

## **DIVERSITY OF OWLFly LARVAE – A QUANTIFIABLE MORPHOLOGICAL ANALYSIS ACROSS THE FOSSIL RECORD AND EXTANT REPRESENTATIVES**

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Ascalaphidae, the group of owlflies, is an ingroup of Neuroptera, the group of lacewings. Owlflies are closely related to the well-known antlions (Myrmeleontidae). Owlflies are widely distributed in all non-polar continents, thriving in tropical as well as temperate climates. Adult owlflies are known as generalist aerial predators with certain similarities to dragonflies and butterflies. Owlfly larvae are voracious ambush hunters, often covered in debris to conceal their presence, and equipped with large mandibles often presenting three major teeth. We reconstructed 38 fossil specimens resembling modern day owlfly larvae and used these together with about 200 modern representatives of Ascalaphidae and Myrmeleontidae in a quantitative analysis. The shapes of the head and mandibles of these individuals were outlined from a dorsal or ventral point of view (depending on the specimen). The morphological analysis was conducted on this data using an elliptic Fourier transformation and principal component analysis. With this, we can compare the morphological diversity of the larvae in the Cretaceous, the Eocene, the Miocene, and the modern fauna.