

# OCCURRENCE OF ECTOPARASITES ON A PEAFAWL (*PAVO CRISTATUS*, LINN.) IN TAMIL NADU

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## ABSTRACT

*The present communication deals with concurrent infestation of lice and tick in a peafowl from Cauvery delta region of Tamil Nadu. External examination of the bird revealed presence of six lice and seven tick specimens. The ectoparasites were processed and examined under microscope. The lice and tick specimens were identified as Goniodes pavonis and nymphal stages of Haemaphysalis sp respectively. This is the first study to establish the concurrent infection of Goniodes pavonis and Haemaphysalis sp in peafowl from Cauvery delta region of Tamil Nadu and also first report of Goniodes pavonis in peafowl from India.*

**Keywords:** Peafowl, *Goniodes pavonis*, *Haemaphysalis sp*

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Peacock is recognized for its beauty and holiness in Hindu religion and grouped under the order Galliformes in the family Phasianidae. They are prone to various bacterial, viral and parasitic infections (Kathiravan *et al.*, 2017). Parasitic infestation especially ectoparasites which makes itching, irritation, lowered feed intake, retarded

growth, reduced weight gain, decreased egg production in peafowls (Subramanian *et al.*, 2003; Sharma *et al.*, 2020; Yadav *et al.*, 2021). Reports about occurrence of ectoparasites on peafowl are scanty from India (Ponnudurai *et al.*, 2011; Puttalaksmamma *et al.*, 2019). The present communication reports the concurrent infestation of lice and tick on a free ranging peafowl from Tamil Nadu.

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District forest officer from Thanjavur district of Tamil Nadu brought a dead one and half year old male wild peafowl for necropsy at Department of Veterinary Pathology, Veterinary College and Research Institute, Orathanadu, Thanjavur. The bird

met with electric shock and had dog bitten wound. External examination of the bird revealed presence of six lice and seven tick specimens. The ectoparasites were collected and processed in Department of Veterinary Parasitology for identification. Collected lice and ticks were boiled in 5% sodium hydroxide followed by repeated washing in tap water. The arthropods were then treated with ascending grades of alcohol, cleared in carbolic acid and mounted in glass slide with Canada balsam. The mounted arthropods were examined under stereo zoom microscope and identified based on the morphological features given by earlier authors (Ganjali *et al.*, 2015; Nasser *et al.*, 2015; Naz and Rizvi, 2018).

Macroscopic examination of ectoparasites collected from peafowl revealed 6 lice and 7 tick specimens. Lice specimens were observed on the feathers of the head and neck region of the bird. They were identified as *Goniodes pavonis* under microscope. Of the 6 lice specimens collected, from the infested peacock, two adult male (Fig.1), one adult female (Fig.2) and 3 nymphal stage were identified. They are large lice, about 2.7 to 3mm in length. The length of male and female lice is about 2.7 mm and 3mm respectively. The antennal base is enlarged and lobed is the characteristic feature of *Goniodes pavonis* (Fig.3). Anterior margin of male genital opening is prolonged posteriorly and bilobed. This species had been reported for the first time in Indian peafowl from India. Perusal of available literature did not reveal about the occurrence of these lice in pea fowl from India (Sheela *et al.*, 2015). However, *Goniodes*

*pavonis* in Indian peacock was reported earlier from other countries like England (Stewart *et al.*, 1996), Japan (Yoshino *et al.*, 2011), Iran (Ganjali *et al.*, 2015), Saudi Arabia (Nasser *et al.*, 2015) and Pakistan (Naz and Rizvi, 2018). Areas around the eyes and wattles of peacock were attached with ticks. The tick specimens were identified as nymphal stages of *Haemaphysalis* sp. The larval and nymphal stages of *Haemaphysalis* sp ticks are reported to be commonly questing Indian peacock (Hoogstraal and Trapido, 1963). Similar kind of occurrence of *Haemaphysalis* ticks was reported from Tamil Nadu (Ponnudurai *et al.*, 2011) and Karnataka (Puttalaksmamma *et al.*, 2019) in India. Despite these studies, the knowledge of ectoparasites on peafowl in India remains limited. There was no previous targeted research on ectoparasitic infestation of peafowl. We report for the first time *Goniodes pavonis* lice and concurrent infestation of *Haemaphysalis* tick on peafowl in India. Considering that there is limited information available on the louse and tick fauna of peafowl, further investigations are needed to identify and comprise future collection of ectoparasites.

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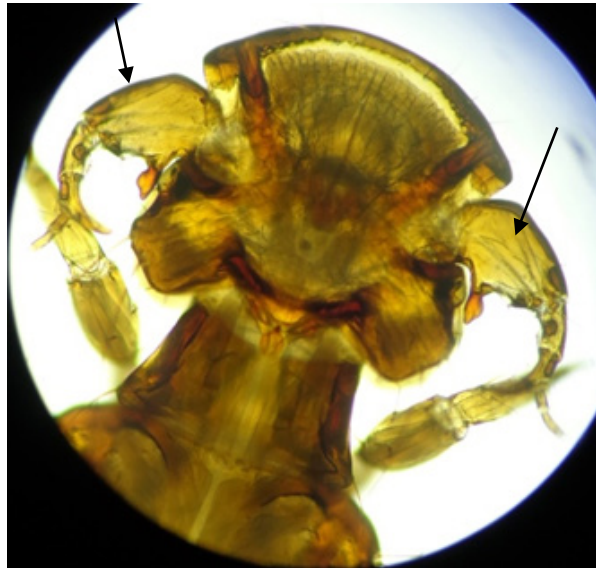
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**Fig. 1.** *Goniodes pavonis* male



**Fig. 2.** *Goniodes pavonis* female



**Fig. 3.** The enlarged and lobed antennal base in the head of *Goniodes pavonis* (arrow)