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A historical review of nomenclature and high-level classification of praying mantises (Mantodea), including a provisional checklist of the names associated to suprageneric ranks

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Abstract

The history of high-level classification of praying mantids is presented. The various historical stages that helped to construct our current knowledge on Mantodea taxonomy and systematic are highlighted through an extensive literature review, from pre-Linnaean times to the present. A provisional checklist of the names associated to suprageneric ranks (family, subfamily and tribe) is also provided, in addition to some remarks on the future efforts that need to be conducted in Mantodea research.

Key words: Mantodea, nomenclature, classification.

Introduction

Praying mantids have long been recognized throughout worldwide history, with some of their earliest references dating back to ancient Egypt. Because of their particular morphology and striking behaviour, they were thought to have religious significance and the ability to predict the future. In this way *μαντις*, *μαντεως* ('mantis') means soothsayer or prophet in ancient Greek. The delimitation of Mantodea as a natural group was not effective at first, only taking hold at the beginning of the nineteenth century after a long confusion with phasmids and mantispids (Neuroptera). In the meantime, their place within the Insecta was often uncertain, being successively put among different orders before their final placement within the Dictyoptera, more specifically as the sister-group of cockroaches (Blattodea). Almost simultaneously, multiple efforts were conducted to provide the order with an internal structure, for which the creation of genera, tribes and families were necessary; this is still an on-going struggle. Extensive but often limited progress has been made on various aspects of praying mantid biology and natural history, such as in their morphology and physiology, behaviour, life cycle, palaeontology, relevance of male genitalic morphology in taxonomy, cytogenetics and molecular studies. All this information has provided scientists with a relatively steady but slow-growing body of data for better understanding the evolutionary relationships within Mantodea.

The advent and eventual incorporation of modern molecular techniques in the study of Mantodea systematics will make necessary major reorganizations within the order. Therefore, the expected reconfiguration of their high-level classification will inevitably unveil multiple nomenclatural issues that will need to be addressed. In order to facilitate this labour to future mantid researchers, I here present an extensive historical review of the progress made in Mantodea nomenclature and systematics in regards to its high-level classification system, while also highlighting some of the most relevant findings in other aspects of their biology. Also included is a checklist of the names associated to suprageneric ranks currently in use (family, subfamily and tribe), their original equivalent as first published and their nominative genera as a further guideline at the time of addressing nomenclatural matters.

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