



Tracking of Toxocariasis in (*Panthera pardus saxicolor*) the Endangered (vulnerable) Feline Species in the Wildlife of Northwestern Iran

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Dear Editor-in-Chief

The leopard (*Panthera pardus saxicolor*), is among the five species in the genus *Panthera* (1), considered as vulnerable animal according to IUCN (International Union for Conservation of Nature Red List) regulation (2). The hosting territory of this leopard is extended about 885,300 km² nearly the 50% of the total land mass of Iran (3). Concerning the diverse types of parasites that are harboring by leopards worldwide, different species of trematodes, cestods and nematodes as well as some protozoans, have been previously reported by the researchers in different parts of the world (4). Regarding the focus of present report, recording of *Toxocara cati* in *Panthera pardus saxicolor* in Iran in 2010 is worth mentioning (5).

The specimen (*P. p. saxicolor* found unwillingly killed in Gergy County (48°5'8"E; 39° 0' 48" N, Ardabil Province northwestern Iran) bordering Azerbaijan in the 2009 was submitted to the Laboratory of Helminthology in the School of Public Health at Tehran University of Medical Sciences, Tehran, Iran. The same panther has been examined for *Trichinella* larvae so far and was revealed the presence of *T. britovi* larvae based on multiplex PCR technique (6).

In this survey, the entire containing of the digestive tract was precisely detected microscopically.

The stomach was consequently opened and remarkably found empty showing the hunger of the panther. The recovered worm became enough transparent using lacto phenol solution. Surprisingly the only small cream colored helminth finally identified as *T. leonina* were observed in the empty stomach. Careful drawing of the samples was performed using a drawing tube equipped microscope. Taxonomical identification up to the genus level were carried out, taking advantage of previous reliable pioneers (7). Morphological characters were consequently led us to a male *T. leonina*. The longitudinal size of the worm was 90 mm, and two distinct spicules (0.80, 0.81 mm) at the posterior end of the worm (Fig. 1).

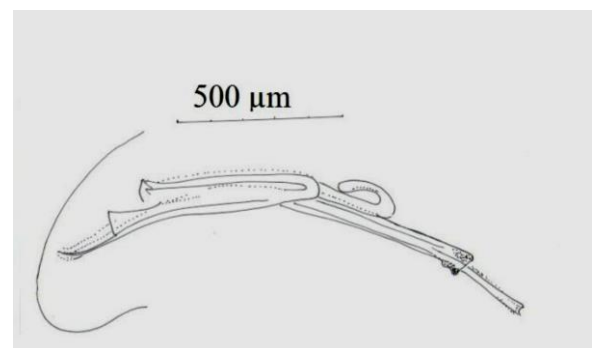


Fig. 1: *Toxascaris leonina*. Two spicules at the posterior end of the body (Original)



Moreover, the presence of three lips along with their enclosures at the anterior end of the body (Fig. 2), two cervical alae and lack of ventricule between the oesophagus and gut, designates the *T. leonina*.

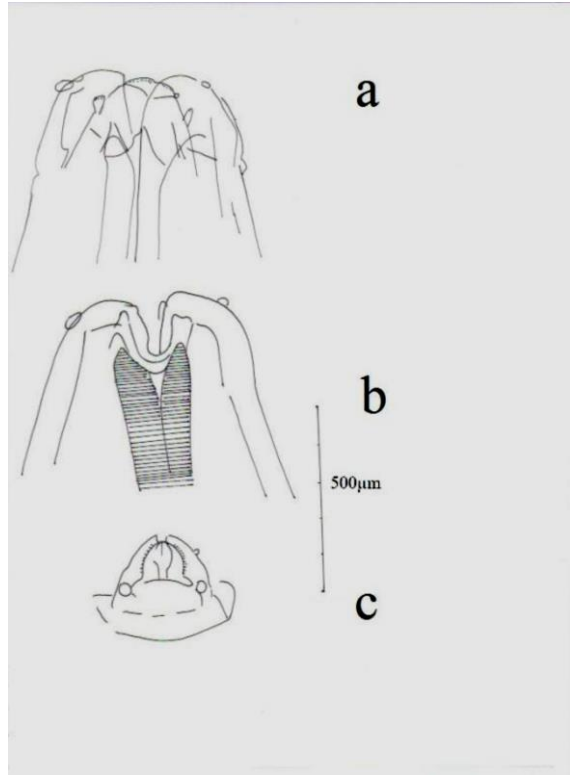


Fig. 2: *Toxascaris leonina*. A: three lips along with their enclosures at the anterior end of the body. B: moth-oesophagus view. C: upper and frontal view (Original)

Apart from the parasitological points of views seeing an adult male *T. leonina* in the empty stomach of a Persian panther, can be attributed to a real hunger of the killed animal in the wildlife of this part of the country. Moreover, the recording of the excision of a *Toxascaris* larva from a child orbit in eastern Africa in 1984 is also a supporting fact its possible potential in human infection (8). Regardless to ethiological species of the ascariids in carnivores, our present study drags the mind of readers towards the possible role of the wild felids such as panthers, in distributing of zoonotic helminthiasis in the nature.

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Conflict of interest

The authors declare that there is no conflict of interests.

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