

How long to play dead in order to stay alive?

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A belly-up antlion larva remaining motionless for an unpredictable period testing to destruction the patience of potential predators. Credit: Professor Nigel R. Franks, University of Bristol

Many animals remain motionless or play dead after being attacked by a predator in the hope that it will give up and move onto some other unfortunate prey.

A team of scientists from the University of Bristol has been studying this

phenomenon in antlions considered to one of the fiercest predators in the insect kingdom.

Their findings, which appear today in the journal *Proceedings of the Royal Society B*, suggest that studying the duration of such immobility may provide a new understanding of [predator](#)-prey relationships.

Professor Nigel Franks, from the School of Biological Sciences, led the research. He said: "Lots of animals play dead in extreme danger. Examples include possums, certain birds, and woodlice.

"Even humans may play dead in extremis. However, to the best of our knowledge, no one before us has asked the question how long should a potential victim 'play possum'?"

The Bristol team discovered that playing dead in antlion larvae is highly strategic—remaining motionless for completely unpredictable periods. Hence, a predator cannot predict how long its potential prey will remain inactive.

Professor Franks added: "This is a strategy that should test to destruction the patience of a potential predator and has probably saved countless antlions from their fate.

"Our work shows a new way forwards for studies of predator evasion: namely, the importance of quantitative and analytical approaches focusing on how behavioral acts can be strategically timed."

More information: Post-Contact Immobility and Half-Lives that Save Lives, *Proceedings of the Royal Society B* (2020).

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