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Ticks infesting the endangered Italian hare (Lepus corsicanus) and their habitat in an ecological park in southern Italy.

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Abstract

The Italian hare (Lepus corsicanus) is an endangered species whose natural populations have decreased in recent years. This study's objective was to identify ticks infesting hares and their habitats in a wildlife reserve in southern Italy. In June 2009, ticks were collected by dragging in three transects set in a meadow habitat within an enclosure inhabited by hares and in three similar transects outside this enclosure. Fifty-five ticks were collected by dragging, being 54 inside and 1 outside the enclosure. Ticks were identified as Hyalomma marginatum (34 males, 17 females), Dermacentor marginatus (2 males, 1 female), and Rhipicephalus bursa (1 female). In September 2009, ticks were collected from 17 Italian hares and identified as Ixodes ricinus (2 larvae, 45 nymphs, 35 males, 37 females), Rhipicephalus turanicus (2 males, 1 nymph), and Hyalomma sp. (165 nymphs). PCR amplification and sequencing of a partial region of the 12S rDNA gene of Hyalomma nymphs allowed their identification as H. marginatum. This study suggests that host presence is a factor determining the level of environmental tick infestation as well as the free-living tick species in the study area and that Italian hares are hosts for I. ricinus and H. marginatum. Studies to assess whether these ticks could limit the survival and fitness of Italian hares and affect their conservation status are needed. Moreover, it is necessary to investigate whether these ticks are infected with pathogens of medical and veterinary concern.