

Dolphins can remain alert for up to 15 days at a time with no sign of fatigue

October 17 2012



The female dolphin SAY who performed a continuous echolocation tasks for 15 days. Credit: Credit: Brian Branstetter

Dolphins sleep with only one half of their brains at a time, and according to new research published Oct. 17 in the open access journal *PLOS ONE*, this trait allows them to stay constantly alert for at least 15 days in a row. Brian Branstetter from the National Marine Mammal Foundation and colleagues found that dolphins can use echolocation with near-perfect accuracy continuously for up to 15 days, identifying targets and monitoring their environment.



The researchers studied 2 dolphins, one male and one female, and found that they were capable of this task with no signs of fatigue for 5 days. The female dolphin performed additional tasks for a 15-day period. How much longer they could have continued was not studied.

Sleeping with only one half of the brain at a time, or unihemispheric sleep, was believed to have evolved in dolphins to enable them to breathe at the surface of water even when half-asleep. This new research suggests that the need to remain vigilant may also have played a role in the evolution of this sleeping behavior.

"These majestic beasts are true unwavering sentinels of the sea. The demands of <u>ocean life</u> on air breathing dolphins have led to incredible capabilities, one of which is the ability to continuously, perhaps indefinitely, maintain vigilant behavior through echolocation" says Branstetter.

More information: Branstetter BK, Finneran JJ, Fletcher EA, Weisman BC, Ridgway SH (2012) Dolphins Can Maintain Vigilant Behavior through Echolocation for 15 Days without Interruption or Cognitive Impairment. PLoS ONE 7(10): e47478. doi:10.1371/journal.pone.0047478

Provided by Public Library of Science

Citation: Dolphins can remain alert for up to 15 days at a time with no sign of fatigue (2012, October 17) retrieved 8 May 2024 from <u>https://phys.org/news/2012-10-dolphins-days-fatigue.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.