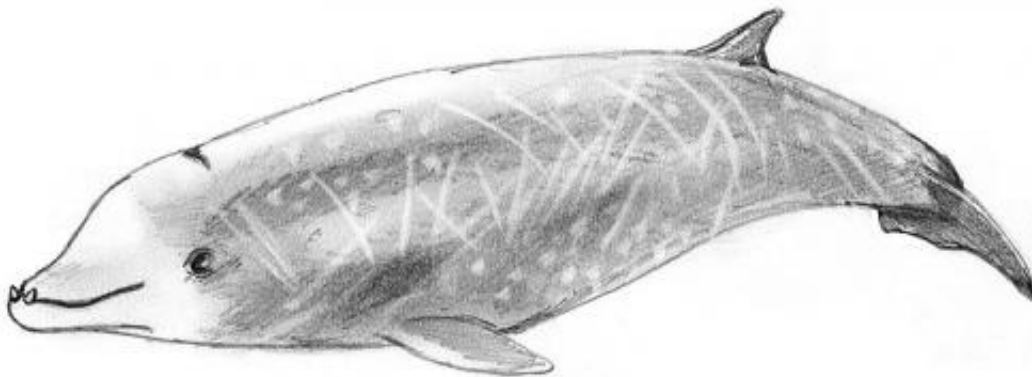


Cuvier's beaked whales set new breath-hold diving records

March 26 2014



Credit: Bardrock/Wikipedia

Scientists monitored Cuvier's beaked whales' record-breaking dives to depths of nearly two miles below the ocean surface and some dives lasted for over two hours, according to results published March 26, 2014, in the open access journal *PLOS ONE* by Gregory Schorr from Cascadia Research Collective and colleagues.

Distributed throughout the world's oceans, the Cuvier's beaked whales' frequent dives deep into the ocean make them difficult for researchers

to study. Previous studies using short-term tags (~ 215 hours of data) have indicated that this deep-diving species might be the most extreme breath-holding diver in the ocean. To better understand this behavior, scientists analyzed data from satellite-linked tags that recorded the diving behavior and locations of eight Cuvier's beaked whales off the Southern California coast. Researchers collected over 3,700 hours of diving data, including depth and time of each dive.

Researchers recorded 1100 deep-dives, averaging 0.87 miles deep, and 5600 shallow-dives, averaging about 0.17 miles deep. The deepest dives recorded was one that reached nearly two miles below the [ocean surface](#), and the longest lasted 137 minutes. The dives captured by this study not only exceed the previous Cuvier's beaked whale diving records of ~1 mile deep and 95 minutes, but also the current mammalian dive record previously set by the southern elephant seal at ~1.5 miles deep and 120 minutes. One striking difference compared to other divers is that deep-diving elephant seals and sperm whales require an extended recovery period after long, deep dives, whereas Cuvier's beaked whales average less than two minutes at the surface between dives.

According to the authors, the results of this study provide a better understanding of the unique diving capabilities of this species, which accounts for 69% of recorded marine mammal strandings associated with military sonar operations. However, all eight whales were tagged on a Navy sonar training range off the west coast of California and spent significant portion of their time there, suggesting that these animals may have learned to cope with anthropogenic disturbances that cause stranding in Cuvier's [beaked whales](#) elsewhere. "It's remarkable to imagine these social, warm-blooded mammals actively pursuing prey in the darkness at such astounding depths, literally miles away from their most basic physiological need: air," added Greg Schorr

More information: Schorr GS, Falcone EA, Moretti DJ, Andrews RD

(2014) First Long-Term Behavioral Records from Cuvier's Beaked Whales (*Ziphius cavirostris*) Reveal Record-Breaking Dives. *PLoS ONE* 9(3): e92633. [DOI: 10.1371/journal.pone.0092633](https://doi.org/10.1371/journal.pone.0092633)

Provided by Public Library of Science

Citation: Cuvier's beaked whales set new breath-hold diving records (2014, March 26) retrieved 13 April 2024 from <https://phys.org/news/2014-03-cuvier-beaked-whales-breath-hold.html>

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.