

Lisle



When she's not busy grading papers or teaching organismal biology at Benedictine, Leigh Anne Harden, Ph.D., likes to trudge through murky bodies of water and dive for turtles—all in the name of research.

Her work is part of a much larger effort currently underway to protect the critically endangered Blanding's turtle, listed as one of 12 "priority" species the Chicago Wilderness organization has identified that could benefit from collaborative conservation action plans.

"My research questions revolve around how ectotherms (cold-blooded) vertebrates function and interact with their environment, particularly in the face of urbanization and climate change, and how this information can be used to help conserve them," Harden said. "Much of my research is focused on turtles because many species are imperiled, and compared to other endangered species are easier to capture, handle and study."

FACULTY RESEARCH

Professor working to save endangered Northern Illinois turtle

Turtle populations globally are on the decline due to habitat loss resulting from increased human activity and land development.

Among the many factors affecting a Blanding's turtle's chances of survival are cars, an overabundance of predators such as raccoons, foxes, weasels, mink and coyotes, and slow growth rates (the turtles do not reproduce until they are about 14 or 15 years old). As a result, the majority of newborn turtles cannot survive without human intervention.

"Wetland-dependent species such as Blanding's turtles are exceptionally at risk of extirpation because of their need to traverse large expanses of interspersed wetland and upland habitats," said Harden. "In Illinois, they were historically found in the extensive marsh system in the northern half of the state, but now are limited to isolated wetland patches. As a result, they are listed as endangered or threatened across much of their range in the United States and are considered federally threatened or endangered in Canada."

In northeastern Illinois, the effort to save the Blanding's turtle includes several county forest preserve districts including DuPage, Lake and McHenry counties and involves world-renowned wildlife specialists, ecologists and social scientists. Biologists capture pregnant turtles, induce ovulation, incubate their eggs, and rear the hatchlings for a couple of years before releasing them back into their natural habitat once they are larger and more likely to survive.

To date, this collaborative recovery program has reared more than 3,000 Blanding's turtles and released nearly 2,800 of them to wetlands in northeastern Illinois over a 21-year period.

Harden along with Loyola University Chicago researchers and BenU student Sumaiya Shahjahan use radio-tracking technology to search for the captive-reared

turtles that were re-introduced to their natural habitat. Once located, they test the turtle's blood for indicators of stress and malnutrition, parasites and other anomalies, and record other pertinent data, such as their height and weight, to determine the health of the population.

"Little is known about the survivorship, viability and overall health of these captive-reared turtles after they are released into a new, natural wetland environment," Harden said. "Our primary goal has been to monitor the physiological health of captive-reared Blanding's turtles through their release into the wild."

"We are still collecting data, but preliminary findings indicate that the health and body condition of captive-reared turtles varies among rearing facilities," Harden added. "Most re-released turtles have survived their first year out in the wetland. This research will help to guide captive-rearing and population augmentation practices and ultimately play a role in conserving this endangered species."

Students who are involved in Harden's research learn a lot more than how to track and trap the dark green-brown and yellow-speckled critters.

"Regardless of how they fit into this program—whether they want to focus on rigorous fieldwork, take field-based physiological measurements or stay in the lab and analyze turtle tissues—they benefit immensely by becoming true scientists," Harden said. "They become



critical-thinkers as they advance through the scientific process from data collection and hypothesis testing to troubleshooting, analysis, writing and presenting their project. This process is important for a student's development and extends far beyond the discipline of science."

In addition to her research, Harden has applied for a Disney Conservation Fund grant in collaboration with the Cosley Zoo, Forest Preserve District of DuPage County, Loyola University Chicago and the Benedictine University Jurica-Suchy Nature Museum to develop educational curricula on wetland ecology and turtle conservation.

A second grant proposal, submitted with the U.S. Fish and Wildlife Service, would help fund further study of the demography and health of turtle species in Michigan's Kalamazoo River, following the largest and most expensive in-land oil spill in U.S. history. The spill occurred in July 2010 after a 6-foot section of pipeline carrying tar sands oil burst, sending hundreds of thousands of gallons of oil into a tributary of the river.

If funded, the proposed four-year project will require the recruitment of several BenU undergraduates to conduct field work, Harden said. ●



FACULTY HIGHLIGHT

Benedictine instructor encourages students to zoom in on other facets of filmmaking

Jason Sperb, Ph.D., is a researcher and commentator on the film industry, providing insights and analysis on elements of cinema that more than enhance the experience for students at Benedictine who take his media studies courses.

"My research often focuses on the importance of film history, of situating movies within the time period in which they were made," Sperb said. "What was going on in the culture then? What was happening politically, technologically? What conditions were the filmmakers themselves responding to? What kinds of factors may have shaped reactions and responses from audiences then? I bring this kind of historical focus to the classroom regardless if it is labeled as a history class."

He is the author of such books as, "Flickers of Film: Nostalgia in the Time of Digital Cinema," "Blossoms & Blood: Postmodern Media Culture and the Films of Paul Thomas Anderson" and "Disney's Most Notorious Film: Race, Convergence and the Hidden Histories of Song of the South." His work has also appeared in several periodicals.

This past September, he published an article in the *Journal of Popular Film and Television* analyzing the 2013 documentary "Blackfish," which highlights the captivity of killer whales at SeaWorld.

The article, "From Nihilism to Nostalgia: Blackfish and the Contradictions of the Nature Documentary," examines how nature documentary film and TV straddle the fine line between sentimentalizing wildlife on the one hand and fearing its brutal nature on the other. The contradictory tension in the genre comes to a crisis in "Blackfish," which attempts to sympathize with the killer whales in captivity at the same time it repeatedly foregrounds their ruthless nature as an apex predator.

In March, he gave a presentation at the 2017 Society for Cinema and Media Studies conference called "Save that Gag for the Tourists: Industrial Reflexivity and Post-Tourism Narratives in Hollywood's Hawai'i Cycle of the 1930s."



The presentation highlighted a subject of his newest book project about images of Hawaii in mainland U.S. film and television shows from the pre-World War II era up through the tourist boom of the 1960s. It charts the media representations of labor and leisure, racial identity and nostalgia, and how they intersect with historical, industrial and political contexts of the time.

According to Sperb, early narrative film depictions of Hawaii feature clichéd conventions of the "South Seas Romance"—stories about young sailors who discover love with the chieftain's daughter on a remote island in the South Pacific. After the emergence of sound films and reflexive backstage musicals, Hollywood abandoned simplistic south seas romances in favor of more playful takes on Hawaii's mediated reputation as a "destination image," incorporating a sort of post-touristic irony.

This act of examining other contexts in which films were made—not just its subject matter—is what Sperb tries to impart on his students.

"I ask students to look beyond the text itself," he said. "It is important for them to understand where we've come from as a society and a culture, to learn about the past, to understand what factors shaped the beliefs and actions which came before us and which inform the world we live in today, so that we can all begin to have a better understanding of, and the ability to influence, where we are headed in the future." ●