

Researchers make a major cavefish discovery in Thailand

March 24 2016



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Researchers from New Jersey Institute of Technology (NJIT) have identified unique anatomical features in a species of blind, walking cavefish in Thailand that enable the fish to walk and climb waterfalls in a manner comparable to tetrapods, or four-footed mammals and amphibians. The discovery of this capability, not seen in any other living fishes, also has implications for understanding how the anatomy that all species need to walk on land evolved after the transition from finned to limbed appendages in the Devonian period, which began some 420 million years ago.

This research is reported in a March 24 *Scientific Reports* article, "Tetrapod-like pelvic girdle in a walking cavefish," by Brooke E. Flammang, Daphne Soares, Julie Markiewicz and Apinun Suvarnaraksha. Flammang and Soares, assistant professors in the NJIT Department of Biological Sciences, were assisted with the research by Markiewicz, an NJIT post-baccalaureate research volunteer in the Flammang lab at the university. Investigator Suvarnaraksha is a member of the Faculty of Fisheries Technology and Aquatic Resources of Maejo University in Thailand.

Speaking of the unique anatomical structures seen in the [cavefish](#), *Cryptotora thamicola*, Flammang says, "It possesses morphological features that have previously only been attributed to tetrapods. The pelvis and [vertebral column](#) of this [fish](#) allow it to support its body

weight against gravity and provide large sites for muscle attachment for [walking](#)." With respect to evolutionary significance, she adds, "This research gives us insight into the plasticity of the fish body plan and the convergent morphological features that were seen in the evolution of tetrapods."

More information: Brooke E. Flammang et al. Tetrapod-like pelvic girdle in a walking cavefish, *Scientific Reports* (2016). [DOI: 10.1038/srep23711](#)

Provided by New Jersey Institute of Technology

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