International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

The Ixodid Ticks of the Long-Eared Hedgehog Hemiechinus Auritus (Gmelin, 1770) in Baghdad Area

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Abstract: ***20 long- eared hedgehogs (Hemiechinus auritus) were collected from Baghdad area, In June 2015 to June 2016, was infected by 45 ticks. The samples were obtained from 15 infected animals 20 male and 25 female. The study show that a long-eared hedgehog was infected by one genera of Rhipicephalus and single species (R.turanicus).***

Keywords: Ecto-parasites, Ixodid ticks, Long- eared hedgehog, Rhipicephalus turanicus

1. Introduction

In general Hedgehogs are small mammals in winter hibernate for few days and are active in summer feed on insects, reptiles, small mice and bird eggs as they feed on plants [3]; [10], There are three genera and species of Hedgehog Hemiechinus auritus has long ears, European Hedgehog has shorter ears and longer nose Erinaceus europaeos and African hedgehog Its color tends to brown and is called Paraechinus aethopicus [13], it belong to order Insectivora Family Erinaceidae [11]. Our study on Ectoparasites of Hemiechinus auritus are living organisms that live on the host's body as ticks [7]. Hard ticks (Ixodid) are considered to be the main vectors of diseases that infect mammals [5], [14];[15];[16] covered the Ixodoidea on domestic animals in Iraq, seasonal and geographic studies, and studied host distribution in Iraq .[2] recorded the occurrence of lice, mice and ticks on domestic mammals. ecto- parasites studies of wild animals in Iraq are still few [9] Collect ticks on these animals[1] recorded four species of ticks on Long eared hedgehog in Nineveh province [6] stated that the Long eared hedgehog infected with two species of ticks [18] recorded a more infection ratios of Ixodid ticks on Long eared hedgehog in the middle and south of Iraq,[20] confirmed that R.turanicus is considered a new record in Iran, [17] also proved that hedgehog infected with R.spp. in Saudi Arabia[5] found that R.turanicus also collected from hedgehog in Turkey . The aim of this study is to investigate and record Ixodid ticks infected Long-eared hedgehog in Baghdad area.

2. Materials and Methods

A total of 20 specimens of the long-eared hedgehog Hemiechinus auritus collected from different areas of Baghdad province during June 2015 to June 2016 .The animals were carefully examined for tick parasites, of them 15 (75%) were found infected with only one species of ixodid tick Rhipicephalus turanicus. the recovered ticks were 45 (20 males and 25 females) with an intensity of 3, Ticks were kept in vials with 70% alcohol, cleaned from debris, labelled and stored until the laboratory examination. Identification was done according to keys provided by [12]

3. Results and Discussion

From this study results shown a total of 20 long-eared hedgehogs, 15 were infected (75%) with one genera of Ixodid ticks Rhipicephalus is R.turanicus. the number of ticks samples that were released from the animals (45) 20 male and 25 female (table 1), Intensity of ticks (3) from the total number of ticks (45).In general Rhipicephalus is considered a three-host tick species and its mid brown color. Eyes and pistons are present females of R. turanicus have the genital aperture with posterior lips , males have small shallow cervical fields, male and female of R.turanicus have spiracle plates with tails [19] fig (1).

Table (1)

Host	No.	No. Infected	%	Ticks species	Male	Female	Total no. of ticks
Hemiechinus auritus	20	15	75	*Rhipicephalus turanicus*	20	25	45

In this work results shewed that the Long-eared hedgehog infected with one species of Rhipicephus turanicus This corresponds to the findings of [1]; [2]; [4]; [19]; [5], while [6] Prove a presence of Haemaphysalis sp. and Argus persicus, [13] recorded in addition to the genus Rhipicephlus the genus Hyalomma [4] found another species of Rhipicephalus with R. turanicus. Also [8] recorded a presence of Rhipicephalus appendiculatus on hedgehog. As for the infection rate in this study was recorded a rate of 75% and can be considered a large proportion compared to other studies [8] recorded 20.5%, While the percentages were close to or equal to what reached [5] as it was 66.66 % and [18] where was 76.19% .This shows that Rhipicephalus especially R.turanicus It is widely found in wild animals, especially on hedgehogs with high rate.

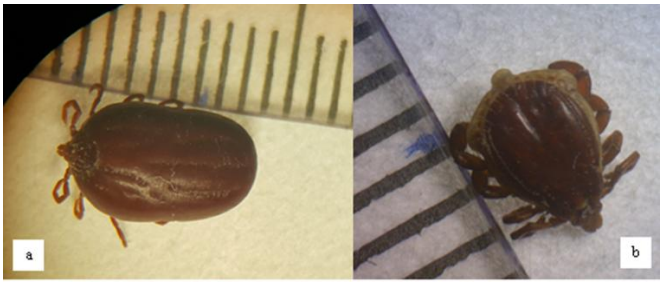

Figure 1: Rhipicephalus turanicus "(a)" female "(b)" male

4. Conclusions

Through this work It can be inferred generally hedgehogs and especially long - eared hedgehogs are infected with the most common genus of ixodid ticks that is Rhipicephalus and the species R.turanicus in Baghdad area with infested rate of 75% These results are of great benefit in several fields like human and animal health as well as scientific fields and so on.

5. Acknowledgements

I extend my thanks and appreciation to the Iraq Natural History Museum, University of Baghdad, , especially to Professor Dr. Mohammad K. Mohammad and Lecturer Saman R. Lahony for all their assistance in accomplishing this work. I also express my great respect to my husband Dr. Hussein Abbas Jabur for his continuous support in completing my scientific career.

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