



BIOMASS COORDINATOR: KIRSTEN SLETTEN '16

BioMass

Biology Student Newsletter

Sept/Oct
2015

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Letter from the Biology Chair:

by Kim Kandl

On behalf of the Biology Department faculty and staff, welcome first year and transfer students and welcome back returning students! We realize that you have now been on campus for several weeks, but this is our first opportunity to formally tell you how happy we are to have all of you on the Hill. (If you are reading this from abroad in India, Tanzania, Great Britain or anywhere else in the world, know that we miss you, we are keeping you in our thoughts, and we look forward to catching up with you when you return.) Since the semester started we have enjoyed seeing you in our classes, labs, and offices, and we love seeing you studying and socializing throughout Regents Hall. We especially like interacting with you at events such as "Speed Dating," the Natural Lands walk and the first seminars of the semester. We hope that you will continue to participate in Biology events such as the Waffle Social hosted by Tri-Beta (the Biology student honor society) on October 2. If you haven't gotten a chance to join us at one of our events

yet, we hope to see you soon! With such a big department, we think communicating with you is important. You have probably already received a few emails from us, and another important aspect of our communication with you is this Newsletter. You can look forward to this in your inbox about once a month. The Newsletter is the result of hard work and effort by the Biology Administrative Assistant, Joy Broin, and the student Biomass Coordinator Kirsten Sletten. This Newsletter could not happen without students like you who contribute your articles, photos, art and other talents. We really hope you enjoy the first Biomass of the new academic year.

Best wishes for a wonderful school year,

Kim Kandl

Biology Department Chair



It's Not Just Bees that Sting

Your first Student Naturalist Article for the year written by Leah Stinson '16

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Bio Related Groups to Join

St. Olaf students in Honduras on the Medical Brigade last January. Photo by Hannah Besonen

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Introducing the New BioMass Coordinator

by Kirsten Sletten

Hello! My name is Kirsten Sletten and I am a senior Biology major from Stoughton, WI. I am thrilled to be part of the Biomass staff for this coming school year! When I'm not in class or lab I enjoy running in the natural lands, eating cage cookies, and taking meaningless BuzzFeed quizzes.

I am looking forward to collaborating with students and staff throughout this upcoming school year to create a fun and informative newsletter! If you have any interest in writing for the BioMass or have any comments/suggestions please feel free to contact me at slettenk@stolaf.edu.

-Kirsten



LIKE TO WRITE?

Contact Kirsten to suggest an article subject or offer to write an article.



Distinction in Biology

by Joy Broin

The Biology Department honors a limited number (up to 10%) of graduating majors with Distinction in Biology. Each spring the faculty reviews the research papers and presentations of the student candidates, and awards this academic honor to those who fulfill departmental ideals of academic excellence and research scholarship.

Pre-application Due November 2

Student submits two items to Joy Broin broin1@stolaf.edu:

- 1) a Pre-Application form that includes basic information, an abstract of the research project, and a detailed plan for completing the research paper by the final due date of March 14;
- 2) an unofficial transcript. You should obtain your research advisor's approval before completing the pre-application. **For full information visit <http://wp.stolaf.edu/biology/distinction/>**



New Biology Faculty for 2015-16

Beth Pettitt- I am a behavioral ecologist with a special interest in mate selection, parental care and animal communication. I have taught introductory biology courses at the College of St. Benedict and St. John's University for the last three years. I am excited to be apart of the St. Olaf Biology faculty and to explore new topics with Ole students that are taking BIO 123 Human Biology this fall, BIO 391 Special Topics Behavior course during interim and BIO 121 Biological Sciences in the spring. I have an awesome dog, Lillie, and very supportive partner, Andy. When I was a kid I wanted to join the circus and so I learned how to ride the unicycle and juggle, but I never mastered doing both at the same time.



Sara Fruehling- Hi Ole Biologists! I am new to all of you at St. Olaf this year but taught biology at St. Olaf previously, so am I familiar with what it means to study biology at St. Olaf. I am teaching Bio233: Genetics both Fall and Spring semesters this academic year and will also teach Bio124: The Biology of Women during Interim. My training and research interests are in the field of medical microbiology and particularly love talking about the interactions of viruses and bacteria with their hosts. This overlaps with topics of microbiology, immunology, cell biology, genetics, and molecular biology. I also love conversations about study abroad (especially the Biology in South India program!), sustainable agriculture, beekeeping, birds, travel, and the best current books/movies/youtube videos. Come find me in RNS386!



Sarah Amugongo— I am an Assistant Professor of Biology, currently teaching Human Anatomy and Physiology. I come from Kenya, where I did my undergraduate studies in Botany, Zoology and Education. My initial goal was to be a high school teacher of Biology and Chemistry but after graduating I changed my mind and decided to go to graduate school. I did my PhD in Integrative Biology at the University of California, Berkeley and my Postdoctoral training at the University of California, Davis. My research focuses on the role of prenatal exposures on adult body composition. Using the rat model in the lab, I study the effects maternal prenatal conditions on the development of the offspring.

Welcome to (or welcome back) to St. Olaf Biology!

Student Naturalist Article:

It's Not Just Bees that Sting

by Leah Stinson, '16

If you have spent any considerable amount of time in the outdoors since returning to the Hill, your senses have most likely been overwhelmed with a cool fall breeze, a hint of breakfast cereal from down the hill, changing leaves, and lest we forget, a swarm of buzzing insect around your head. When your peers indicate they have suffered a “bee” sting, most likely they are referring to the yellow jacket, which shares an order, hymenoptera, with the species of bees. What are the roles of these different hymenopterans, and how do we distinguish them from one another?

In the spring and early summer, yellow jackets eat carnivorously. In doing so, they actually protect your garden. As the populations grow, yellow jackets may feed on more sugars, and then eventually resort to scavenging around garbage cans and buildings as the natural food supply dwindles. These wasps tend to nest underground in rodent burrows, where colonies can be composed of up to thousands of individuals by late season. Yellow jackets are known to be aggressive and can sting multiple times, unfortunately for their human neighbors.

Despite similar physical characteristics, yellow jackets differ substantially from their fellow hymenopterans. These include, but are not limited to paper wasps, hornets, European-native honeybees, bumblebees, and a plethora of solitary bees, most of which comprise the category of

endangered North American-native bees. One clear distinguishing characteristic of yellow jackets is their aggression. Paper wasps and hornets, similarly, exhibit aggression, but do not scavenge, so are less likely to surprise you during your afternoon picnic. Honeybees, bumblebees, and solitary bees attack less readily. Yellow jackets can be identified by their physical appearance, as well. Yellow jackets have a smooth, bright yellow and black body with a relatively well-defined thorax and abdomen. Although paper wasps and hornets resemble yellow jackets, honeybees and bumblebees are generally plumper and dressed in a darker yellow. Another characteristic to distinguish yellow jackets is their nesting location: underground. Honeybees, paper wasps, and hornets nest aboveground. Although bumblebees nest in the ground, they can be differentiated by aforementioned physical characteristics.

So, if you feel the painful puncture of an insect, I encourage icing and/or anti-itch cream as needed, followed by some reflection on which type of insect has actually wounded you, before falsely reporting a bee sting to your peers.

LEARN THE DIFFERENCE



Yellow Jacket

A yellow jacket, pictured above, characterized by a well-defined thorax and abdomen and bright yellow and black stripes down the backside.



HoneyBee

A honeybee, pictured above, is native to Europe and is characterized by a more plump figure and darker yellow and black stripes.

Natural Lands Curator

Ask Kathy Shea or Diane Angell questions on the Natural Lands !

Bio Related Clubs:

As a new school year on the hill begins discover and become involved with one of the many biology

related clubs or organizations found on the St. Olaf campus. These clubs and organizations are great ways to explore various fields of biology outside of the classroom and to meet other biology enthusiasts!

Alpha Epsilon Delta: Preprofessional Health Honor Society is dedicated to the encouragement and recognition of excellence in pre-professional health scholarship. Our Society welcomes all students engaged in the pursuit of professional development, provides a forum for students with common interests, and extends a program of service to benefit the college/university community. Contact: Arne Schick <schick@stolaf.edu>

The Neuroscience Club aims to provide a forum for St. Olaf students who have an interest in neuroscience to meet and learn more about the field. Meetings allow Oles to explore topics in neuroscience that interest them, learn about research being performed by professors and students at St. Olaf, and discuss scientific literature in many different areas of neuroscience. The club meets Wednesdays evenings 6:00-7:00 pm. Contact: Jake Westerberg <westerbe@stolaf.edu>

The St. Olaf Professionals Club provides support and resources for students interested in pursuing a career in the healthcare field. The club hosts a variety of speakers and panels, organizes regular volunteer events, and discusses healthcare issues. You can find our events on the G-cal located on their website(<http://stolafprehealthclub.wordpress.com/>). Contact: Signe Braafladt <braaflas@stolaf.edu>

The Pre-Physical/Occupational Therapy club is an organization for students who desire to explore a future career in the field of physical or occupational therapy. Events are organized on and off campus to enlighten students on the wide variety of PT/OT specialties, and to help students with the graduate school application process and shadowing opportunities. Contact: Lauren Petronac <petronac@stolaf.edu>

The Sports Medicine Club promotes the benefits and appreciation of sports medicine. Additional goals include bringing in speakers or clinicians; collaborating with other student orgs; organizing trips to sports medicine, physical/occupational/chiropractic therapy, or athletic training conferences/symposiums; providing important and relevant information to St. Olaf Students. Contact: Jake Barzen <barzen@stolaf.edu>

St. Olaf's American Medical Student Association (AMSA), a nationally recognized organization, strives to build St. Olaf Pre-Med student's leadership skills. We fulfill this through volunteer event coordinating, physician shadowing coordinating, and networking with medical schools around the nation. Contact: John Feemster <feemster@stolaf.edu>

St. Olaf Holistic Medicine Club-Our mission is to educate the student body about complementary and alternative medicine by bringing in regular speakers to present on holistic health topics such as acupuncture, healing touch, chiropractic medicine, and nutrition. Contact: Lauren Bird <bird@stolaf.edu>

St. Olaf Molecular Science Club is St. Olaf's undergraduate chapter of the American Society for Biochemistry and Molecular Biology whose purpose is to advance knowledge in the fields of biochemistry and molecular biology by supporting research and academic advancement. Contact: Lauren Roelike <roelike@stolaf.edu>

The St. Olaf Pre-Vet Club aims to bring together students interested in pre-veterinary studies, promote interest in the science of veterinary medicine, provide resources and information about veterinary school, encourage community awareness about animal health, and participate in community service. Contact: Taylor Hermundson <hermunds@stolaf.edu>

Tri Beta (Biology Club) is an informal organization that is open to any St. Olaf Student interested in Biology. It is a great opportunity to meet other students and interact with Biology faculty members. Tri Beta Biological Society is open to second semester sophomore, junior and senior biology majors. Contact: Mary O'Sullivan <osulliva@stolaf.edu>

Herpetology Club is an organization dedicated to studying and enjoying reptiles and amphibians. Members care for the terrarium in the fourth floor atrium of Regents Hall, discuss scientific literature and documentaries, and participate in field trips to scout out our local herps. Contact: Chris Wellems <wellems@stolaf.edu>

Partners In Health is a grassroots organizing group that does awareness, advocacy, and fundraising work for Paul Farmer's international organization of the same name. Contact: Louise Asleson <asleson@stolaf.edu>

St. Olaf Global Brigades is a chapter of Global Brigades, the world's largest student-led global health and sustainable development organization. The group travels to either Panama (Environmental Brigade only) or Honduras for a week during Interim Break to participate in either the Medical Brigade, the Public Health Brigade, the Environmental Brigade, or in the

Water Brigade.

SEE? SOMETHING FOR EVERYONE IN REGENTS

With so many directions you can go as a Biology student, checking out or joining a group on campus can help spark your interest with your degree.