

# Life, Earth & Environment Seminar Series

When: Wednesday 20<sup>th</sup> July, 12 – 1 pm

Where: Natural Resources Building, Lecture Theatre 1 (EM1)

## RESPONSES OF BATS TO FIRE

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Bats are incredible animals, being the only mammal capable of true flight and the second largest order of mammals in the world. Because of their small body size and ability to fly, they occupy a wide range of habitats and have developed varying strategies to cope with the constraints associated with their environments. Insectivorous bats have a high surface area to volume ratio, and therefore they must compensate for high rates of heat loss with high rates of energy expenditure. One way bats deal with this limiting energetic conundrum is the use of torpor, whereby metabolic rate and body temperature are markedly reduced. Global warming can affect the physiology and ecology of bats via a long-term increase in  $T_a$ , but also by encouraging fire and other extreme weather events. Although it has been previously shown that small, daily heterothermic terrestrial mammals use more torpor in response to fire, how hibernators, i.e. bats, physiologically respond to smoke and wildfire is unknown.

### Biography

Anna is a PhD student at the University of New England and is interested in using physiological and ecological principles to answer questions regarding activity and energy use in small mammals. She is particularly interested in insectivorous bats because of their ability to fly as well as their comparatively long life span and low reproductive output to other small mammals. Anna has attended universities in the USA, South Africa and Australia.

