Hancock Biological Station
On Kentucky Lake

WSI
Watershed Studies Institute
MURRAY STATE UNIVERSITY

CONFLUENCE

Director's Overflow by Michael Flinn

Phew! The semester has come to an end, and I'm really looking forward to that blissful day where I can finally unwind and reflect on all the amazing activities we've had over the past couple of months (even if that day feels like a distant dream). From "Biofests" to "Beast feasts," and Science Cafés to Scholar weeks, we've been racing at full speed for months. Amidst all the organized chaos, I want to express my gratitude to those who have worked tirelessly to make it all possible. Your unwavering persistence, exceptional organization, and "get-it-done" attitude have been the driving force behind the success of these events. So, a big THANK YOU to all of you! Moreover, as I look back on this spring, I'm reminded of the vibrant community we have—a diverse group of individuals who share a passion for the environment, fascinating critters, and the education of our future generations. This camaraderie was particularly evident during several off-campus public events, where fresh faces outnumbered the familiar ones. Lastly, I feel compelled to urge this incredible community not to ease up, not to linger for too long, and not to rest on our laurels. Let us gather our energy for the challenges and opportunities that await us tomorrow. Together, we can achieve great things!

Spring 2023

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Featured Staff: Clay Thompson

I grew up in rural Pendleton County KY on a small farm where my family and I raised livestock. I graduated high-school in 2016 and then went to Eastern Kentucky University. I received a bachelor of science in biology and minored in chemistry; I graduated in May of 2020. After college I moved to Oregon and worked on commercial fishing boats collecting fishing effort information that was used by NOAA to set fishing quotas in the Pacific Ocean. I then moved here to Murray and began working for Kentucky Department of Fish and Wildlife Resources in the Critical Species branch (Carp). I worked for KDFWR for a year before accepting the position here at HBS. I am hoping to complete a masters thesis while I am working for HBS. In my free time I enjoy riding my motorcycle, antique shopping with my girlfriend, and cooking.

Pictures: Top left: Clay working on Commercial Boat, Middle: Dr. Flinn and Clay on Cruise, Bottom Left: Clay getting equipment ready for new road Bottom Center: Clay preparing road for gravel pavers, Bottom Right: Michelle Weaver and Clay laying down gravel pavers,

Featured Graduate Student: Michelle Weaver

I am from Gettysburg, Pennsylvania. I started attending Murray State in the spring of 2021 in pursuit of a second bachelor's degree in wildlife biology and conservation. My first in person class, herpetology, took place at Hancock Biological Station in the summer of 2021. Lectures would take place in the classroom and afternoons were spent hiking and exploring the trails of HBS in pursuit of finding reptiles and amphibians to ID. One of my first finds on HBS was the eastern box turtle *(Terrapene carolina*), little did I know what the future had in store for me. Shortly after, I was invited to investigate eastern box turtles by Dr. Andrea Darracq, which evolved into my graduate thesis. I'm currently investigating the effect turtle racing has on the eastern box turtle. Turtle racing involves the capturing and use of mostly wild-caught box turtles (Terrapene spp.), but occasionally pet turtles are used and can be standalone events or a part of larger family events (e.g. festivals). During races, most turtles are held in boxes with other turtles raced and then released away from their initial capture site.

Though turtle racing is legal in most states we lack knowledge of how these races affect turtles post race. Thus, the objective of my thesis is to understand the short-term and long-term health and behavioral effects of turtle races on Eastern Box Turtles. The box turtles in my study, were collected from a race held in Kentucky. Following collection we completed a physical exam which included collecting blood samples and oral/cloacal swabs, of each turtle. We quarantined the turtles for two weeks at HBS, attached transmitters, and following negative PCR test results for ranavirus (FV3), released 19 turtles (weight > 400 g), onto a national wildlife refuge in Kentucky. We also captured eight native box turtles from the same release location and followed the same procedure as with the race turtles. Since release in July 2021, I have been tracking turtles weekly and have completed four total health evaluations. We are currently in the process of completing laboratory analyses associated with testing for diseases other than ranavirus. My final season of tracking should come to an end this fall, with the hopes an undergraduate will take over monitoring these turtles for at least two more years. This project is being completed collaboratively with the St. Louis Zoo Institution of Conservation Medicine and the Box Turtle Conservation Society.

I also have a small side project working with nine-banded armadillos (*Dasypus novemcinctus*). In this project I'm looking at the affect these armadillos have while expanding their home range further into KY. The nine-banded armadillo is originally from South America but has slowly expanded its range northward and was also purposely introduced in Florida. One aspect of my project involves evaluating what species use the burrows armadillos create. To evaluate what species use the burrow, I'm placing a series of cameras on burrows throughout western Kentucky. I'm also using a scope camera on some burrows to catch smaller species that may not be picked up by trail cameras. Another aspect of this project is quantifying the diet of the nine-banded armadillo, which involves examining stomach contents from roadkill specimens.

Pictured above: Michelle Weaver holding a common snapping turtle (*Chelydra serpentina*). Picture to the left is an Eastern Box Turtle with a transmitter attached, this Eastern Box Turtle was used in a race. The picture on the right is a nine banded armadillo next to its burrow on HBS property.

Prescribed Fire

April 2023

In early April, students in Dr. Andrea Darracq's Principles of Wildlife Management class had the awesome opportunity to receive training on prescribed fire during an 8-hour workshop given by members of the Kentucky Prescribed Fire Council. This was followed by a perfect burn day where students implemented a burn on Hancock Biological Station under the close supervision of a trained fire crew that included professionals from the the Kentucky Department of Fish and Wildlife and the Kentucky Forestry Commission.

Sustainability Festival Family Day

April 2023

The sixth annual Family Day was at the Arboretum this year and organized by Rhonda Lamb for Jackson Purchase Foundation. Informational tables lined the walkway from local groups including Master Gardeners, LBL's Nature Station and Paris Landing State Park. We had over 200 people come out and hope to have more next year!

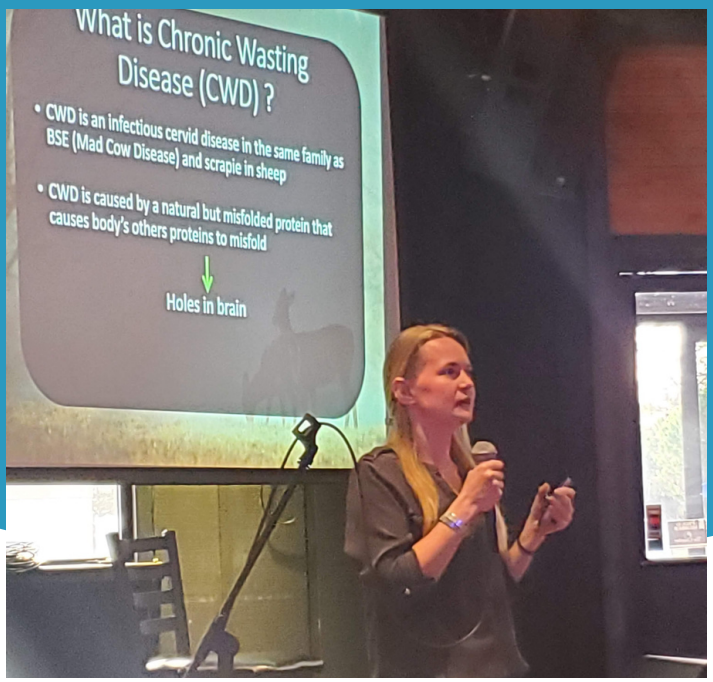
Beast Feast

April 2023

MSU's Wildlife and Fisheries Society, with help from Backcountry Hunters and Anglers (BHA), put on a feast of wildlife dishes for the ages. An amazing group of local citizens came to try out everything from raccoon risotto to antelope stroganoff and pan-fried trout to Bigheaded carp egg rolls, along with a variety of yummy sides and desserts (by Dr. Howard Whiteman).

Science Cafe

April 2023



Noelle Thompson, former KYDFWR deer coordinator, discussed the ins and outs of chronic wasting disease (CWD) in deer, something that has already affected Tennessee and is poised to affect Kentucky. The Café was organized by Dr. Andrea Darracq and hosted by Tap 216 in Murray during Earth Week and was filled with a diverse mix of interested people with dozens of questions for the speaker. This event was such a success that it is likely it will be held every semester, with other intriguing and accomplished speakers (by Dr. Howard Whiteman).

CCMS Environmental Day

April 2023

Two day event at Bee Creek in Murray with the Calloway County Middle School Science classes. We show the students how HBS samples water from Kentucky Lake, let them observe invertebrates under the microscopes, and teach the class about bioindicators of healthy water. The students also have the opportunity to explore Bee Creek with nets to see what they can find.

Pictured below from left to right: Karissa Coffield, HBS resident, demonstrating how water samples are obtained from the lake using a Schlinder trap. Middle photo shows the contents captured in a net from the creek. Last photo is the students trying to identify the plankton from a water sample through the microscope.

River Sweep

April 2023

River Sweep was sponsored by Ohio River Valley Water Sanitation Commission (ORSANCO) and Hancock Biological Station. Groups ventured out from the station on foot, by canoe or pontoon boat and collected two trucks loads of garbage from the nearby roadway and shorelines. Event was followed by a Fish fry lunch prepared by our HBS staff.

HBS UPGRADES:
funded by the Cherry Foundation

Spring 2023

ROAD UPGRADE TO THE DOCK

Gravel pavers were used to resurface the service road to the dock which used to wash away with every rain. Our staff completed the entire job in 4 days.






"Boat port" installed in April to provide cover for our boats and tractor. Parking area was extended to the road to create a drive-through.