

## New finding of the threatened *Apteromantis aptera* (Fuente, 1893) in Portugal (Mantodea)

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**Abstract:** We report a new finding of *Apteromantis aptera* (Fuente, 1893) in Portugal. The specimens of this protected Iberian endemic species were collected at pitfall traps in an extensive pasture area near S. Marcos da Ataboeira (south-eastern Portugal). This interesting finding has also prompted us to briefly discuss the need to develop specific projects in order to update our knowledge of the distribution and population status of protected terrestrial arthropod species that occur in Portugal.

**Key words:** Mantodea, *Apteromantis aptera*, Iberian endemic, Bern Convention, Habitats Directive, Portugal.

### Novo registo de *Apteromantis aptera* (Fuente, 1893) em Portugal (Mantodea)

**Resumo:** Damos a conhecer um novo registo de *Apteromantis aptera* (Fuente, 1893) em Portugal. Os exemplares deste endemismo ibérico protegido foram capturados em armadilhas de queda numa área de pastagem extensiva próxima de S. Marcos da Ataboeira (Sueste de Portugal). Esta descoberta interessante impeliu-nos a discutir a necessidade premente no desenvolvimento de projectos específicos que visem a actualização do conhecimento da distribuição e do estado das populações das espécies de artrópodes terrestres protegidas por convenções e directivas internacionais que ocorrem em Portugal.

**Palavras-chave:** Mantodea, *Apteromantis aptera*, endemismo ibérico, Convenção de Berna, Directiva Habitats, Portugal.

### Nueva cita de *Apteromantis aptera* (Fuente, 1893) de Portugal (Mantodea)

**Resumen:** Se da a conocer una nueva cita de *Apteromantis aptera* (Fuente, 1893) de Portugal. Los ejemplares de este endemismo ibérico protegido se capturaron en trampas de caída en una zona de pasto extensivo cercana a S. Marcos da Ataboeira (sureste de Portugal). Este interesante hallazgo nos ha llevado a discutir la urgencia de desarrollar proyectos específicos destinados a la actualización del conocimiento sobre la distribución y estado de las poblaciones de especies de artrópodos terrestres presentes en Portugal y que están protegidas por convenios y directivas internacionales.

**Palabras clave:** Mantodea, *Apteromantis aptera*, endemismo ibérico, Convenio de Berna, Directiva Hábitats, Portugal.

### Introduction

*Apteromantis aptera* is a rare Iberian endemic praying mantid which has been reported from several localities in the southern half of the Iberian Peninsula. The distribution and biology of this protected species was updated some years ago (Peinado & Mateos, 1998; Galante & Verdú, 2000), but recently a few other populations have been discovered (Brenes, 2003; Ruiz, 2004; Díaz *et al.*, 2006) including the first record of this species to Portugal (Grosso-Silva & Soares-Vieira, 2004).

The adults of this species can be easily identified since both males and females lack wings, present developed conical eyes and are larger than the other Iberian Amelinae. Nevertheless, someone inexperienced can easily confound them in the field with the immature stages of other mantid species. Keys for the identification of Iberian Mantidae are provided by Morales Agacino (1947), Kaltenbach (1976) and Pascual (1988).

The scarcity of data on the distribution of *Apteromantis aptera*, altogether with the low number of individuals reported, makes us suppose that this species is rare. *A. aptera* is included in the annex II of the Bern Convention, in the annexes II and IV of the Habitats Directive and was also classified as Lower Risk/Near Threatened by the IUCN (World Conservation Monitoring Centre 1996). The species has been reported from Mediterranean scrublands and grasslands across a wide altitudinal range (from sea level up to 1300 meters), but recently, Díaz *et al.* (2006) found this species in extensive cereal (barley) monoculture, an unusual habitat-type for this species according to the previous findings.

### Results and Discussion

Two specimens, both females, were collected in pitfall traps between 25/05/2006 and 13/06/2006. The finding took place at the "Herdade de Belver", near S. Marcos da Ataboeira (29SNB97) (SE Portugal). The area is characterized by an extensive pasture system with low density of sheep livestock (600 animals/ha) managed in a sustainable way, according to the "Plano Zonal" of Castro Verde. Our finding, altogether with the results reported by Díaz *et al.* (2006), is particularly interesting since it provides evidence that semi-natural habitats may play a key role for the conservation of *A. aptera*. In future, these secondary habitats may even become more

important for the survival of this protected mantid species due to the ongoing loss of its primary habitats.

Our finding was extremely fortuitous since pitfall trapping is a sampling technique indicated to collect ground-dwelling arthropods (spiders, ground-beetles, ants), but unsuitable to capture mantids. The assessment of the population status of this protected species will demand the application of other sampling techniques, like net sweeping or direct collection from the vegetation, which allow the manipulation of individuals without causing them harm.

The conservation of a species with low dispersal capability and structured into spatially discontinuous local populations, like *A. aptera* appears to be, presents a great challenge to the entities responsible for overseeing conservation measures. However, the lack of knowledge on the biology and distribution of *A. aptera* is still one of the major obstacles for the adoption of specific conservation measures to guarantee protection for this Iberian endemic species. This situation can only be overcome with the development of a set of studies directed to elucidate us on key aspects of the biology of this species.

In Portugal, the conservation of insects is an issue continuously postponed. Only ten species of insects benefit from legal protection as a consequence of the transposition of the Bern Convention and the Habitats Directive (92/43/CEE) to the National Law System. However, with a few exceptions, little is known about the distribution and the conservation status of these protected species in Portugal. Unlike what happens in other EU countries, there is no study reference on these protected species in Portugal and no efforts have been developed to identify and monitor their populations. As a consequence the national conservation policies have consecutively overlooked the need and the international obligation to safeguard the populations of these protected insects.

The conservation of insects in Portugal is a challenge that needs to be faced. This task demands not only the commitment of the authorities responsible for nature conservation and management, but also from the experts in academic institutions and scientific societies, altogether with the cooperation of experienced researchers from international institutions and the general public. A strategy to implement insect conservation in Portugal must be defined in the short-term. Considering the international obligation to

value and safeguard some of the most threatened insects in Europe, one of the first initiatives should be the assessment of their conservation status in our country. Moreover such strategy should be designed and conducted in order to achieve the following goals: 1) promote the improvement of our knowledge on the Portuguese insect fauna, 2) identify species of concern, 3) establish monitoring programmes for selected species, 4) collect data on the biology of selected species in order to propose specific conservation measures to benefit their populations and 5) raise general public awareness for the need to value and safeguard the larger fraction of taxonomic biodiversity, the insects.

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## CORRECCIONES AL ARTÍCULO: Los Noctuidae (Lepidoptera) del Parque Regional de Sierra Espuña (Murcia)

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Se elimina *Eublemma himmighoffenii* (Milliere, 1867) debido a un error de identificación por lo que el número de especies, hasta el momento, de la familia Noctuidae del Parque Regional de Sierra Espuña (Murcia, sureste de la Península Ibérica) es 212 especies.

La Tabla II se modifica para mostrar el número de especies consideradas y su proporción para cada tipo de elemento y para cada categoría biogeográfica.

En la familia Noctuidae predominan las especies de influencia mediterránea amplia (67,46%), los elementos de amplia distribución alcanzan el 30,18% y los ibéricos suponen el 2,36%. La elevada influencia mediterránea es una consecuencia de la posición geográfica del área de estudio destacando, además, la influen-

cia asiática que supone el 50,94% del total (resultado de la suma de los elementos asiático-mediterráneos y euroasiáticos).

Si se analizan individualmente las tres categorías biogeográficas se aprecia que entre los elementos de amplia distribución (30,18%) la mayor aportación a esta categoría corresponde a los elementos euroasiáticos (16,98%) y tropicales (9,43%) que difiere ligeramente de las distribuciones observadas en la fauna de noctuidos de Murcia (Calle *et al.*, 2000). Esta diferencia puede ser reducida mediante el aumento del esfuerzo de muestreo en el área de estudio. Por otro lado, los elementos de amplia distribución mediterránea no difieren de los observados para el conjunto de noctuidos de Murcia (Calle *et al.*, 2000).

**Tabla II. Distribución biogeográfica de los Noctuidae del P.R. de Sierra Espuña**

Tipos de elementos	n	%	% clases principales
Paleártico	2	0,94	
Tropical	20	9,43	
Euroasiático	36	16,98	30,18
Holártico	2	0,94	
Cosmopolita	4	1,89	
Atlanto-mediterráneo	71	33,50	67,46
Asiático-mediterráneo	72	33,96	
Endémico o Ibérico	5	2,36	2,36
Total	212	100	100

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De la bibliografía desaparece la referencia a la especie eliminada:

CALLE, J. 1983b. *Los Lepidópteros de Castellón de la Plana*. Caja de Ahorros de Castellón de la Plana. 190 pp.