

IXODIDAE (ACARINA : METASTIGMATA)

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INTRODUCTION

Ixodid ticks are important from economic point of view as most of these ticks are known as carrier of diseases in man and domestic animals. The first attempt to study the ixodid tick fauna of Arunachal Pradesh was made by Nuttall and Warburton (1915). Later through the works of Sharif (1928), Dhanda and Rao (1964), Hoogstraal *et al.* (1970) and De and Gupta (1978) a total number of sixteen species belonging to seven genera were reported from Kameng, Lohit, Siang and Subansiri districts of Arunachal Pradesh.

The present collection is represented by ten species belonging to five genera, of these three species under two genera are reported here for the first time from Arunachal Pradesh and others are the first record from Tirap district. In addition to the economic importance, the data on the recorded hosts and distribution of the species in India are included here. All the collections are deposited in the National Collections of Zoological Survey of India, Calcutta.

1. *Amblyomma testudinarium* Koch, 1844

Material examined : 1 ♀, 2 ♂♂, Arunachal Pradesh, Gibbon's land, 16 kms east of Miao, Tirap district, from unknown host, 20.xii. 1982, coll. S. Biswas.

Hosts in India : Buffalo, bullock, cattle, mithan (a wild bovine), goat, dog, deer, tapir, rhinoceros, horse, wild bear, wild pig (*Sus cristatus*), tiger, tree shrew (*Tupaia glis versurae*), red jungle fowl (*Gallus gallus*), man, vegetation.

Distribution in India : Arunachal Pradesh, Assam, Karnataka, Maharashtra, Orissa, Sikkim, West Bengal.

Remarks : The species was reported for the first time from Kameng, Siang, Subansiri and Lohit districts of Arunachal Pradesh by

Dhanda and Rao (1964). Krijgsman and Ponto (1932) stated that *A. testudinarium* transmits piroplasmosis and anaplasmosis. Sharif (1938) also considered this species as a vector of diseases.

2. *Aponomma pattoni* Neumann, 1910

Material examined : 4 ♀ ♀ , Arunachal Pradesh, Miao, Tirap district from unknown host, 2.xii. 1982, coll. *S. Biswas* ; 4 ♀ ♀ , Arunachal Pradesh, Zero camp, 30 kms north-east of Miao, Tirap district, from sambar, 15.xii. 1982, coll. *S. Biswas*.

Hosts in India : Reptiles, sambar.

Distribution in India : Arunachal Pradesh, Tamilnadu.

Remarks : The species is reported here for the first time from Arunachal Pradesh. The chief hosts are reptiles of different types. But the present collection data shows that few specimens were collected from dead sambar so it is assumed that the sambar was killed by snake. This species is not much important from economic aspect.

3. *Boophilus microplus* (Canestrini, 1887)

Material examined : 6 ♀ ♀ , Arunachal Pradesh, Miao, Tirap district, from unknown host, 5.xii.1982, coll. *S. Biswas*.

Hosts in India : Buffalo, cattle, goat, horse, mithan, sheep.

Distribution in India : Almost all the states.

Remarks : *B. microplus* was previously reported from Arunachal Pradesh by Dhanda and Rao (1964). This tick species is known to transmit the disease producing organisms such as *Coxiella burnetti*, *Babesia* sp., *Theileria* sp., *Borrelia* spp., *Anoplasma* sp. and *Haematoxenus veliferus* to cattle.

4. *Haemaphysalis (Alloceraea) aponommoides* Warburton, 1913

Material examined : 2 ♂ ♂ , Arunachal Pradesh, Zero camp, 30 kms north-east of Miao, Tirap district, from sambar, 15.xii.1982, coll. *S. Biswas*.

Hosts in India : Cattle, horse, man, vegetation.

Distribution in India : Arunachal Pradesh, Sikkim, West Bengal.

Remarks : Dhanda and Rao (1964) recorded this species for the first time from Kameng district of Arunachal Pradesh. Hoogstraal

(1967) reported that biting and crawling on man by this species cause Himalayan haemorrhagic infection.

5. **Haemaphysalis (Haemaphysalis) birmaniae** Supino, 1897

Material examined : 5 ♀ ♀ , 2 ♂ ♂ , Arunachal Pradesh, Zero camp, 30 kms north-east of Miao, Tirap district, from sambar, 15.xii.1982, coll. S. Biswas ; 1 ♀ , 1 ♂ , Arunachal Pradesh, Gibbon's land, 15 kms east of Miao, Tirap district, from unknown host, 20.xii.1982, coll. S. Biswas.

Hosts in India : Antelope, Indian muntjac, chital, domestic zhum, serow, goral, cow, man.

Distribution in India : Arunachal Pradesh, West Bengal.

Remarks : The first record of this species from India was made by Dhanda and Rao (1964) and the specimens were collected from Lohit district of Arunachal Pradesh. The economic importance of this species is not much known.

6. **Haemaphysalis (Kaiseriana) bispinosa** Neumann, 1897

Material examined : 1 ♀ , Arunachal Pradesh, Gibbon's land, 16 kms east of Miao, Tirap district, from cow, 19.xii.1982, coll. S. Biswas.

Hosts in India : Buffalo, cattle, goat, spotted deer, donkey, pony, horse, sheep, dog, tiger, cat, monkey.

Distribution in India : Almost all states.

Remarks : Dhanda and Rao (1964) reported this species for the first time from Kameng, Lohit, Siang and Subansiri districts of Arunachal Pradesh. This common species is a carrier of KFD virus and important pest of domestic animals.

7 **Haemaphysalis (Kaiseriana) cornigera shimoga** Trapido and Hoogstraal, 1964

Material examined : 4 ♂ ♂ , Arunachal Pradesh, Zero camp, 30 kms north-east of Miao, Tirap district, from sambar, 15.xii.1982. coll. S. Biswas.

Hosts in India : Bison, cattle, sambar deer, vegetation.

Distribution in India : Arunachal Pradesh, Karnataka, Kerala, Meghalaya.

Remarks : This species is reported here for the first time from Arunachal Pradesh. This species is recognized as the vector of KFD virus.

8. *Haemaphysalis (Kaiseriana) davisii* Hoogstraal, Dhanda and Bhat, 1970

Material examined : 66 ♀ ♀, 14 ♂ ♂, 10 NN, Arunachal Pradesh, Zero camp, 30 kms north-east of Miao, Tirap district, from sambar, 15.xii.1982, coll. S. Biswas.

Hosts in India : Cattle, goat, horse, mule, sheep, sambar, deer, barking deer, gour, hog hadger, tiger.

Distribution in India : Arunachal Pradesh, Sikkim.

Remarks : *H (K) davisii* was first recorded from Arunachal Pradesh by Hoogstraal *et al.* (1970) and this species is very common in different districts of this state. Economically this species is less important.

9. *Haemaphysalis (Kaiseriana) spinigera* Neumann, 1897

Material examined : 1 N, Arunachal Pradesh, Gibbon's land, 16 kms east of Miao, Tirap district, from rat, 28.xii.1982, coll. S. Biswas.

Hosts in India : Crow-pheasant, jungle babbler, red-vented bulbul, almost all mammals.

Distribution in India : Andaman and Nicobar islands, Andhra Pradesh, Arunachal Pradesh, Foot hills of central and eastern himalayan region, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamilnadu, West Bengal.

Remarks : This species is reported here for the first time from Arunachal Pradesh. It is mostly a forest inhabiting tick and carries KFD virus which causes deadly disease in birds and mammals.

10. *Hyalomma marginatum isaaci* Sharif, 1928

Material examined : 1 N, Arunachal Pradesh, Empen village, 15 kms east of Miao, Tirap district, from wild rabbit, 16.xii.1982, coll. S. Biswas.

Hosts in India : Migratory birds, buffalo, domestic cattle, goat, sheep, hare, dog, horse, camel, man.

Distribution in India : Andhra Pradesh, Arunachal Pradesh, Bihar, Gujarat, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Tamilnadu, Uttar Pradesh, West Bengal.

Remarks : Dhanda and Rao (1964) collected one nymph of this tick species from horse and that was the first report of *H. marginatum isaaci* from Arunachal Pradesh (Kameng district). It is thus reported here for the second time from the state. This species has got medical and veterinary importance as pest and vector of diseases. Grobov (1946) isolated the Crimean haemorrhagic fever virus from the nymphs of this species.

SUMMARY

Ixodid tick fauna represented by ten species in this communication are the first record from Tirap district and among these two genera and three species are new to Arunachal Pradesh.

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