



## GUEST EDITORIAL

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It is evidently due to my status as the eldest active praying mantid taxonomist that I have been given the honor to introduce this special issue of *Zootaxa*. Entirely devoted to the study of Mantodea, and planned by Julio Rivera, this volume constitutes a significant initiative; it responds to a renewed research interest in praying mantids and gives these insects their deserved recognition.

I would like to invoke our illustrious predecessors from whom I gradually acquired the knowledge that is essential to become truly proficient in our field. During the 1950s, Lucien Chopard guided my first steps in the study of mantids after he wrote the “Mantodea” chapter for the *Traité de Zoologie* in 1949, under the guidance of Pierre-Paul Grassé. Almost simultaneously, starting in 1960s, I developed close and rewarding, although at times inconsistent, working associations with Marcello La Greca (Italy), Max Beier (Austria) and Alfred Kaltenbach (Austria). Our relationship persisted throughout these scholars' lifetimes. These three scientists also benefited from the knowledge of their predecessors, particularly from taxonomists of the second half of the 19<sup>th</sup> century, who pioneered major developments in Mantodea taxonomy and nomenclature. Substantial discoveries were made by John Obadiah Westwood (England), Carl Stål (Sweden), Henri de Saussure (Switzerland), James Wood-Mason (England/India), then by Ermanno Giglio-Tos (Italy), Franz Werner (Austria), James A.G. Rehn (USA) and Morgan Hebard (USA). In more recent times, it has been a joy to be joined by younger researchers, some of which already have a sound competence, such as Francesco Lombardo (Italy), Julio Rivera (Peru/Canada), Reinhard Ehrmann (Germany), Gavin Svenson (USA), and an ever-growing list of emerging scientists. This volume, in great part authored by some of these young talents, truly points to a promising future. There will certainly be plenty of work for us all, and we must continue expanding our knowledge in this field in order to attain a satisfactory level of objectivity.

The development of mantodean taxonomy was informed by various sources. In the beginning, only external morphology was taken into consideration, and later, starting in 1914, genitalic morphology was incorporated. However, it was not until 1953 that male genitalia began to be systematically studied, whereas little is currently known about the utility of female genitalia for taxonomic inference. Cytogenetic studies were initiated in 1921, becoming more frequent after 1938; since then, these sorts of studies have experienced little attention and many gaps still remain. Research incorporating molecular data only began with the turn of the present century, overturning the classification system currently in use, as entomologists realized that the existing system does not account for biological reality. A new classification system, integrating all available knowledge, is now in the process of being developed, although it will still take some time to attain a more stable and natural scheme. However, this is the natural consecution of scientific advancements, with all its errors, approximations and suppositions. We have to recognize that all the authors that have contributed towards our knowledge of mantids have, at some point, published studies that were later proven to be incorrect. Considering this, we should not be offended by errors, but instead we should try to correct them even if this happens decades later. As Lucien Chopard would enjoy repeating, with his usual modesty, “it is only those that do nothing that can make no mistakes”.

I encourage future contributors to undertake small-scale studies focusing on local faunas, much of which has been poorly inventoried, being subject of only sporadic and incomplete surveys. On the other hand, there are taxa that must be reviewed on a larger scale, including investigations on their biology, which can greatly differ among congeners, especially from widely separated regions. Large-scale inventories are also necessary, but the task of producing them is not easy as sampling is difficult. Praying mantids live in isolation, but can be collected in reasonable numbers using light traps; these are best for collecting males, which are more often capable of flight and

thus more mobile than females. Considering this fact, many species are only known by a limited number of specimens, and some of these are poorly preserved by the various natural history organizations that keep them. The current state of these collections can make it difficult to conduct thorough studies and new collections are needed. Moreover, nature is not that simple to interpret: intraspecific variation is great, the sexes can be very different, and neighboring species can easily be mistaken.

Nevertheless, important improvements have taken place over the last decades. Eventually, we may succeed in describing a greater number of species than those that are already known. Special efforts must be made for unveiling the many synonymies that resulted from poor understanding of sexual dimorphism in the early stages of mantid taxonomy. I would especially like to draw attention to the most diversified genera, some of which have already achieved major advances, while others are still only partially outlined. I suggest to young scholars to direct their efforts towards the following genera with the highest priority: *Eremiaphila*, *Acontista*, *Creobroter*, *Tarachodes*, *Galepsus*, *Miomantis*, *Sphodromantis*, *Hierodula*, *Rhombodera*, in addition other less diversified and less known genera that should also be studied.

The work that remains to be done is immense. This volume offers a sampling of articles from various taxa; it represents a substantial single step forward to encourage future studies that will ultimately provide a more global and profound knowledge. I wish much courage and satisfying results to those that will devote themselves to this task in the upcoming years.

### **Acknowledgements**

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