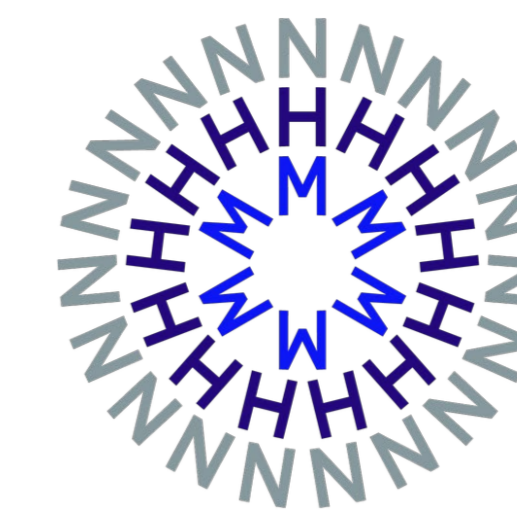


Exploring the morphology and distribution of putative venom glands in Gymnophiona

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Abstract

Caecilians are an order of limbless, fossorial and aquatic animals which alongside the Caudata (salamanders) and anurans (frogs) make up the extant amphibia.¹

Amphibians were not, until recently, thought to be actively venomous. A recent study has suggested that caecilians might be – analysis of secretions from dental glands finding homology with squamate venoms.

This study reviewed species of caecilian previously unstudied, and specimens with different life stages and life histories to broaden understanding of the distribution of these putative venom glands.²

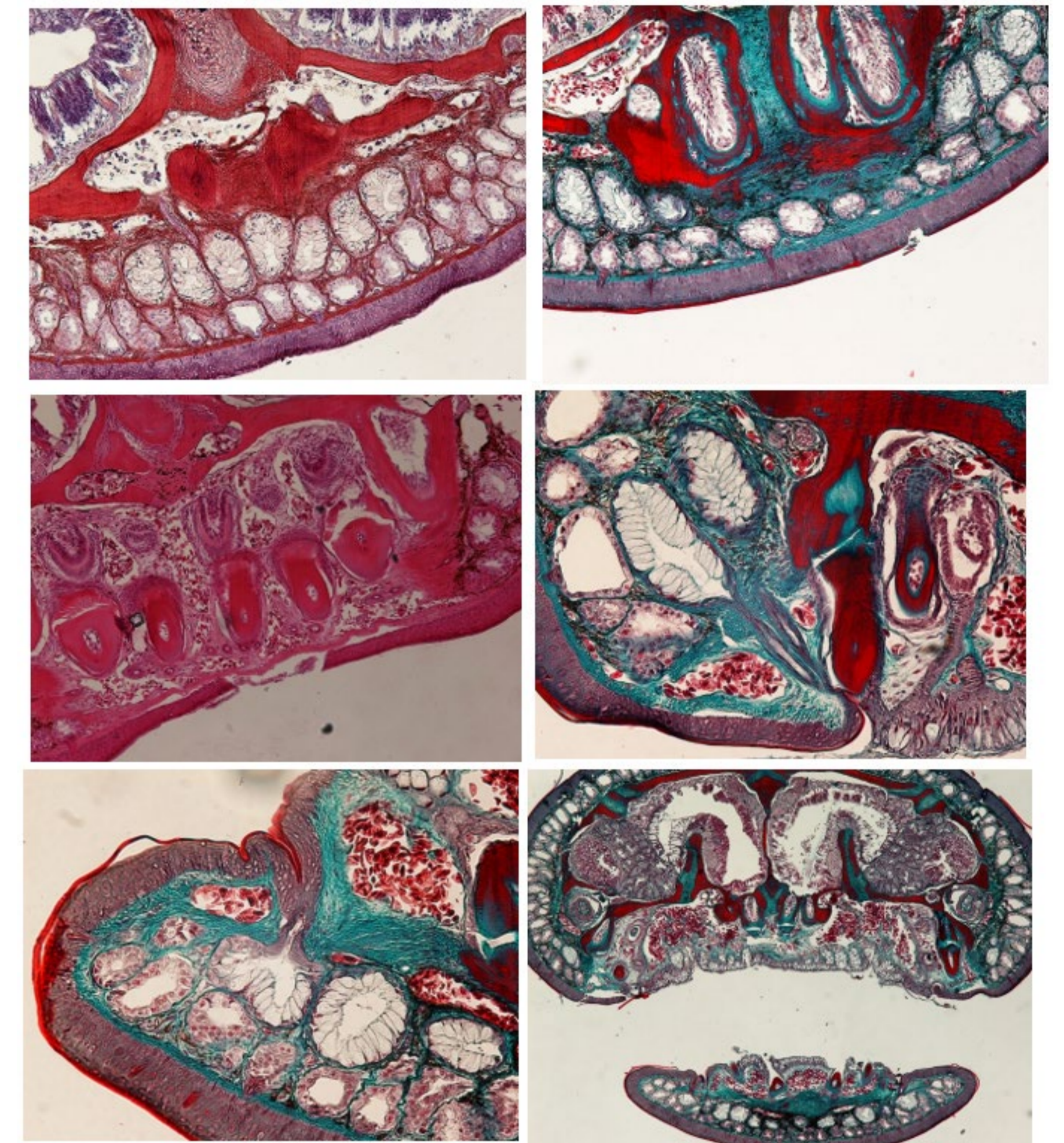
Highlights

- > Dental glands were discovered in every specimen studied, showing that they are broadly distributed throughout Gymnophiona
- > There are differences in the morphology of glands across specimens
- > There are large glands embedded within the muscles of mastication which may be newly discovered

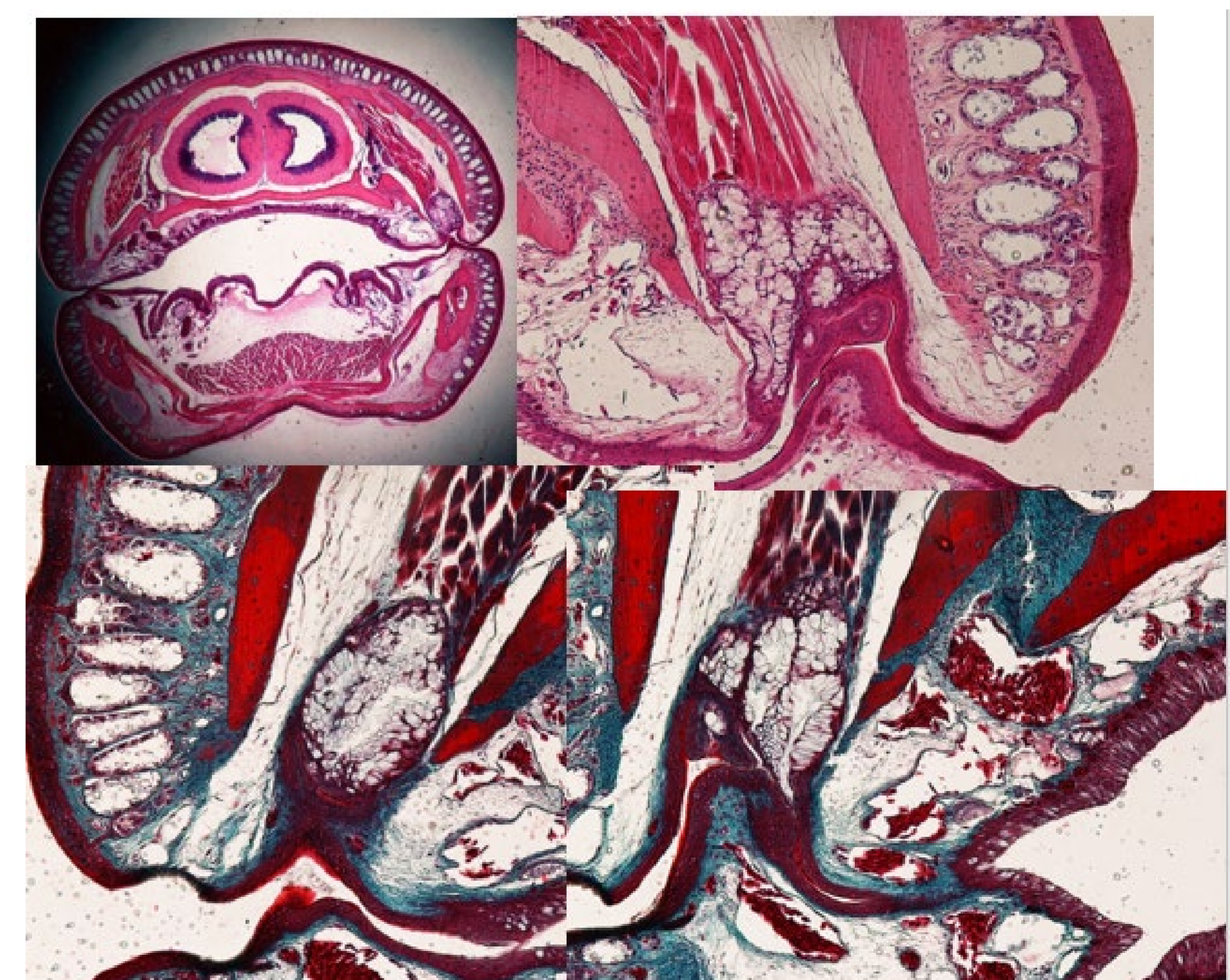
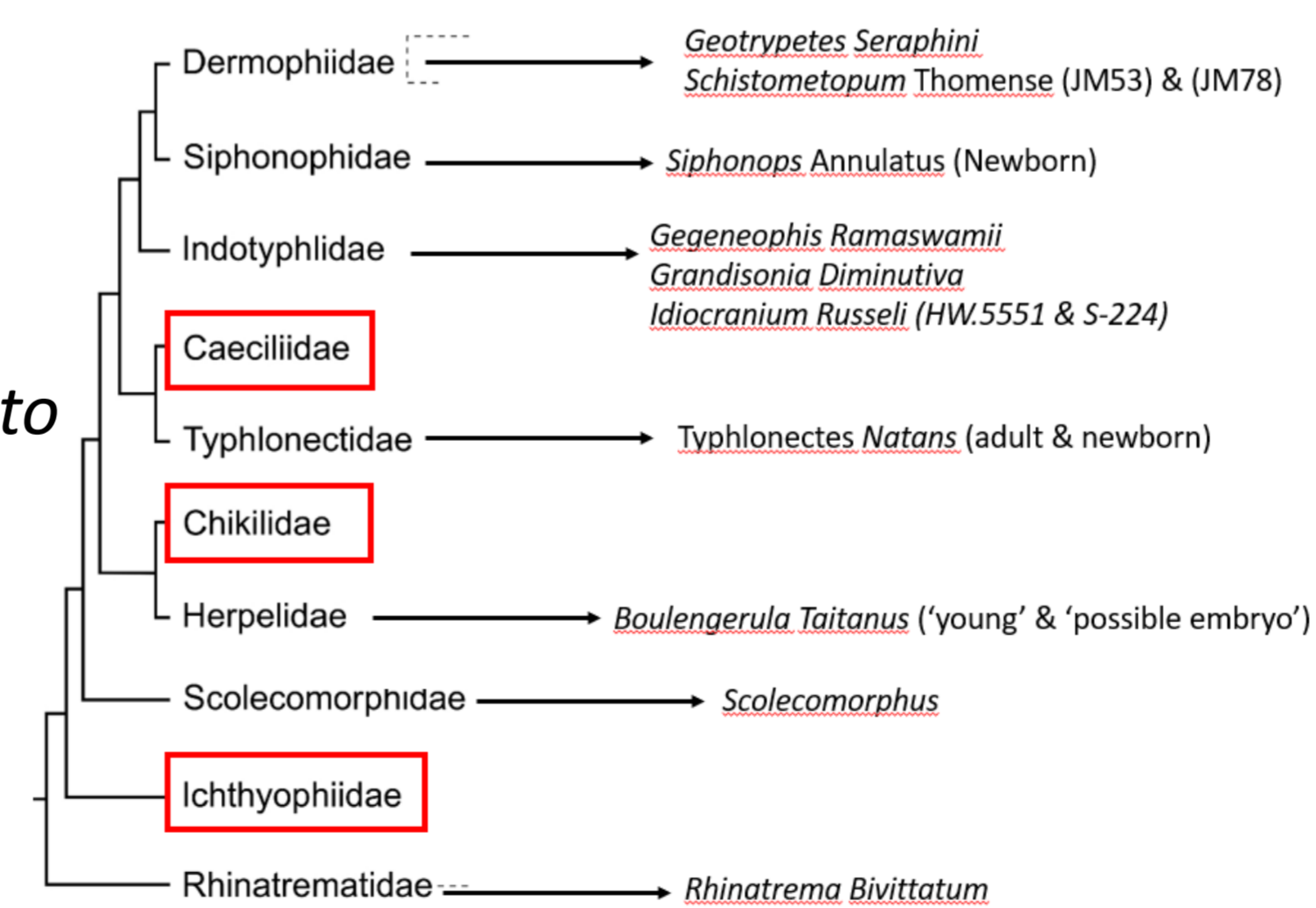


Photo by B.S.F. Silva, published in Boletim Museu Paraense Emílio Goeldi. Ciências Naturais 6(3) Sept – Dec 2011

Dermophiidae
– original work



Reviewed specimens mapped on to caecilian phylogeny



1. Diego San Mauro, David J. Gower, Hendrik Müller, Simon P. Loader, Rafael Zardoya, Ronald A. Nussbaum, Mark Wilkinson,

Life-history evolution and mitogenomic phylogeny of caecilian amphibians, Molecular Phylogenetics and Evolution, Volume 73, 2014,

2. Pedro Luiz Mailho-Fontana, Marta Maria Antoniazzi, Cesar Alexandre, Daniel Carvalho Pimenta, Juliana Mozer Sciani, Edmund D. Brodie, Carlos Jared,

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