

## Lice Infestation in Mithun (*Bos frontalis*) of Nagaland

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Received: 12/10/2014

Revised: 29/10/2014

Accepted: 30/10/2014

### Abstract

Mithun, a semi-domesticated bovine species living in the forests of North-East India is known to share some of the helminths and ticks parasitizing domesticated cattle. The present investigation conducted to ascertain lice infestation in mithun revealed identification of *Linognathus vituli*, a sucking louse of cattle. One male mithun calf out of 53 animals had infestation with this species. Non-detection of other bovine species of lice such as *Damalinia bovis* and *Hematopinus eurysternus* in this forest dwelling animal necessitates further study in a larger group of animals particularly during winter season.

**Key words:** Lice infestation, *Linognathus*, Mithun, Nagaland.

### Introduction

Mithun (*Bos frontalis*) is an important bovine species found in India's hilly North-East region which experiences a cool and tropical rain forest climate. Farmers rear mithun in the forest areas under open grazing condition without any shelter and additional feed. Diseases of semi-domesticated mithun have been reviewed by Rajkhowa *et al.* (2003). So far parasitic diseases are concerned, few reports are available on the occurrence of gastro-intestinal helminths (Rajkhowa *et al.*, 2005; Chamuah *et al.*, 2009) and scanty reports on haemoprotozoa (Das *et al.*, 1999) and on ticks as external parasites (Pathak and Chabra, 2012; Chamuah *et al.*, 2013). Therefore, the present investigation was undertaken to ascertain lice infestation in mithuns.

### Materials and Methods

The study was carried out in the hilly Porba village under Phek district of Nagaland, India. During the month of April, 2014 a total of 53 free ranging mithuns were examined for lice infestation. Entire body surface of the animals irrespective of age and sex was searched for the ectoparasites. Live specimens were collected in glass tubes containing 70% alcohol and thereafter processed in the laboratory by standard procedure using 10% potassium hydroxide solution. Morphological identification of the specimens was done with the help of available keys (Sen and Fletcher, 1962; HMSO, 1979).

### Results and Discussion

During the investigation one male calf was found to have infestation with lice on the ventral surface of the abdomen and inner aspect of thigh. All the collected specimens grossly looked similar in appearance. Morphological features of the specimens observed under microscope were elongated body with eyeless pointed head, 5-segmented antennae, membranous hollow and hairy abdomen, 1 pair of spiracle dorsally on the mesothoracic region of fused thorax, first pair of legs smallest, tarsi with single claw, presence of thumb-like tibial pad and 6 pairs of abdominal spiracles without any paratergal plate.

Morphological findings agreed to the description of sucking louse, *Linognathus* (Sen and Fletcher, 1962; HMSO, 1979; Soulsby, 1986) and at species level it was presumptively identified as *Linognathus vituli* (Fig 1-2).



Fig 1: Anterior portion of *Linognathus vituli*