

# General Meeting



9/10/2019

Animal of the Week: **Bonobos** (*Pan paniscus*)



# General Meetings

- Every meeting from now on will be in 128 Natural Sciences
- 7pm-8pm



**\*\*You're allowed to bring pets to meetings- please just message us approve it \*\***

# Opportunities in Zoology

- Join AZA!
  - Resume builder
  - Keep up with all the recent news in the zoo world
  - Job postings
  - Connect with zoos all over the world
  - Get the Connect Magazine

**ASSOCIATION  
OF ZOOS &  
AQUARIUMS**





# Active Member Status

You will be an active member  
for the spring semester,  
except the Newcomer  
exception!

- Attend 1 Fundraising Event
- Attend 1 Social Event
- Attend 1 Service/Outreach Event
- Pay Dues & attend 6 general meetings
- Apparel discounts, Reduced trip fees, Graduation pins\*\*, Networking opportunities, Special events, Leadership building

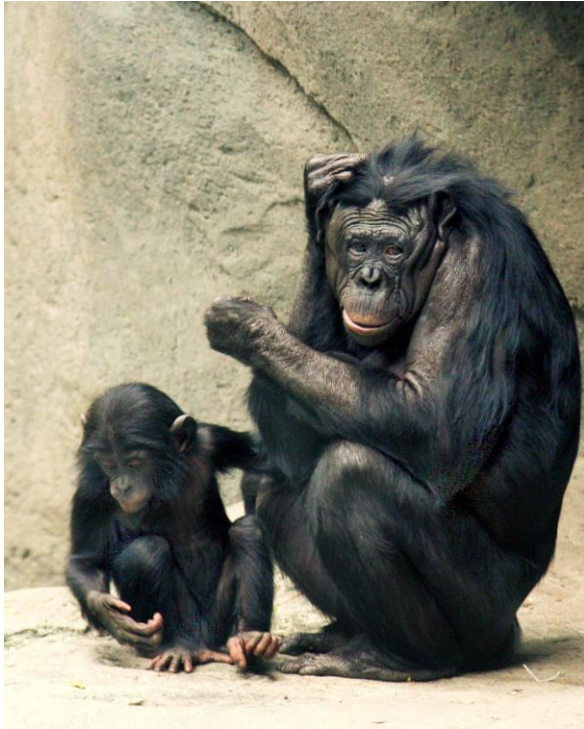
\*\*Seniors- Be an active member of a committee

# Dues!



- \$20 per semester or \$30 annually
- Pay Muning at the end of the meetings (Venmo or cash)
- All dues are due: **September 24th**
- New members will be active once dues are paid!

# Social



- Trips and events
- Make friends and have fun!
- Have a say in fall and spring semester trip!
  
- Committee meeting after the general meetings for 15 minutes

# Bat Walk with MSU Bat Association

Let us know if you went so we can give you a social credit!





# Fundraising



- Local charities
  - The Rock Fundraiser
  - Grants, scholarships, and sponsorships
  - Advertising for semester charity/animal
  - Alumni networking
- 
- Committee meetings 10-15 min after general meetings

# Collecting Cans

- Collecting cans at meetings and football games!
- Bring in 1 garbage bag full of cans/bottles = 1 fundraising credit
- If you go to tailgate or know someone doing tailgating ask them to collect the cans and keep them for us!
- Will be doing in fall and spring semester
- Money going towards trips and fundraiser!

# Services/ Outreach



- Local charities
  - The Rock Fundraiser
  - Grants, scholarships, and sponsorships
  - Advertising for semester charity/animal
  - Alumni networking
- 
- Committee meetings 10-15 min after general meetings

# Upcoming Events!

- National Fossil Day at the MSU Museum: **Sunday, October 6th, 10AM-4PM**
  - Help man the Dinosaur Dash 5K course, event tables, activities, and more!
  - **Contact Nick VanAcker by September 20** ([vanack22@msu.edu](mailto:vanack22@msu.edu)) if interested or have questions



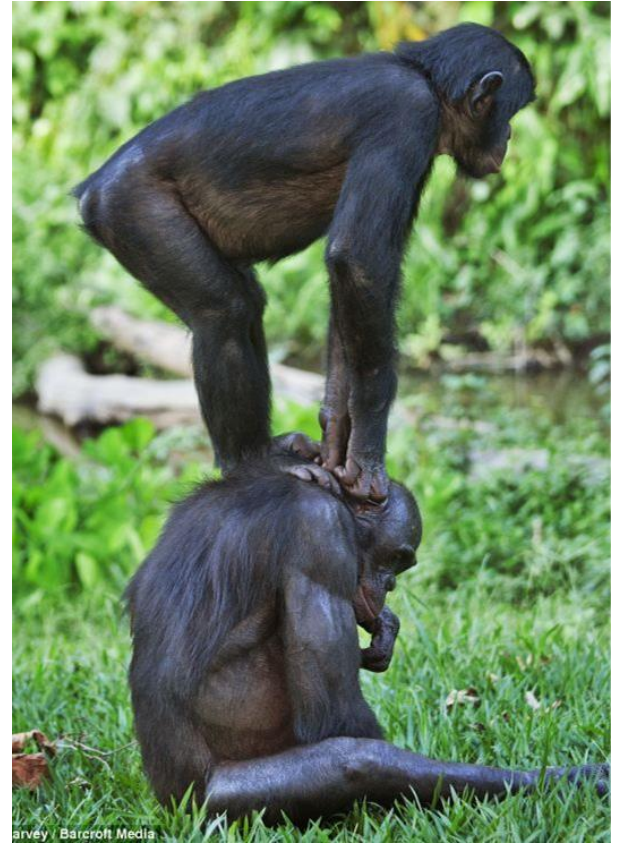


# Pay Dues & Merchandise

- 2017-2018 Periodic T-shirt, Long Sleeve, & Crew Neck
- Spartan Head T-shirts
- Hats, Shot Glasses, Water bottles, Stickers, Lanyards, etc!
  
- Pay Muning due for this semester or both - \$20 or \$30
  
- Go to committee meetings!
  
- Come talk to any e-board member for questions or just to talk!

# Check out our social media!

- Website: [www.msuzsa.weebly.com](http://www.msuzsa.weebly.com)
- Twitter: @MSUZSA
- Snapchat: @msu\_zsa
- Instagram: msu\_zsa or MSU ZSA
- Venmo: MSU ZSA





Now: Summer Experiences!

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# Summer Experiences



REUs, Zoos, & Nature Centers, Oh My!



# Annie Kovach



Zoo Teen Program



# Who Am I

- Annie Kovach
- Cincinnati, OH
- Criminal justice/psychology/Spanish
- Theater, mock trial, zoo

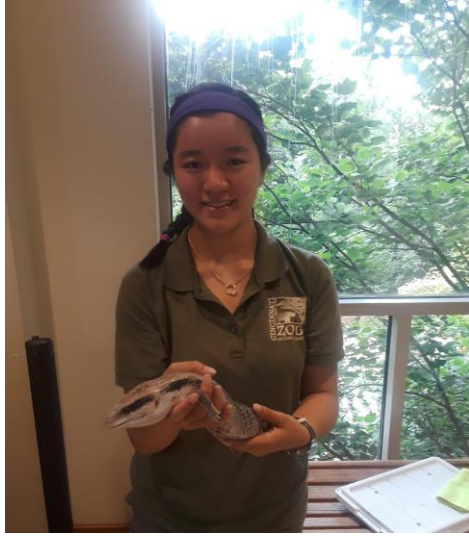




# Zoo Teen Program

- Education & visitor experience
- Buzz troop (photographers)
- Horticulture
- 13-17yrs





## Education & visitor experience

- Visitor engagement
- Camp

# Experiences

- Festival of lights
- Camps
- Zoo troop
- Zoo on the move
- Overnights
- Zoo Academy







## When you “retire”

- Instructor
- Zoo Teen supervisor
- Adventure guide
- Wild encounters
- Intern
- Much more!

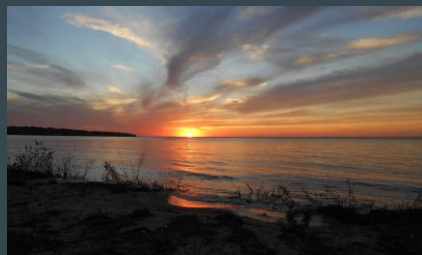
# Alena Bowman



Kellogg Biological Station & Oregon Ridge Nature Center



# Kellogg Biological Station (Battle Creek, MI)



- Field courses: Ecology, Ecology Lab, Plant Systematics
- Turtles galore
  - Painted, Box, Blashill's...
- Plants
  - More plants
- Research projects
- Camping
- Hiking
- Soccer
- Ice cream

# Oregon Ridge Nature Center (Baltimore, MD)



## Naturalist Internship

- Animal Care
  - Reptiles, Amphibians, Insects (incl. butterflies), Fish, Poultry, Raptors, Rabbit
  - Feeding, cleaning, etc.
  - Grocery runs
- Sensory Garden Rehab
- Weeding/Pruning
- Trail maintenance
- Interpretation

# Advice

- Don't be afraid to reach out
- Jump into whatever you're doing
- Always be on the lookout for cool things (e.g. turtles, plants, internships, ice cream shops, etc.)



# What's Next?

- This year
  - ULA for Honors Bio Lab
  - Writing Center Consultant
  - Clubs/Volunteering
- Summer 2020
  - Study Abroad in Spain?
  - Take classes
- December 2020
  - Graduation!
- After that
  - Grad school?
  - Master Naturalist program
  - Seasonal field work

bowman55@msu.edu

# Aalayna Green



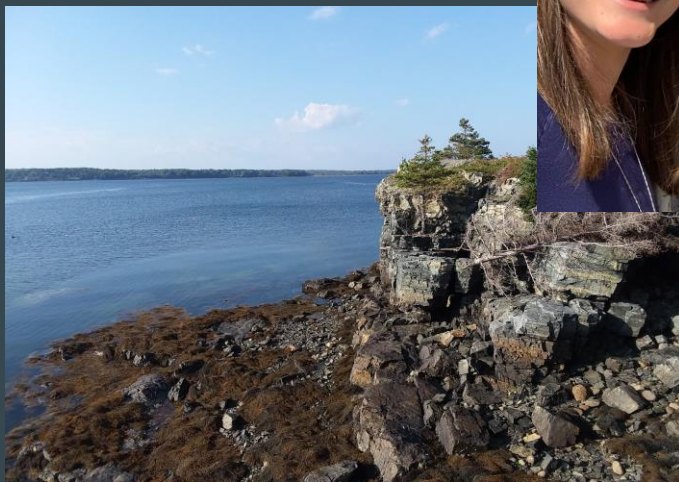
Research Experience for Undergraduates (REU)





## REU ANEW at the University of Maine

- NSF REU Program
  - Fully funded 10 week research fellowship.
    - Room, board, & stipend!
  - Amazing for CV/Resume
  - Strives to increase diversity in sciences (social, biological, etc.)
  
- Mentored under Dr. Carly Sponarski
  - Specializes in the human dimensions of wildlife.
  - My project focused on the human dimensions of wildlife disease.



- Where to next?
  - Continue research with Dr. Gore and Dr. Montgomery
  - Princeton University - EEB Scholar
  - International Research Experience for Students in Costa Rica??



- **ADVICE**

- **Make connections with research advisors now!**
  - **Apply selectively & broadly.**
  - **Take diverse classes, don't limit yourself.**
  - **Advocate for yourself, you're awesome!**
  - **It's never too late to think about your future, start emailing, applying, researching, etc. NOW.**
- Any more questions?
    - **greenaal@msu.edu**





# Amelia Gardner



Greensboro Science Center & Blank Park Zoo

# Summer 2019

## Greensboro Science Center, Greensboro NC





# Herpetology Internship



# Main Duties

- Open Herp Holding in the mornings.
- Clean barn and all other enclosures according to schedule.
- Provide fresh water to all non-aquatics at least once daily.
- Assist with water changes and water quality monitoring for aquatics.
- Feed animals and prepare diets ahead of time as needed.
- Provide enrichment, twice daily for meerkats, weekly for all other animals.
- Take turtles outside for exercise once or twice a week.
- Interact with guests in a positive manner, answer questions.
- Keep records of things like feeding, enrichment, outdoor exercise, etc.
- Close Herp Holding in the evenings, clean the floors, counters and windows.

**Work day- 8:15am- 5:15pm. Intern classes held weekly.**





**Meerkat  
Painting**

**Intern  
Swap  
Day**



# Summer 2018

## Blank Park Zoo, Des Moines, Iowa





# Large Mammals Internship





# Main Duties

- Provide animals fresh food and water twice daily.
- Assist in unloading and storing hay & alfalfa bales.
- Refresh chemicals in sterile footbaths daily.
- Provide fresh enrichment daily.
- Dump waste trailers in compost pile as needed.
- Cut fresh browse for all animals daily.
- Monitor animals' activity budget using ZooMonitor App.
- Assist in training sessions for giraffe and rhinos when necessary.
- Interpret public giraffe training sessions to the zoo guests, answer questions.
- Clean barns and outdoor yards, including chemical disinfection.
- Observe medical procedures and be on standby to assist keepers and vets.



**Work day- 6:45am- 4pm. Intern classes held weekly. Final project required.**

# Exhibit Space Usage in Relation to Crowd Size in the Slender-horned Gazelle

The Slender-horned Gazelle (*Gazella leptoceros*) is a small, light-colored gazelle well-adapted for desert life. They can be found roaming the Sahara desert in Algeria, Chad, Libya, Tunisia, Sudan and Egypt, but now occupy a much smaller and more fragmented area than their original range. This species is listed as Endangered by the IUCN, mainly due to uncontrolled overhunting/poaching, though they have also been affected by habitat loss. They have historically been prey for several large land predators such as the cheetah, Cape hunting dog, lion, leopard, and spotted hyena, but they likely do not come into contact with all of these in the present day.

The Association of Zoos and Aquariums has a Species Survival Plan for these gazelles which is currently under the Yellow designation. Blank Park Zoo contributes to the conservation of this species by breeding them here at the zoo according to SSP recommendations. BPZ presently has five Slender-horned Gazelles, one adult male, two adult females and a male and female calf who were born this spring.

Like all of the species in the Large Mammal department here at BPZ, keepers and interns will periodically observe and then record the behavior of the gazelles using an app called ZooMonitor which was developed by Lincoln Park Zoo. This enables us to track trends in their behavior and usage of their exhibit.

## Blank Park Zoo's Slender-horned Gazelles



3004 'Giselle' and 3138 'Mary Jane'



3130 'LeBron'



3002 'Gordon' and 3005 'Twiggy'

During a ZooMonitor session, the observer will record some background information on the circumstances of the observations- crowd size, temperature, morning vs afternoon, and which species are on exhibit (if multiple species share one space). They then observe their chosen species for ten consecutive one-minute intervals, and for each individual animal record its position within the exhibit and current behavior(s) at each interval.

After two months of collecting data on the animals in the Large Mammal department this summer, we interns got to sit down with it to do some analysis. The ZooMonitor app has built-in features that generate visual interpretations of your data, such as heat maps showing where the animals spend their time and behavior budget charts breaking down the frequency of an animal's different behaviors by percentage of recordings.

I chose to focus on heat maps for their ease of interpretation. There are many variables that can be manipulated as you generate your maps, so I changed one at a time looking for trends in our observations. I began to notice something of a pattern as I looked at heat maps for the gazelles at different crowd sizes. The app has four different categories of crowd sizes- 0-5 people, 6-15, 16-30, and 31+. Most observations fell into the 6-15 and 16-30 ranges, so I decided to combine the two smaller and two larger categories together into heat maps.

A heat map is simple to read- blue spots indicate an area where the animals have been recorded, but infrequently, and warmer colors mean the animals are there more often.

## Heat Maps of All Gazelles, June 1<sup>st</sup>- July 29<sup>th</sup>, 2018 (105 sessions)



### Crowd Size 0-15 Individuals (49 sessions)



### Crowd Size 16-31+ Individuals (56 sessions)

ZooMonitor sessions done at times with smaller crowds tend to show the gazelles exploring the borders of the exhibit, whereas sessions done with larger crowds show them spending more time in the middle of the exhibit and also in the far southwest side of the exhibit, which is not immediately surrounded by a guest path. The idea that the gazelles would make some effort to avoid close proximity to humans is not surprising, as they are a small prey species and will even display skittish behavior around their keepers.

None of the other factors recorded in the app (temperature, time of day, species on exhibit) appeared to have an impact on the behavior or location of the gazelles in their exhibit.

Future explorations of this observation could perhaps go further in-depth with determining if large crowds can significantly stress the gazelles by doing stress hormone testing and/or behavioral comparisons during times with small crowds, large crowds and off exhibit.

## Heat Maps of Individual Gazelles, June 1<sup>st</sup>- July 29<sup>th</sup>, 2018 These three animals were present and accounted for during every gazelle ZooMonitor session.

### 3005 'Twiggy'



Crowd Size 0-15



Crowd Size 16-31+

### 3130 'LeBron'



Crowd Size 0-15



Crowd Size 16-31+

### 3002 'Gordon'



Crowd Size 0-15



Crowd Size 16-31+

# Christina Liu



Kellogg Biological Station

# Kellogg Biological Station in South Gull Lake, Michigan



## Kellogg Biological Station in South Gull Lake, Michigan

- Student at KBS for 5 weeks
- Took classes and got involved with field work and research
  - Ecology
  - Ecology Lab
  - Plant Systematics
- Hands-on outdoor classroom experience
- Good way to learn basic research protocol
- Lots of fun things to do and beautiful views!







# What's Next?

- Research in the Ganz Lab this year (zebrafish care and PCR duties)
- Looking for a marine biology internship this summer!
- Advice:
  - Take risks
  - Make connections, it's never too early to start thinking about the future
  - Have fun!
- Questions? [liuchri4@msu.edu](mailto:liuchri4@msu.edu)



# Marty Schmidt



Cincinnati Zoo & Botanical Garden



# Animal Care Internship -- Cincinnati Zoo & Botanical Garden



- Aviculture Department
- Lived in intern house
- 40 hours/week for 14 weeks





# Animal Care Internship -- Cincinnati Zoo & Botanical Garden



- 450+ animals

- 100+ species

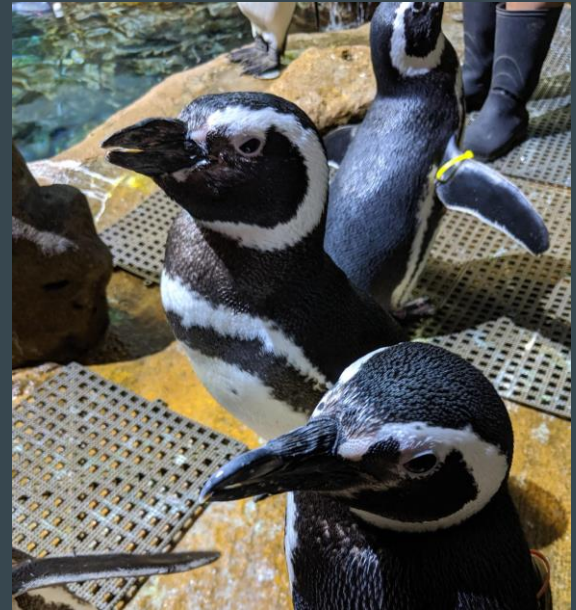




# Animal Care Internship -- Cincinnati Zoo & Botanical Garden



- Observation project
- Penguin tours





# Animal Care Internship -- Cincinnati Zoo & Botanical Garden



- Networking & new friends





# Animal Care Internship -- Cincinnati Zoo & Botanical Garden



- Zoo visits



# Animal Care Internship -- Cincinnati Zoo & Botanical Garden

- Future Plans
  - Job after graduation?
  - Masters eventually
- Advice!
  - Apply to lots of places
  - Keep an open mind
  - Enjoy yourself
- Email:
  - [schmi680@msu.edu](mailto:schmi680@msu.edu)



# Ashley Dunn



Howell Nature Center



**Howell Nature Center**





Orphan Rehab



(More Baby Opossums)





Releases

Thank You For Coming!!