Do bats adapt to gates at abandoned mines?

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Big eared townsend bat (Corynorhinus townsendii) Credit: Public Domain

Abandoned mines can serve as roost sites for bats, but because the mines pose serious risks to humans, officials often install gates at their entrances. With more than 80,000 abandoned mines in the southwestern United States, these subterranean habitats are important to bat survival as human disturbances from recreation and other activities at natural caves are affecting their use by bats.

A new *Journal of Wildlife Management* study found that most gates installed today do not impede usage of the site, with bats acclimating over time after gates are placed. The new findings are important because prior to the study, biologists knew little about the effect of gates on bat behavior.

Certain factors were more important than gate design in predicting the presence of some bat species, including elevation, portal area, number of mine levels and entrances. Although the researchers saw no difference in bats' responses to gate height or material, less maneuverable bat species initially collided and landed more frequently on gates than did agile species.

The findings will inform management on closure methods at caves and abandoned mines in the United States and beyond.

"Bats are often viewed negatively, but they are critical to our ecosystems," said lead author Dr. Carol Chambers, of Northern Arizona University. "Bats face many difficulties today, from white-nose syndrome to habitat loss. Our findings help protect these animals and keep humans safe."

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