

Scientists find that crocodiles do, indeed, sleep with one eye open

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Credit: Michael Kelly

Scientists from La Trobe University have found evidence to support a great Australian legend: crocodiles do indeed sleep with one eye open.

The research, which was published in *The Journal of Experimental Biology*, has found that [crocodiles](#), like some birds and aquatic mammals, may well sleep with half of their brain at a time (known as unihemispheric sleep).

The phenomenon would allow crocodiles to keep one eye open and connected to the 'awake' side of their brain, while the other eye and other half of their brain are sleeping, so they can immediately respond to threats, prey or other young crocs.

The researchers found that crocodiles were more inclined to sleep with one eye open when humans were present, and that the open eye was always directed towards the human.

Sleeping with one eye open is a behaviour that has previously been studied in some birds and aquatic mammals, including dolphins, but has never been closely monitored in crocodilians.

The research was conducted by Michael Kelly, Richard Peters and John Lesku from La Trobe's School of Life Sciences, and Ryan Tisdale from Max Planck Institute for Ornithology, Avian Sleep Group, Germany.

"These findings are really exciting as they are the first of their kind involving crocodilians and may change the way we consider the evolution of sleep," lead researcher Michael Kelly said.

"What we think of as 'normal' sleep may be more novel than we think."

The research enables the scientists to have a better understanding of effective sleep.

"The value of the research is that we think of our own sleep as 'normal' - a behavioural shutdown that is a whole-brain affair," said Dr John Lesku.

"And yet, some birds and [aquatic mammals](#) sleep unihemispherically with one eye open. If ultimately crocodilians and other reptiles that have been observed with only one [eye](#) closed are likewise sleeping unihemispherically then our whole-brain (or bihemispheric) [sleep](#) becomes the evolutionary oddity."

More information: The paper will soon be available at jeb.biologists.org/content/218/19/3175

Provided by La Trobe University

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