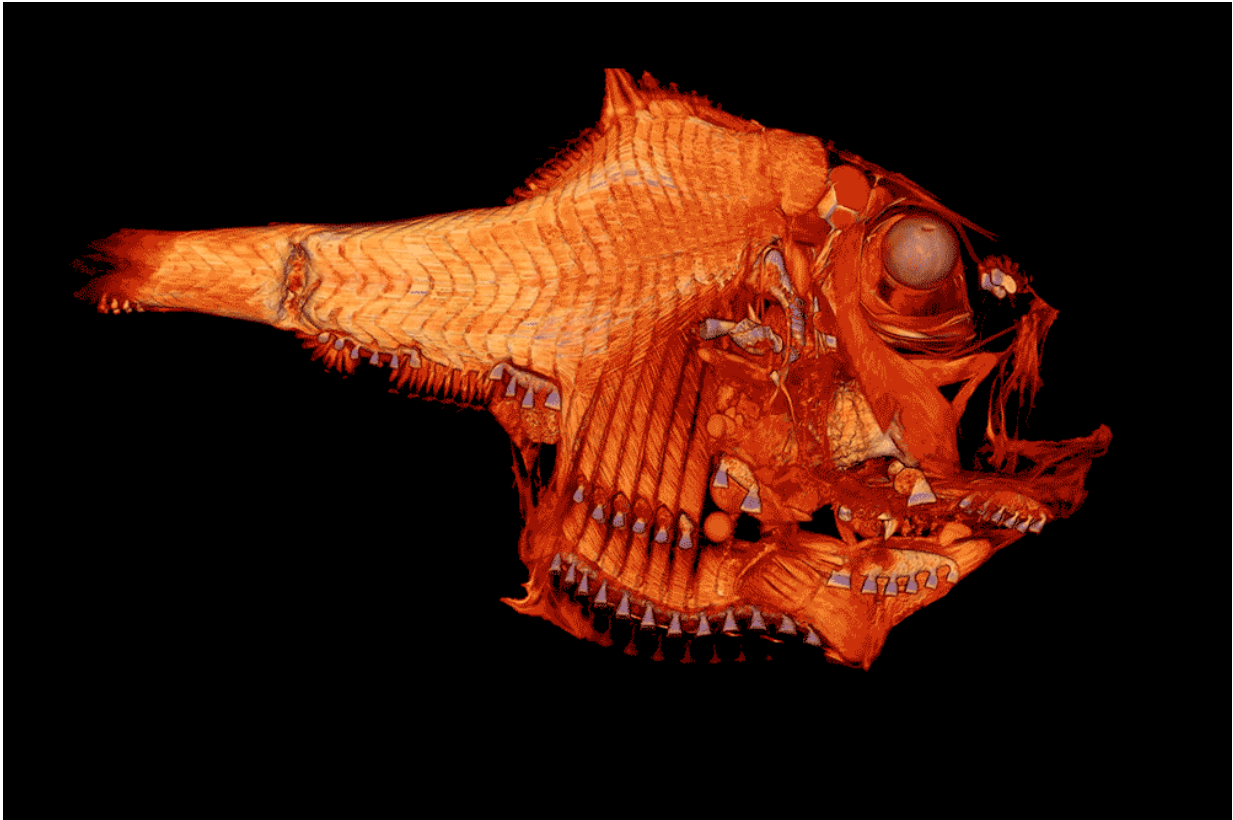


# Lights in the eyes for better disguise

June 11 2020, by Robin A. Smith

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Some fish shine lights in their own eyes for better disguise. Credit: Alex Davis and Duke SMIF

This hatchetfish hides from predators swimming in the shadowy depths below using a clever disguise. Glowing spots on its belly make it nearly invisible against the sunlit waters above. But the fish's eyes point upward.

How does it adjust its underside lights to blend in with the faint light filtering down from above if it can't see its belly? Many [fish](#) with this type of camouflage also have bioluminescent organs in front of their eyes that they use as a reference, researchers report. Instead of facing out like a searchlight, these glowing organs face in, towards the eye, to help them match their own brightness to their background.

"Evidence That Eye-Facing Photophores Serve as a Reference for Counterillumination in an Order of Deep-Sea Fishes," is published in *Proceedings of the Royal Society B*.

**More information:** Alexander L. Davis et al. Evidence that eye-facing photophores serve as a reference for counterillumination in an order of deep-sea fishes, *Proceedings of the Royal Society B: Biological Sciences* (2020). [DOI: 10.1098/rspb.2019.2918](https://doi.org/10.1098/rspb.2019.2918)

Provided by Duke University

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