



## UNCOMMON TICKS FROM ITALY.

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### Keywords

Ticks, rare species, Italy.

### Introduction

Some species of ticks are uncommon for certain areas of Italy. Specimens of these species are often collected during surveys on ticks and tick-borne pathogens, but are rarely published, thus contributing to the little knowledge of tick distribution. The aim of this work was to collect data on tick species otherwise not reported by many Italian tick researchers.

### Material and Methods

The data were obtained both from published literature and from unpublished data provided by the authors, along with the specific identification keys used. A "rare tick" was defined as never recorded before or recorded few times in a specific Italian region. The rarity levels were coded as: 1) rare (first report in a specific Italian region); 2) uncommon (reported once or twice); 3) quite common (a lot of reports in that region). Time and location, number and stage of ticks origin of the specimens (animals or environment), referred to each sample were annotated together with the name of who made the identification and keys used.

### Results

Records from nine Italian regions were collected, referring to the last twelve years (1999-2011). In total, 14 species (total specimens: 521) were considered rare (level 1 and 2) and five species (total specimens: 822) were considered more common (level 3). The following species were included at level 1: *Argas reflexus* in Sardinia; *A. vespertilionis* and *Rhipicephalus bursa* in Emilia Romagna, *Haemaphysalis inermis* in Abruzzo and *Rhipicephalus annulatus* in Liguria. Other species, like *Ornithodoros coniceps*, *Haemaphysalis concinna*, *H. inermis* and *Rhipicephalus turanicus* and *Ixodes festai* were recorded before only once or twice. Some ticks were found for the first time on new hosts: *I. festai* on blackbird (*Turdus merula*), *R. pusillus* on hedgehog (*Erinaceus europaeus*) and *Hyalomma scupense* on man. *H. aegyptium* was collected from a large number of tortoises (*Testudo graeca*) illegally imported and therefore must be still considered exotic. The ticks very common in some Italian region like *I. ricinus*, *I. hexagonus*, *R. sanguineus* and *Dermacentor marginatus* were not mentioned.

### Discussion and Conclusions

Data confirmed the presence of ticks considered uncommon in some areas and new species were found in specific part of Italy. This survey contributes to update the distribution and hosts of tick species in Italy. The future involvement of more Italian researchers working on this specific field will enhance our potential of mapping the distribution of uncommon ticks.

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### References

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