

A NEW SPECIES OF THE GENUS *LASIOSEIUS* BERLESE (ACARI : GAMASIDA : ASCIDAE) FROM INDIA

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INTRODUCTION

The members of the genus *Lasioseius* form a dominant group among the free-living ascid mites in India. The genus *Lasioseius* was proposed by Berlese in 1916 for *Lasioseius muricatus* (Koch, 1839). Literature studies reveal the presence of nearly one hundred species of *Lasioseius* all over the world. Bhattacharyya *et al.* (2000) reported the presence of eight species of *Lasioseius* in the Indian region. In the present paper the authors are going to describe a new species, *Lasioseius annandalei*. The holotype and the paratype are deposited in the National Zoological Collection, Zoological Survey of India, Calcutta.

Soil samples were brought to the laboratory in the polythene bags, and the mites were extracted by using modified Tullgren apparatus. The specimens were preserved in 70% ethanol, cleared in lactic acid, and mounted in Hoyer's medium.

Lasioseius annandalei sp. nov.

Female : Dorsal shield reticulated over entire surface, longer (395.61 μ) than wide (276.07 μ), with twenty-three pairs of faintly serrated setae (Fig. 1); anterior region with eleven pairs of setae, r2 absent, j1 and r3 measuring 34.15 μ and 54.07 μ respectively; posterior region with twelve pairs of setae, J-series incomplete, with only three pairs of setae; length of J-series setae shorter than their distances between their bases; setae J5 (17.07 μ) and Z5 (76.84 μ) are respectively the shortest and longest setae of all dorsal setae; Z4 and S5 subequal in length (71 μ); four pairs of short, simple marginal setae arise from the body margin; peritreme visible dorsally extending beyond setae j1.

Tritosternum well-developed, lacinae pilose only at anterior region (Fig. 2); pre-sternal area lineated; sternal shield reticulated, 82.53 μ long along its midline, 130.92 μ wide between two anterolateral corners, with three pairs of subequal sternal setae; anteromedian margin of sternal shield wavy, anterolateral portion slightly extended anteriorly, posterior margin highly concave; fourth pair of sternal setae on metasternal shield. Genital shield truncate posteriorly, narrowing

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anteriorly, with a pair of genital setae on its lateral margin. Ventri-anal shield (162.2 μ long, 210.6 μ wide at their widest point) reticulated, with five pairs of pre-anal setae excluding a pair of para- and a post-anal setae, posterior end forming a cribrum; ventral membrane with five pairs of setae around ventri-anal shield, largest one serrated in nature. Paired conspicuous metapodal shields present along lateral margin. Remnants of free endopodal shields present between coxae III and IV. Peritrematal shield wide, extending upto posterior level of coxa II; peritreme long, narrow, extending from stigma to level of paravertical setae; stigma situated at level of anterior half of coxa IV.

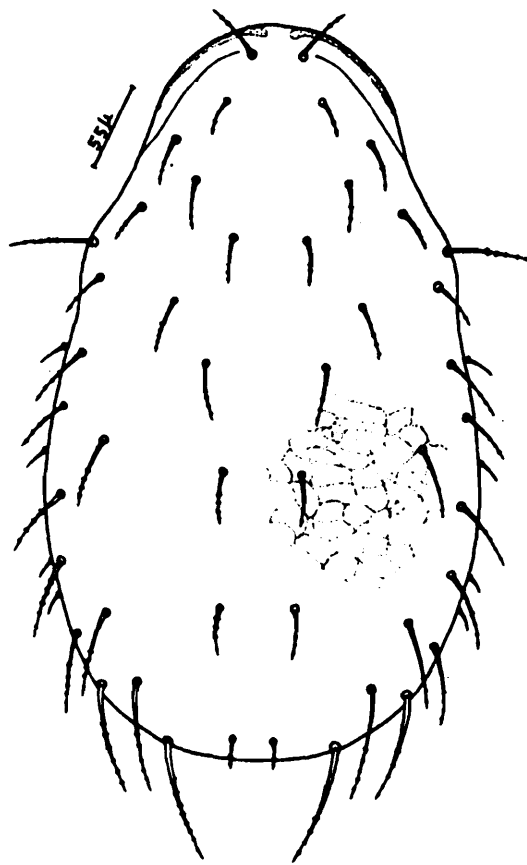
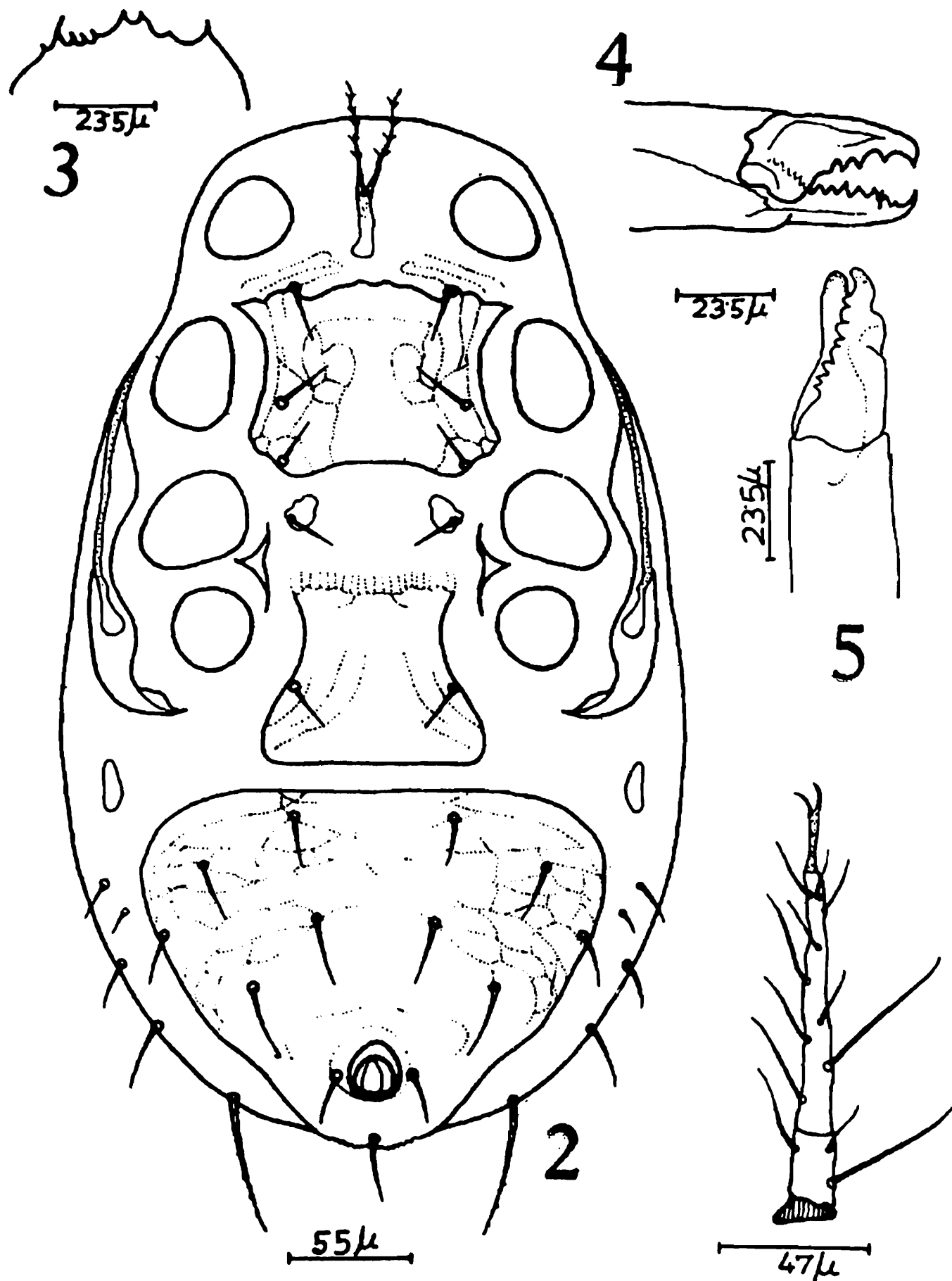


Fig. 1. *Lasioseius annandalei* sp. nov., female. 1. Dorsum.

Tectum basically trispinate, median projection bifurcate, several denticulate ridges present (Fig. 3). Pedipalp five-segmented, specialised setae on palpal tarsus two-tined. Six rows of deutosternal denticles present in the capitular groove, anterior four rows and sixth row narrow with few denticles, fifth row widened with 6–9 teeth. Corniculi normal, internal malae extending beyond tips of corniculi. Chelicera dentate, movable digit with four teeth, distal tooth smaller than others; fixed digit with a distinctive set of teeth of unequal size, setiform pilus dentilis at its proximal end (Figs. 4 & 5).

All legs with ambulacra and claws; chaetotaxy of legs I-II-III-IV : genua 13-11-9-9, tibiae 13-10-8-9; leg II and leg III subequal in length, *i.e.*, 358.9 μ and 362.6 μ respectively, leg IV (492.1 μ) longer than leg I (451.9 μ); tarsus IV with paired macrosetae laterally (Fig. 6).



Figs. 2-5. *Lasioseius annandalei* sp. nov., female. 2. Venter, 3. Tectum, 4. Chelicera, axial view, 5. Chelicera, lateral view.

Male : Unknown.

Material Examined : Holotype female, Gulmarg, Jammu and Kashmir; ex. soil with moss; 6.xi.1997; S. K. Bhattacharyya coll. One paratype female, Gulmarg, Jammu and Kashmir; ex. pine leaf litter; 6.xi.1997; S. K. Bhattacharyya coll.

Differential Diagnosis : *Lasioseius lasiodactyli* Ishikawa, 1969 shows some similarities with the new species, *Lasioseius annandalei* in the following characteristics : twenty-three pairs of serrated dorsal setae, number and nature of setae of J-series, reticulation of dorsal shield, shape of endopodal shield, tritosternum and tectum, length of internal malae and peritreme. However, the new species differs from its related species in the following combinations : subequal length of Z1 and S2, number of setae on ventral membrane and ventri-anal shield, shape of metasternal shield, absence of exopodal shield and components of metapodal shield.

Etymology : The species is named after Dr. T. A. Annandale, the founder-director of the Zoological Survey of India.

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