

Credit: Andrew Lawrence

▲ Andrew Lawrence releases a male lesser prairie-chicken. He and his colleagues found that oil and gas development affected males more than females.

Oil and gas development affects male lesser prairie-chickens more

Studies of lesser prairie-chicken survival usually focus on females, but when researchers looked at the impacts of oil and gas development, they found males were even more affected.

"We shouldn't discount the effects males have and what their contributions could be to population dynamics and conservation of the species overall," said Andrew Lawrence, a PhD candidate at New Mexico State University and lead author of the study published in the *Journal of Wildlife Management*.

Lawrence's team fitted lesser prairie-chickens (*Tympanuchus pallidicinctus*) with VHF radio collars or GPS transmitters to track them and monitor their survival. Comparing the data with oil and gas infrastructure maps, they found utility pole density in an individual bird's home range was most related to grouse survival, possibly due to raptors using poles to look for prey. Males may be more affected because they spend more time exposed to predators while trying to attract mates, Lawrence said.

Ohio roads are deadly for snakes

Edges provide important resources for snakes in southeastern Ohio, but alongside roads, they can act as ecological traps that make snakes more susceptible to vehicle strikes.

Fifteen years of roadkill data showed researchers what snake species are most vulnerable, what types of roads are most dangerous and when strikes are most likely to occur. They found 14 of 18 snake species in the region were killed on roads between 2003 and 2018, mostly on busier state roads but far from urban areas.

"The number of road mortalities shows that [snakes] are much more abundant than they otherwise seem," said Ryan Wagner, a master's student in environment and natural resources at the Ohio State University and the lead author of a study published in the *Journal for Nature Conservation*.

Black rat snakes (Pantherophis spiloides), northern black racers (Coluber constrictor), rough green snakes (Opheodrys aestivus) and eastern garter snakes (Thamnophis sirtalis) made up most of the road mortalities.



Credit: Ryan Wagner

▲ Vehicles struck and killed black rat snakes in southeastern Ohio more than other snakes.

Many of the killed snakes were found

along forested edges around pastures. These areas are important for snakes, Wagner said, but they could act as ecological traps near roads, drawing snakes near the roadway where they can be struck by vehicles.

Snakes were most likely to be struck during spring and late fall when they are coming to and from their winter hibernacula. Limiting road speed or putting up signs during these times may help decrease snake deaths on roads, Wagner said.

Contributed by Dana Kobilinsky and Joshua Rapp Learn



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