

Sea lions yawn due to anxiety

January 17 2020



Credit: CC0 Public Domain

Researchers have analysed these animals for 14 months, concluding that the frequency of their yawns increases immediately after a social conflict among members of the group.

The most common images of sea lions show these [animals](#) opening their

jaws to produce broad yawns. However, a recent study has shown that these animals do not only yawn because they are tired: the yawns of sea lions increase in frequency immediately after situations of social conflict among themselves, both in the aggressors and the victims, meaning they can be attributed to situations of anxiety and stress. These conclusions, published in journal *Scientific Reports*, are part of the study conducted by professors Clara Llamazares and Federico Guillén, from the Department of Animal Ethology and Well-being of the CEU Cardenal Herrera University of Valencia, together with specialist Elisabetta Palagi, professor at the Department of Ethology of the Italian university of Pisa.

According to the authors of the study, to yawn is a behaviour that us humans share with a majority of vertebrate animals. Behind the yawn are possible physiological explanations, such as thermoregulation or sleepiness, but also social ones, which have been studied less and which can be a response to the same pattern for very different species. As CEU UCH professor Clara Llamazares highlights, "in order to research these social causes, it is interesting to observe yawning in animals with certain cognitive complexity that live in cohesive groups, such as primates or marine mammals, which in this case we have studied for the first time: yawning can be conditioned by very similar factors for many of these species who share this behaviour."

First study in marine mammals

In the recently published study, CEU UCH researchers Clara Llamazares and Federico Guillén have been able to point to anxiety as one of the causes of yawning in a heretofore unstudied species, sea lions, with the help of Elisabetta Palagi, from the University of Pisa, who recently detected this same cause in a study on lemurs in Madagascar. They say that "we are finding in new species something that had been proven by noteworthy ethologist Jane Goodall in her first studies on chimpanzees in the Gombe Stream National Park, where she noted that the yawns of

these animals increased in the presence of humans. In these situations, animals yawn more often than in other contexts, which is why this behaviour is considered an indicator of a social situation that is stressful to them. This is also what we have shown in the case of sea lions: they yawn immediately after living situations of conflict among themselves as a way to release stress." To do so, professors Llamazares, Guillén and Palagi analysed the behaviours of a group of South American sea lions of the Oceanogràfic park of Valencia for 14 months, whose social structure is similar to that of the colonies who live in [natural habitats](#).

Also out of empathy?

The conclusions of this first study on the yawning of a [marine mammal](#) also show that sea lions yawn similarly to other animals in very diverse aspects, and that the role that the [yawn](#) fulfils for them is very similar to other species, including humans.

This is why they have decided to continue studying the social causes of yawning in these same animals: "Our next step is to analyse whether sea lions also have the contagious effect of yawning, which can be attributed to empathy among equals. As we have done in the case of anxiety, we seek to confirm empathy as a cause of yawning in these animals, an aspect which has not yet been studied. This would be a new contribution to confirm that behaviours as natural for humans as yawning, place us even closer than we think to many animal species," they write.

More information: Elisabetta Palagi et al. Spontaneous Yawning and its Potential Functions in South American Sea Lions (*Otaria flavescens*), *Scientific Reports* (2019). [DOI: 10.1038/s41598-019-53613-4](https://doi.org/10.1038/s41598-019-53613-4)

Provided by Asociacion RUVID

Citation: Sea lions yawn due to anxiety (2020, January 17) retrieved 27 April 2024 from <https://phys.org/news/2020-01-sea-lions-due-anxiety.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.