

## Mantids and associated Chalcidoidea parasitoids in natural areas from Eastern Spain

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### INTRODUCTION & AIM

Mantids (Mantodea, Mantidae) are generalist predatory insects. They have two raptorial forelegs in which preys are securely caught and held. The female lays her eggs into an ootheca which is made by structural proteins and tanning agents in order to make a protective egg case.

Some families of hymenoptera belonging to Chalcidoidea are known as mantid oothecae parasitoids.

The aim of this study is provide information about the Torymidae and Eupelmidae wasps that act as parasitoids of mantid species found in several Natural Parks of the province of Valencia in Eastern Spain.

### MATERIAL & METHODS



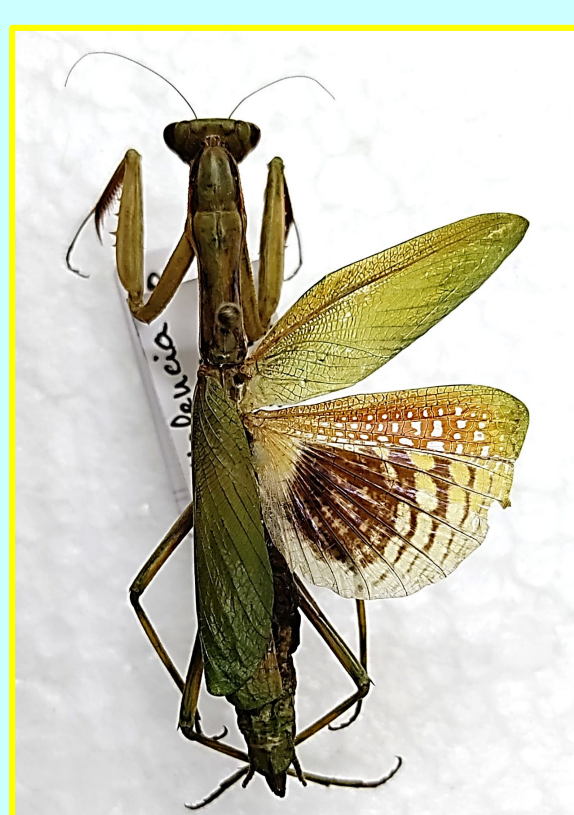
The Albufera of Valencia Natural Park (AV) is a nature reserve located in Valencian Community.

Some oothecae of 3 mantid species were collected on the garrigue vegetation or on the soil, along several periods between 2016 and 2024.

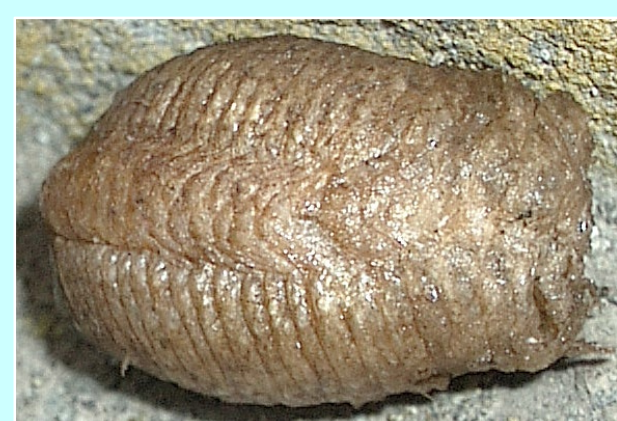
The oothecae were stored in laboratory conditions until the emergence of mantid nymphs and parasitoid wasps. Living nymphs were returned to their territories.

### RESULTS

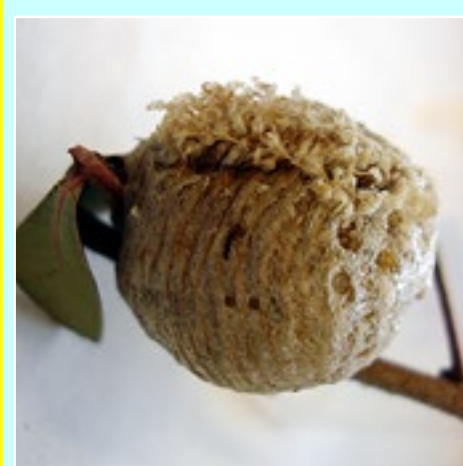
#### Mantids and oothecae



*Iris oratoria*  
(Linnaeus, 1758)



*Mantis religiosa*  
(Linnaeus, 1758)



*Sphodromantis viridis* (Forskal, 1775)

#### Chalcidoidea parasitoids



**EUELMIDAE**  
*Anastatus maculosus*  
Askew, 2004



- Ex ootheca  
on *Pistacia lentiscus*.



**TORYMIDAE**  
*Iridophaga lichtensteini*  
Picard, 1933

- Sweeping on vegetation.



**TORYMIDAE**  
*Podagrion bouceki*  
Delvare, 2005

- Ex ootheca  
on *Asparagus acutifolius*,  
*Phyllirea angustifolia*,  
*Pistacia lentiscus*.

#### OTHER PARASITOID-MANTID RELATIONSHIPS RECORDED FROM SPAIN

Eupelmidae: <i>Anastatus catalonicus</i> B.&P.,1935	<i>Iris oratoria</i>
Torymidae: <i>Microdontomerus iridis</i> (Picard, 1930)	<i>Iris oratoria</i>
Torymidae: <i>Podagrion bouceki</i> Delvare, 2005	<i>Empusa pennata</i>

#### CONCLUSIONS

The parasitoids are species of Torymidae and Eupelmidae families. *Anastatus maculosus* is recorded for the first time emerging from the egg-case of *I. oratoria*. *Iridophaga lichtensteini* potentially parasites *I. oratoria* in Valencian territory. *Podagrion bouceki* has been reared from *S. viridis* being a new parasitoid-host relationship from Spain.