

# Researchers track snakes to study populations, behavior

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Timber rattlesnakes like this one are turning up in subdivision yards and brush thanks to developers who are invading the snakes' turf. A collaboration involving a WUSTL researcher focuses on tracking the snakes' populations and behaviors with the aid of an implanted radio transmitter. Credit: Washington University in St. Louis

A researcher for Washington University in St. Louis, along with colleagues at the Saint Louis Zoo and Saint Louis University are tracking timber rattlesnakes in west St. Louis County and neighboring Jefferson County. They are investigating how developing subdivisions invade the snakes' turf and affect the reptiles.

The researchers are studying timber rattlesnakes and copperheads in their Pitviper Research Project. They hope their efforts will educate the

public and convince people that they can live with the species without destroying them. Wayne Drda is the Washington University researcher. Jeff Ettling, reptile curator at the Saint Louis Zoo, is another member of the research team. The third member is Ryan Turnquist, a biology major at Saint Louis University. Friends of the three researchers and the Missouri Department of Conservation also assist in the study.

"I am the field manager, organizer, and I oversee the equipment," Drda said.

"Jeff will be doing the DNA analysis work, and Ryan helps with the field work and is our GPS/GIS computer whiz."

Most people detest snakes, so the first instinct is to eliminate them, said Drda, who researches at Washington University's Tyson Research Center and who recently assisted Corey Anderson, former Washington University biology graduate student, with his doctoral thesis on rattlesnake and copperhead population behaviors. Anderson, a student of Alan Templeton, Ph.D., Washington University professor of biology, now is a postdoctoral researcher in biology at Arizona State University.

"You can live with the knowledge that timber rattlesnakes and copperheads are in your area, and if you have a problem, you need to go to herpetologists, who can figure out a plan or help remove the snakes," he said. "We don't want to see people become nature vigilantes."

The researchers take captured snakes and implant a small radio transmitter on them to study movement, migration patterns and habitat use.

"Our goals are to understand the ways of these species and to educate suburbanites and rural people about them, so that we can keep a proper balance in the face of development," Drda said.

The researchers have found things about timber rattlesnakes that are counterintuitive. Their breeding time is late summer through early fall, not the spring. While males can wander as much as a couple of miles a week, the females, after giving birth, stay with newborns until the young shed about seven to 10 days later. The females generally stay closer to home, but the males are more active and consequently have longer home ranges.

Most adults are 'homies' — returning to the same area year after year after leaving their den sites. Others seek out new turf, especially during their rapid growth.

Timber rattlesnakes have rattles that are rarely used because with camouflage it makes no sense for them to give away their location, Drda added.

The quintessential suburban lawn is not the preferred habitat of timber rattlesnakes. Occasionally, though, a suburbanite in the colleagues' research area sees one passing through. The team works with residents in the study area to be notified when a rattlesnake is spotted so that the researchers can capture and release the snakes safely.

Source: Washington University in St. Louis

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