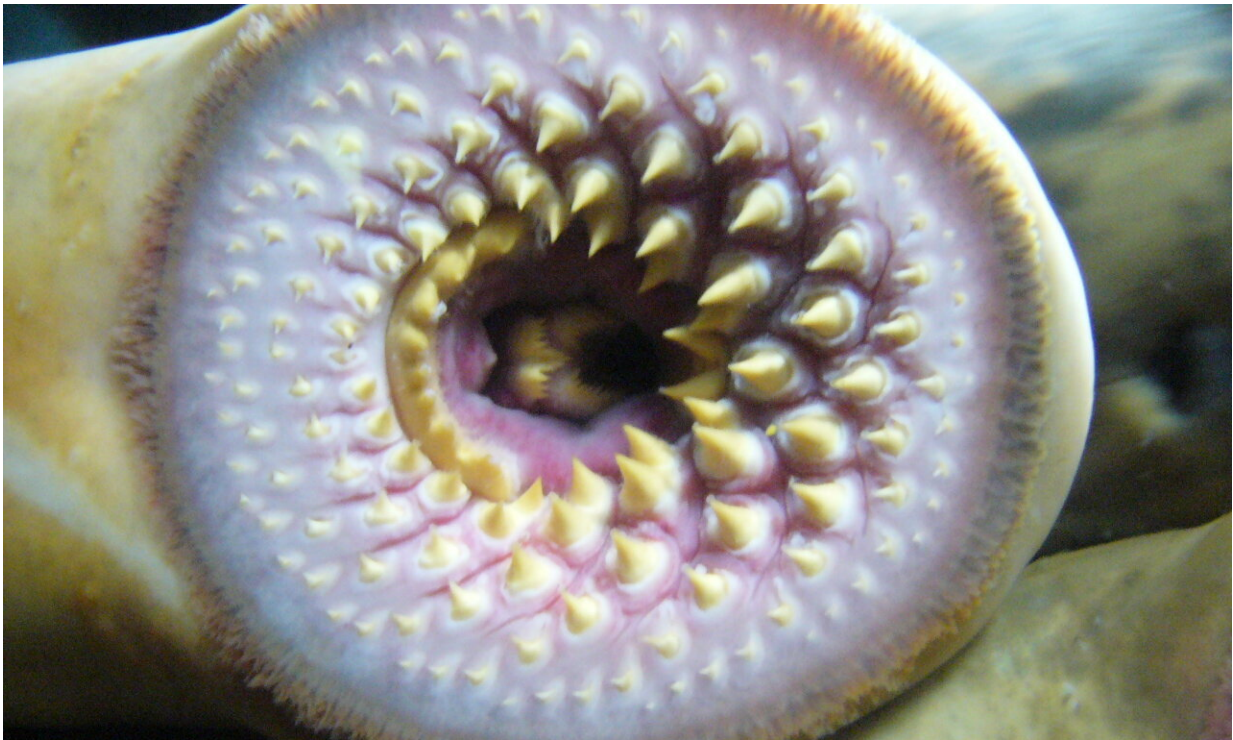


# Scientists explore lamprey's ability to adapt and survive

September 30 2022

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Mouth of a sea lamprey, *Petromyzon marinus*. Credit: Drow male/CC BY-SA 3.0, via Wikipedia.

The ability to regulate salt and water balance is a significant challenge for animals living in freshwater habitats worldwide. In a study published in the *Proceedings of the National Academy of Sciences*, scientists studied lamprey, an ancient group of jawless fish that can live in fresh water and

seawater. They discovered a hormone similar to prolactin that regulates salt transport proteins, enabling lamprey to adapt and survive in freshwater.

"This work helps us understand how animals on ancient Earth were able to transition from the oceans into [freshwater habitats](#)," explained Mark Sheridan, professor of biology and dean of the Graduate School at Texas Tech University, who led the study.

"This work also helps us understand the evolution of the prolactin-growth hormone family, which regulates a vast number of functions in animals and humans, including growth, development, reproduction, immune function, and behavior, in addition to this ancient action on salt and water balance."

**More information:** Ningping Gong et al, Discovery of prolactin-like in lamprey: Role in osmoregulation and new insight into the evolution of the growth hormone/prolactin family, *Proceedings of the National Academy of Sciences* (2022). [DOI: 10.1073/pnas.2212196119](https://doi.org/10.1073/pnas.2212196119)

Provided by Texas Tech University

Citation: Scientists explore lamprey's ability to adapt and survive (2022, September 30) retrieved 19 April 2024 from

<https://phys.org/news/2022-09-scientists-explore-lamprey-ability-survive.html>

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