

First report of *Anatoecus dentatus* in domestic duck (*Anas platyrhynchos domesticus*, Linnaeus, 1788) from Southern India

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ABSTRACT

Parasitic infection is one of the prime causes for morbidity and mortality of ducks in India. Ducks have the habit of wading through the water resources especially paddy fields and feeding on snail which favours occurrence of various parasites. Among the parasites, lice infestation affects growth and productivity of ducks by way of irritation. Lice are well adapted as external parasites and usually are more a nuisance than a threat to their hosts. A nomadic farmer from Mannargudi area of Cauvery delta region of Tamil Nadu, India who had a flock of 1600 ducks reported continuous death of 700 ducks within a period of one month and brought a dead duck to Dept. of Veterinary Pathology for postmortem examination. Examination of entire body of duck prior to necropsy revealed the presence of live lice in the hairs around the junction of beak and head. About 7 lice specimens were collected and brought to Dept. of Veterinary Parasitology for identification. The lice specimens were processed and identified as *Anatoecus dentatus* based on the presence of 'tin opener' shaped effractor in the male genitalia. This is the first report of occurrence of these lice in ducks from Southern India.

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1. Introduction

Duck is one of the indigenous species of poultry, reared traditionally by the poor farmers for their livelihood in India. The distribution and demographic dynamics of duck population revealed that they are concentrated in Eastern, North-eastern and Southern states of the country. Duck farming in India is characterized as nomadic, extensive, seasonal, and is still held in the hands of small and marginal farmers and nomadic tribes. The extensive coast line (4000 km long) with many inland water bodies in several parts of the India offers excellent natural habitat of ducks. As per the livestock census 2007, duck population in India was reported to be 27.43 million constituting 8.52% of total poultry population. The duck population in Tamil Nadu is mostly concentrated in Vellore, Thiruvallur, Villupuram, Kancheepuram, Tirunelveli, Madurai, Thanjavur and Tiruchirappalli districts as these districts are known for paddy cultivation. There are adequate water resources for wading and feeding on snails and fishes by ducks (Gagendran and Karthikeyan, 2011). However, these resources also favour occurrence of parasites in ducks. Among the parasites, lice infestation affects growth and productivity of ducks due to the intense irritation produced by them. Lice are well adapted as external parasites and usually are more a nuisance than a threat to their hosts. The common duck, *Anas platyrhynchos domesticus* (L.) serve as hosts for seven species of lice throughout the world, viz. *Anaticola crassicornis* (Scopoli), *Anatoecus dentatus* (Scopoli), *Anatoecus icteroides* (Nitzsch), *Holomenopon leucoanthum* (Burmeister), *Holomenopon maxbeieri* Eichler, *Holomenopon*

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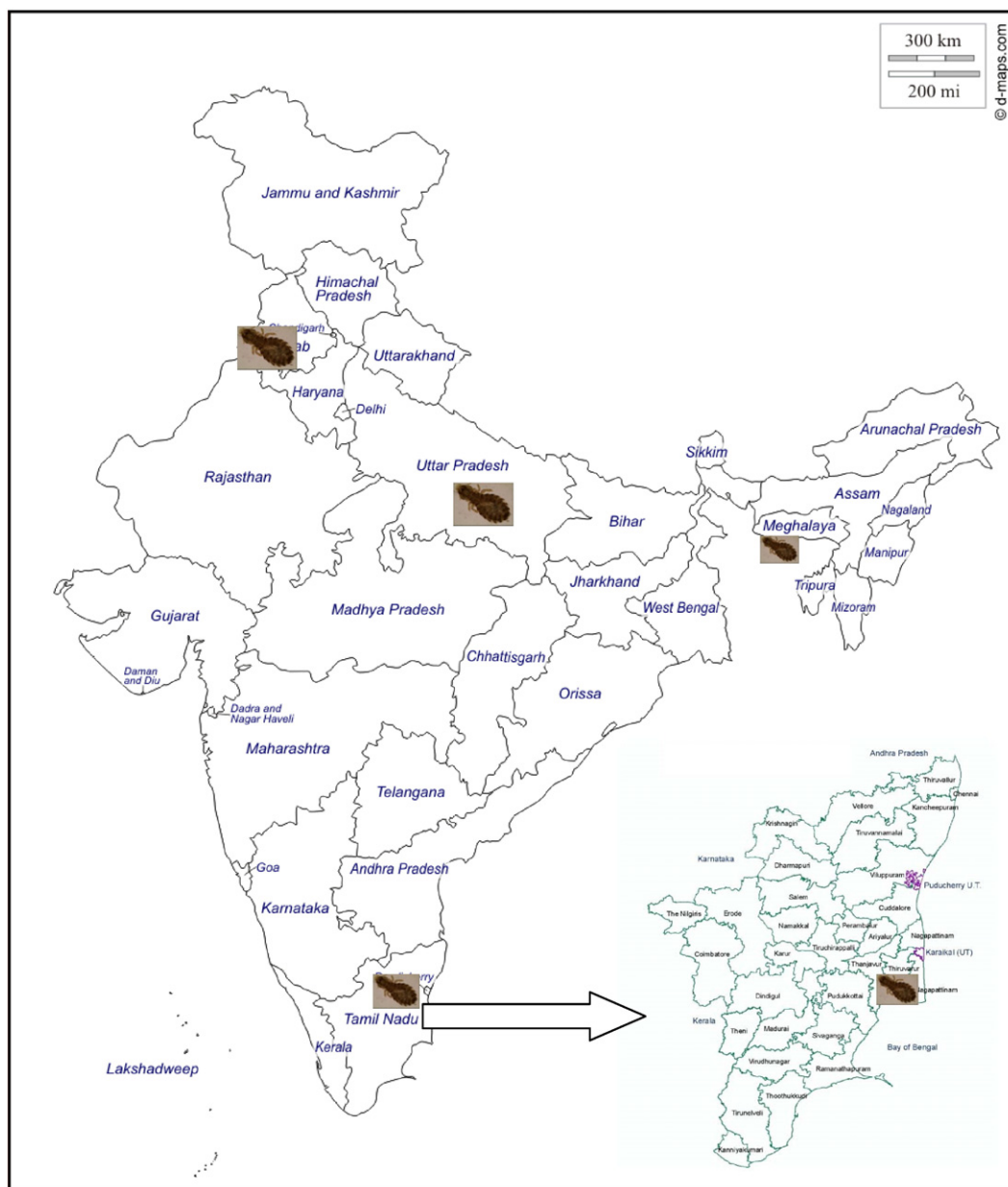


Fig. 1. Geographical occurrence of Duck lice *Anatochus dentatus* from north Indian states like Uttarpradesh, Meghalaya, Punjab and currently in south Indian state Tamil Nadu.

transvaalense (Bedford) and *Trinoton querquedulae* (L.) (Aksin, 2011). Ansari (1947) reported only two species, *A. crassicornis* and *A. dentatus* in *A. platyrhynchos* from Punjab. *A. dentatus* has also been reported from ducks of Meghalaya, India (Rai, 1977). Ahmad et al. (2013) recovered three phthiraptera species, *A. crassicornis*, *A. dentatus* and *H. leucoxanthum* in Bareilly and Rampur district of northern India during 2011–2012 (Fig. 1). However no chewing louse species of the common duck has yet been reported from Southern India (Tandan and Kumar, 1969; Lakshminarayana, 1979; Lakshmanan et al., 2007; Ahmad et al., 2013). Hence the study was envisaged to identify the lice collected from the duck morphologically and know the epidemiological significance in India.

2. Materials and methods

A nomadic duck farmer from Mannargudi area of Cauvery delta region in Tamil Nadu, India had a flock of 1600 ducks. The farmer reported continuous death of 700 ducks within a period of one month after introduction of the ducks in a freshly harvested paddy field for foraging. The farmer brought a one year old dead duck during July, 2013 to Dept. of Veterinary Pathology for postmortem examination to find out the cause of death (Fig. 2a). The duck was placed in a white tray. The entire body of duck

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