



Researchers in the Hans Lab. Back row: Claire Tulloch, psychological sciences and law and society undergraduate student; Aubrey Williams, health and disease undergraduate student. Front row: Vanessa Cooper, entomology graduate student; Krystal Hans, assistant professor of forensic entomology and director of forensic science; Teomie Rivera-Miranda, entomology doctoral student; and Bianca Cortez, biological sciences undergraduate student.

## COVER IMAGE SUMMARY

Dr. Krystal R. Hans is an Assistant Professor of Forensic Entomology in the Department of Entomology at Purdue University. She is a board-certified forensic entomologist who teaches, performs research, mentors students and regularly consults with law enforcement across the Midwest. Her research laboratory focuses on the field of forensic entomology, which is the application of insects as a type of evidence in criminal investigations. Many insects arrive to remains shortly after death and can be collected and analyzed to provide a timeline of insect activity, which is often valuable in death investigations. The Hans Lab (<https://ag.purdue.edu/department/entm/hans-lab/index.html>) examines the behavior and development of forensically relevant insects, particularly blow flies. Both graduate and undergraduate students participate in research on various topics related to decomposition and insect activity that assist with death investigations.

Dr. Hans also finds ways to bring research experiences to students that extend beyond the walls of her research laboratory. She teaches several courses in the forensic science minor, one of which is ENTM 22810 Forensic Investigation. This course incorporates all aspects of crime scene investigation including observing, collecting and packaging different types of evidence from a crime scene. This forensic course also teaches students how to engage with empathy and advocate for victims of unresolved crimes, by participation in a large service-learning project that investigates cold cases. The cold case project is a partnership with Project: Cold

Case (<https://projectcoldcase.org>), a nonprofit organization that serves families of unresolved homicide to offer support and resources. Students in this course focus on unresolved cases, learning how to research publicly available information, submit information requests, and develop awareness campaigns for the victims. They also provide a summary presentation of their case and all materials generated at the end of the semester.

Students also have the opportunity to attend the Cold Case Symposium (<https://purdue.ag/coldcase>), an annual event that highlights the growing number of cold cases across the US. This event brings together students, educators, advocates, law enforcement, community members and victim's families to provide a platform for these cases and offer support for those in need. This symposium gives students insight into how these violent crimes impact not just the forensic science community, but the families that are involved.

Student participation in events like the Cold Case Symposium and the cold case investigation project create a sense of purpose, as their work has real world impact. They learn about the challenges of cold cases and the frustrations that families often face in this process. This course trains students in skills that go beyond the crime scene, creating a more empathetic, victim-focused group of scientists that will have collective impact on the community, the future of forensics and criminal investigations.

*Written by Professor Krystal R. Hans*