

AMBLYOMMA JAVANENSE (SUPINO, 1897) FROM A NEW HOST, MANIS
CRASSICAUDATA GRAY TOGETHER WITH A DESCRIPTION OF
ITS NYMPH FROM GOA, INDIA.

N. C. NANDI

Zoological Survey of India, Calcutta

ABSTRACT

Occurrence of an ixodid tick, *Amblyomma javanense* (Supino, 1897) is recorded herein for the first time from the Indian Pangolin, *Manis crassicaudata* Gray from Molem, Goa along with the description of nymph, hitherto unknown for this species.

On December 21, 1973, one male and one nymph of *Amblyomma* tick were collected on careful examination of the skin of the Indian Pangolin, *Manis crassicaudata* Gray from Molem, Goa, shot dead on December 12, 1973. The specimens were identified as *Amblyomma javanense* (Supino, 1897) and were subsequently confirmed by Dr. Vijai Dhanda of Virus Research Centre, Poona, who also suggested describing the nymph stage for this species. Incidentally, this constitutes the first record of this species from Goa and from a new host, *Manis crassicaudata*. The nymph of *A. javanense* is hereunder described for the first time.

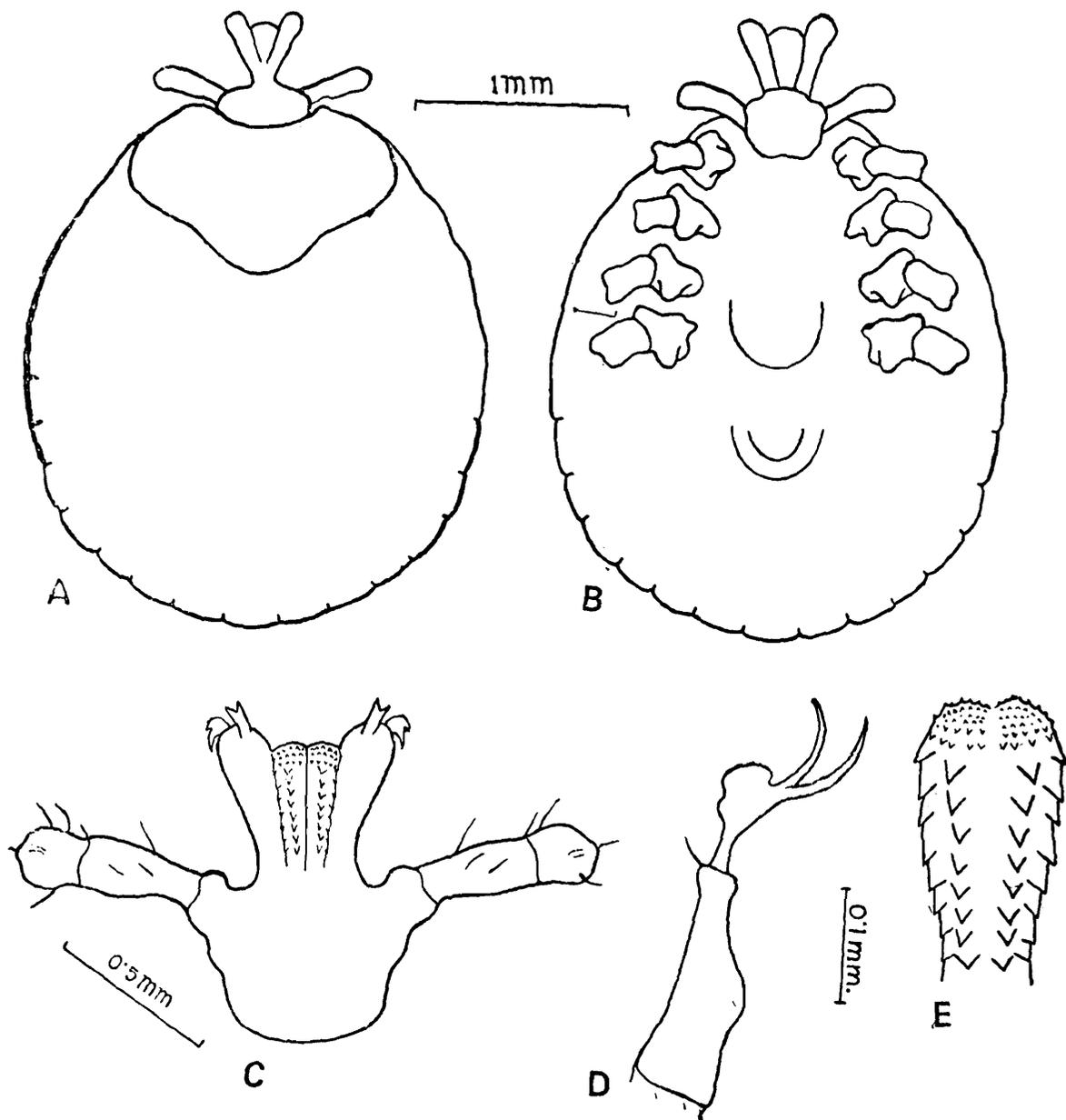
The specimens were found dead sticking to the fold of the fore-leg when collected. Measurements were made in millimeters and were taken at the longest or widest points. Illustrations of the nymph were made from unengorged, unmounted alcohol-preserved specimen, with the help of a camera-lucida.

Description Of The Nymph ; (Figs. 1A—E

Body subcircular measuring 1.5 in length and 2.1 in width (an unengorged specimen).

Capitulum : *Basis capitulum* dorsally more than twice as wide as long, .475 × .450 ; lateral margins convex and converging anteriorly ; posterior margin straight. *Basis capitulum* ventrally subrectangular, lateral margins slightly converging posteriorly. *Palps* slender, 0.48 long ; segment 2 less than twice that of 3. Segment 2 with two supra-internal and one infrainternal setae. Segment 3 with two suprainternal and two infrainternal setae, *Hypostome* long, narrow ; cornu moderate ; dental formula 2/2 ; eight denticles in each file, 4 strong teeth and 4 scale-like teeth. *Cheliceral articles* two ; inner one with 3 small cusps, outer one with 2 large cusps.

Scutum : Subcordiform, reddish brown, broadest in the anterior half ; length (including scapulae) 0.80, slightly greater than two-third width 1.10, widest at the level of coxae II ; lateral margins subparallel



Figs. 1. *Amblyomma javanense* (Supino, 1807), nymph off *Manis crassicaudata* from Goa :
 A & B. Dorsal and ventral views of nymph. C. Ventral view of capitulum.
 D. Tarsi of nymph. E. Hypostome of nymph.

converging anteriorly and also somewhat convergent posteriorly ; posterior margin convex. Cervical grooves short, distinct and slightly narrower posteriorly ; outer margins slightly convex, extending more than one-fourth the length of the scutum. Eyes flat, non-orbital situated at the level of 1st coxae along the anterior outer margins of the cervical grooves.

Dorsum : Middle yellowish, near margins reddish brown and margins pale yellow. Striations fine and almost at regular space of 0.01-0.015, including festoons, like a spider-web. Punctations numerous, small and moderate, scattered almost evenly over the dorsum. Festoons wide 0.23, 13 in number, well marked.

Venter : Yellowish with fine superficial

striations as in the dorsum. Anal aperture 0.91 from the posterior end of the body ; anal groove rounded. *Spiracular plate* indistinct.

Legs : Coxa I with two short subequal spurs ; Coxae II to IV each with a single short triangular spur, the spur at the coxa IV relatively larger. *Claws* well developed, 0.09 long. *Pulvilli* small 0.04, less than half the length of the claw.

Brief Description of The Male :

Body yellow-brown in colour measuring 5.6 in length and 4.1 in width (at the level of 1st of festoon) and with no hairs at the margins. *Basis capitulum* dorsally (0.5×0.9) a little less than twice as wide as long ; lateral margins convex, anteriorly covering to a broadly rounded apex, and subparallel posteriorly ; posterior margin nearly straight. *Basis capitulum* ventrally subrectangular, outer posterior angles rounded ; lateral margins anteriorly forming angles with the straight anterior margin. Dorsal and ventral ridge straight, ventral ridge reaches upto anus. *Palps* (1.05×0.30) club-shaped, more than thrice as long as wide. Segment 2 (0.6×0.22) with 3 setae on both supra-external and infra-external margins. Segment 3 slightly longer than wide. Hypostome with 3/3 rows of teeth, 7 strong teeth in each row followed posteriorly by 4/4 unequal rows of scale-like teeth. Scutum inornate ; venter punctate, broadest at the level of 1st festoon. Anal groove rounded ; anal aperture at the level of 1st festoon ; genital aperture at the level of 2nd coxae. Two short, subequal, broadly rounded spurs at the 1st coxae ; 2nd and 3rd coxae with one flat short spur ; 4th coxae with one distinct blunt spur, slightly longer than those of 2nd and 3rd coxae.

Remarks : Ixodid ticks belonging to the

genus *Amblyomma* Koch, 1844 are represented by more than 100 species all over world (Robinson, 1926 ; Rao *et al.*, 1964). While there are only nine species viz., *Amblyomma clypeolatum* Neumann, 1899 ; *A. habraeum* Koch, 1844 ; *A. helvolum* Koch, 1844 ; *A. integrum* Karsch, 1879 ; *A. javanense* (Supino, 1897) (previously referred to as *A. sublaeve*) ; *A. mudaliari* Rao, Hiregauder and Alwar, 1964 ; *A. nitidum* Hirst and Hirst, 1910 ; *A. supinoi* Neumann, 1905 and *A. testudinarium* Koch, 1844 occurring in India (Jagannath *et al.*, 1973). *Amblyomma crenatum* Neumann, 1899, though mentioned by Patton and Cragg (1913) and Rao *et al.*, 1964 as occurring in South India, considered by Robinson (1926) as an African species off Rhinoceros. This species has not been encountered from Madras State so far (Alwar. 1960).

Of the nine species of *Amblyomma* occurring in India, *A. javanense* and three other species viz., *A. integrum*, *A. mudaliari* and *A. testudinarium* are known sometimes to attack domestic animals (Rao *et al.*, 1964). Sharif (1928) in his revision of the Indian Ixodidae, had reported the occurrence of *A. sublaeve*, now synonymised with *A. javanense*, from various hosts viz., *Nicoria tricarinata*, *Vesperugo abranus*, including *Manis pentadactyla*, from Calcutta Zoological Gardens and *Manis* sp. from Nagpur of Central Province, now in Maharashtra State.

From a perusal of literature it has been revealed that the immature stages of *Amblyomma integrum*, *A. nitidum* and *A. testudinarium* are known so far as the Indian species of *Amblyomma* are concerned. The present author enjoys the privilege of describing the nymph stage for the fourth Indian species. *A. javanense*, from Goa.

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