

Climate change reduces Queensland's bat numbers

July 9 2007

A central eastern Queensland mine has turned up bat fossils which show climate change has had a negative impact on the state's bat population.

Queensland University of Technology (QUT) PhD student Sandrine Martinez is currently sifting through what is the largest and best record of the state's southern most bat population from the late Pleistocene Epoch (beginning two million years ago and ending approximately 10,000 years ago).

The fossil deposits were uncovered by mining operations at Mt Etna, near Rockhampton. They contain a succession of bat remains ranging from the late Pleistocene Epoch to the present and span the transition from full tropical rainforest habitats to the more arid environment that currently characterises the Mt Etna region.

Ms Martinez will compare information obtained from fossil data to the bat communities that still occur in the Mt Etna caves.

“What I've found so far is an overall decrease in species richness – today the Mt Etna caves are inhabited by five species of bat (excluding fruit bats) while in the late Pleistocene there were at least eight,” Ms Martinez said.

“These bats are insectivores and their decline could be due to a reduction in their food sources in response to climate change – that's something I'll be investigating further.

“It’s important to understand what has happened to bats in the past to more accurately predict what could happen in the future and perhaps prevent any more loss of diversity.

“Bats play an important ecological role as natural insect control agents. They account for almost a quarter of all mammal species and are the only flying mammals.

“Bats are declining worldwide and any information about their ecology is crucial to their future management

“Bats are often excluded from palaeoecological analyses due to their rarity in the fossil record and the difficulty in identifying them to species level, so we know very little about them. We don’t want to let this lack of knowledge lead to extinction.”

Source: Queensland University of Technology

Citation: Climate change reduces Queensland's bat numbers (2007, July 9) retrieved 17 April 2024 from <https://phys.org/news/2007-07-climate-queensland.html>

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