



First Record of *Otobius Megnini* (Dugés, 1883) (Ixodida: Argasidae) Found on *Bos Primigenius Taurus* in San Juan Province, Argentina

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Abstract

Otobius megnini is a species of tick frequently found on cattle, sheep, goats, South American camelids, dogs, and humans. It is widely distributed in Argentina, however, it was not mentioned in the province of San Juan, Argentina. This species is of veterinary importance because the infection causes otitis, which is notorious when the parasitic load is high. Due to this, the objective of this note is to mention the first nymphal record of the soft tick *Otobius megnini* for the San Juan province, Argentina, collected at the bottom of the auditory pavilion of a specimen of *Bos primigenius taurus*. This note provides new information on parasitism in domestic exotic cattle, expanding its distribution to the province of San Juan, Argentina.

Keywords: Argentina; Tick; Parasitism; San Juan; Valle Fértil

Introduction

Otobius megnini is known as the spiny ear tick, due to the nymphs having a spiny integument [1]. It is a species of tick with worldwide distribution found mainly in Europe, North America, Africa, Asia and Australia. In the Southern Cone of America is distributed in Argentina, Bolivia, Chile, Guatemala, Mexico, Peru and Venezuela [2]. In Argentina is distributed in various provinces [3], although so far in the San Juan province, it has not been mentioned. This tick presents as characteristic that is fixed at the bottom of the host's ear and is frequently found in cattle, sheep, goats, South American camelids, dogs and humans [1,2,4].

Otobius megnini has veterinary importance because the infection causes otitis, which is notorious when the parasitic load is high. This tick causes ear irritation, causing bacterial infections, also causes loss of appetite and fainting of the animal [4]. Larvae and nymphs are located in the ears (auricular pavilion) and are the only parasites. Adults are free-living and complete the cycle using reserves from the nymphal stage. The cycle is single host and is completed in 2 to 16 months. There may be 3 to 5 nymphal stages, which are those that leave the host. Copulation occurs in the environment and then the female lays about 500 eggs, later the female dies [1].

The purpose of this work is describe the finding of a nymphal stage of *Otobius megnini* for the San Juan province, Argentina, collected at the bottom of the auditory pavilion in a specimen of *Bos primigenius taurus*.

Materials and Methods

The information presented in the following study is based on the recognition of a tick obtained by the authors in February 2018. This was collected in a specimen of *Bos primigenius taurus* (cow) in the locality of Los Baldecitos, Valle Fértil Department, San Juan Province, Argentina. Los Baldecitos corresponds to a locality within the phytogeographic region of Monte. This region covers extensive arid areas with an average rainfall of less than 100 mm/year, with years without any records. It covers an approximate surface of 40.499 km², corresponding to 45% of the total of the province. Xerophilous plants adapted to the hot and dry climate, with little summer rainfall, predominate. The vegetation responds to wet and dry cycles and is characterized by the presence of shrub steppes that exceed 3 m in height, which branch from the base [5]. The tick was collected, preserved in 96° alcohol and observed using a stereoscopic binocular loupe. For the identification, morphological characters were used based on Nava, et al. [2]. The tick is deposited in the parasitological collection of the Gabinete de investigación Diversidad y Biología de Vertebrados del Árido, departamento de Biología de la Facultad de Ciencias Exactas Físicas y Naturales, Universidad Nacional de San Juan (UNSJPar 283).

Results and Discussion

The examination of the auditory pavilion in a female *Bos primigenius taurus* specimen determined the presence of a nymphal stage of the *O. megnini* tick. The characteristics that allowed its diagnosis are an integument with numerous spines and functional hypostoma with large and numerous denticles.

Worldwide there are only two species of the genus *Otobius*, being one of them *O. megnini* in the South Cone of America [2]. In Argentina, *O. megnini* is distributed in the provinces of Jujuy, Salta, Catamarca, Tucumán, Córdoba, La Pampa, La Rioja, Mendoza, San Luis, Santa Fe, Santiago

del Estero and Buenos Aires [3,6,7]. Although distribution throughout Argentina is not ruled out. Due to these facts, this note mentions the first record of the tick *O. megnini* in the locality of Los Baldecitos, in the province of San Juan, Argentina. The information presented is of utmost importance to predict, prevent and avoid the potential risks of infection and diseases that it could cause both in domestic animals and in humans.

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