of just a basic piano accompaniment. *Far Corner* later influenced and inspired the name of Maske's chamber rock ensemble which has released two records on Cuneiform Records Label.



Mikiko Yamada, Senior Biology Major
John Phythyon, Associate Professor of Biology

EFFECT OF ECGC FROM GREEN TEA EXTRACT ON GROWTH AND VIABILITY OF ENTEROCOCCUS FAECALIS

Green tea extracts are promoted as beneficial to humans, particularly as an anti-cancer agent. The polyphenol epigallocatechin-3-gallate (EGCG) is the major agent cited for its health promoting ability. In this study we measured the antibacterial ability ECGC by determining its effects on a typical member of the gastrointestinal normal flora, *Enterococcus faecalis*. We established a quantitative relationship between ECGC concentration in Tryptic Soy Agar and the number of Colony forming units of *E. faecalis* resulting from an initial inoculum. The experiment was duplicated in order to allow for statistical analysis of the results.