



Sigma Xi 15th Annual Poster Session

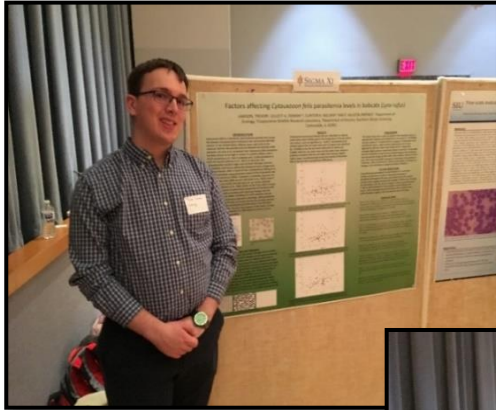
9:00am – 11:00am on April 9th, 2018

Nine posters from the departments of Zoology, Psychology, and Plant Biology were presented this year. There were posters representing both graduate students and undergraduate students alike. Various topics included parasites in bobcats and rats, 3D printed plants, traumatic brain injury, invasive plants around Southern Illinois, and behavior of children related to aggressive media and parental affect.



Bobcat Central

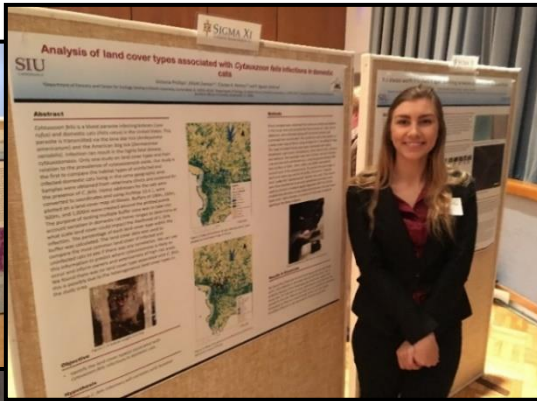
Three undergraduate students presented their studies about a parasite commonly found in Bobcats, *Cytauxzoon felis* (C. felis). The C. felis, while a harmless blood parasite in Bobcats, is deadly in many domestic cats. These students covered topics including the genetic diversity of the parasite in bobcats and domestic cats (Elliott Ziemann), the relationship between landcover and infection of the C. felis in domestic cats (Victoria Phillips), and the factors (i.e. temperature) that affect C. felis in bobcats (Trevor Lawson).



Pictured: Trevor Lawson
(above)

Poster: Factors affecting *Cytauxzoon felis* parasitemia levels in bobcats (*Lynx rufus*)

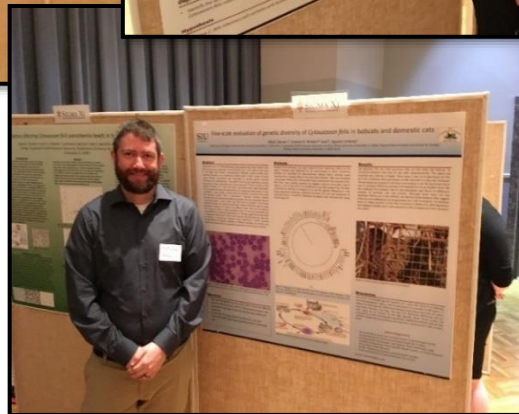
Authors: Trevor Lawson, Elliott Ziemann, Clayton K. Nielsen, F. Agustín Jiménez



Pictured: Victoria Phillips

Poster: Analysis of Landcover Types Associated with *Cytauxzoon felis* Infections in Domestic Cats

Authors: Victoria Phillips, Elliott A. Ziemann, Clayton K. Nielsen, F. Agustín Jiménez



Pictured: Elliott Ziemann

Poster: Genetic diversity of *Cytauxzoon felis* in bobcats and domestic cats in a restricted geographic area

Authors: Elliott Ziemann, Clayton K. Nielsen, F. Agustín Jiménez

Aggressive Media and Affect in Children

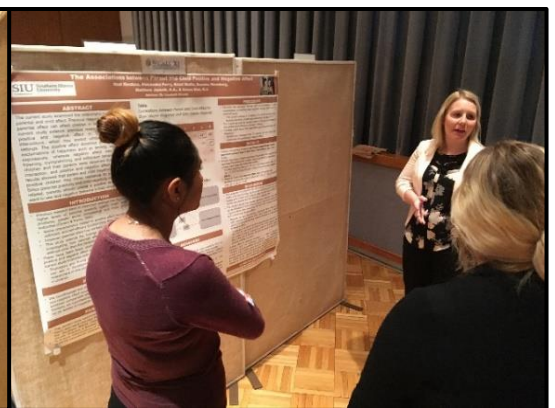
Students who conducted projects in the Southern Illinois Twin and Sibling Study (SITSS) presented their posters. Shay Wood presented information suggesting a significant relationship between altruistic behaviors and preference for media with social aggression but not for media with physical aggression. Itzel Mendoza, Alexandra Perry, Breanna Wennberg, and Kristi Wallin presented data reporting children with positive affect respond to parent positivity and show resilience to parent negativity.



Pictured: Wesley Calvert, Shay Wood

Poster: Examining the Relationship Between Altruistic Behavior and Children's Preferences in Aggressive Media

Authors: Shay Wood, Matthew Jamnik, Lisabeth DiLalla



Pictured: Itzel Mendoza and Alex Perry

Poster: The Association between Parent and Child Positive and Negative Affect

Authors: Itzel Mendoza, Alexandra Perry, Kristi Wallin, Breanna Wennberg, Matthew Jamnik, Emma Diaz

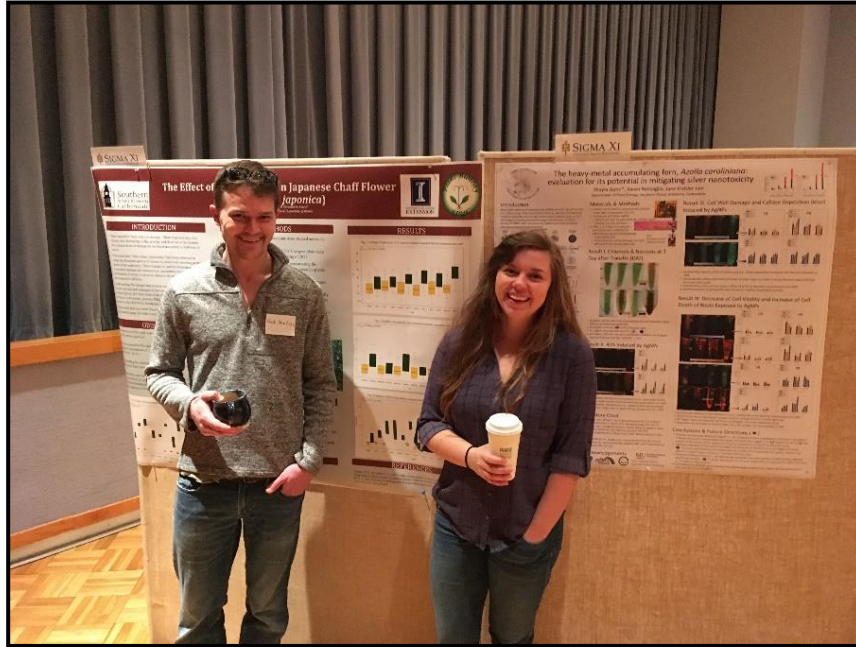
Deer and Heavy Metal

Nick Seaton presented data about the spread an invasive plant and Shayla Gunn presented her poster about the mitigation of silver nanotoxicity using ferns. Nick Seaton's poster presented his work on the invasive species of *A. Japonica* plants and deer grazing, reporting deer grazing impeded the invasive plant's growth. Shayla Gunn's project reported that the fern *Azolla Cardiniana* absorbed silver nanoparticles, suggesting this fern could be used to clean up polluted environments.

Pictured: Nick Seaton (left)

Poster: The Effect of Deer Browse on Japanese Chaff Flower

Authors: Nick R. Seaton, David J. Gibson, and Christopher Evans



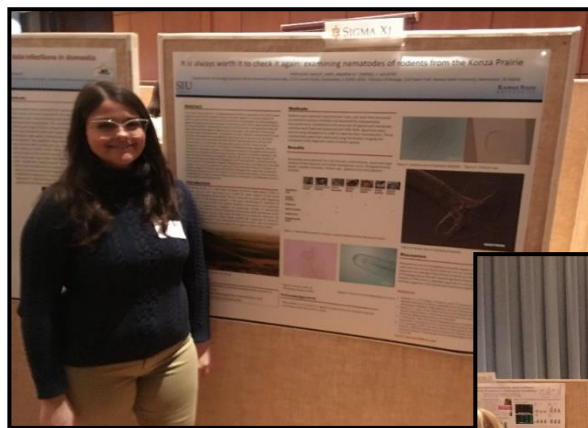
Pictured: Shayla Gunn (right)

Poster: The heavy-metal accumulating fern, *Azolla caroliniana*: evaluation for its potential in mitigating silver nanotoxicity

Authors: Shayla Gunn, Karen Renzaglia, Jane Geisler-Lee

Nematodes to Acid Seeps

Hailey Penticoff studied nematodes found in rodents, to determine if evolution of nematodes could represent an external stressor, like pollution. David Barfknecht discussed how environmental surroundings (i.e. canopy cover) and acid seeps differentially effect the species of plants growing there.



Pictured: Hailey Penticoff (above)

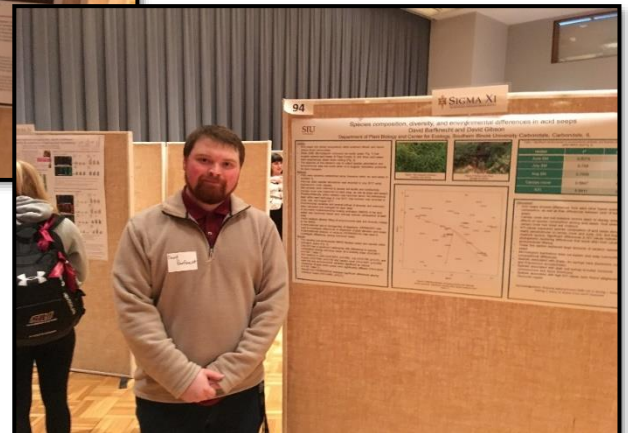
Poster: It is always worth it to check it again: the examination of nematodes of rodents from the Konza Prairie reveals at least one new species

Authors: Hailey Penticoff, Andrew Hope, F. Agustín Jiménez

Pictured: David Barfknecht (below)

Poster: Species composition, diversity, and environmental differences in acid seeps

Authors: David Barfknecht and David Gibson



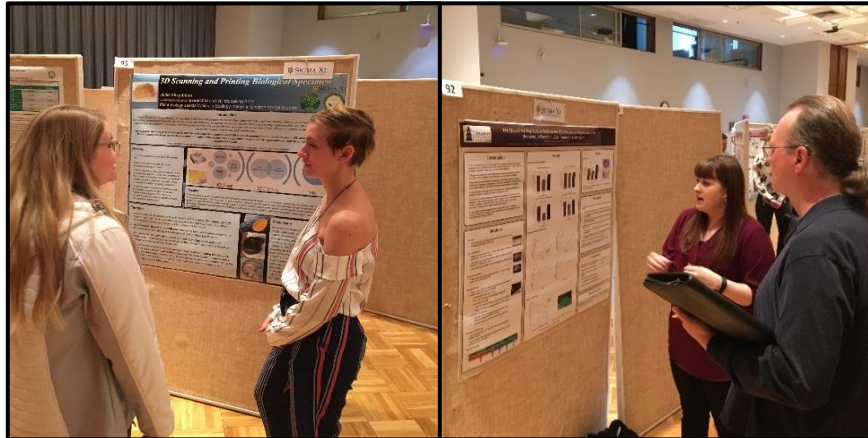
3D Printed Plants and a Magnesium Treatment for Traumatic Brain Injury

Juliet Fitzgibbon presented her work, which provides 3D printed models of biological organisms to further educate the public on the environment. Jennica Young discussed her Master's thesis project that examined a magnesium treatment for traumatic brain injury using a decision-making paradigm in rats.

Pictured: Juliet Fitzgibbon (left)

Poster: 3D Scanning & Printing Collection Specimen

Authors: Juliet Fitzgibbon



Pictured: Jennica Young (right)

Poster: Magnesium Administration after Experimental Traumatic Brain Injury Improves Decision-Making Skills

Authors: Jennica M. Young and Michael R. Hoane

Thank you to everyone who participated, attended, judged, and volunteered! Congratulations to Jennica Young (Graduate) and Shay Wood (Undergraduate) for winning the Student Poster Presentation Awards! It is always enjoyable and inspiring to see young scientists discussing their work. See you there next year!



(Montage by Audreyana Jagger and Jennica Young)