

# THREE NEW SPECIES AND SOME NEW RECORDS OF THE GENUS *GAMASELLODES* ATHIAS-HENRIOT (ACARINA : ASCIDAE) FROM INDIA

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MESOSTIGMATA  
ASCIDAE  
*GAMASELLODES*  
INDIA

**SUMMARY:** The present paper deals with eight species of *Gamasellodes*. Three new species viz., *G. islandicus*, *G. spinosus* and *G. sternalis* are described and illustrated along with their affinities. Four other species viz., *G. americanus* (Garman, 1948), *G. garmani* Hurlbutt, 1970, *G. insignis* (Hirschmann, 1962) and *G. vulgator* Athias-Henriot, 1961 are recorded from India for the first time. *G. bicolor* (Berlese, 1918) is recorded from a new locality. A key to differentiate the above eight species has been included.

MESOSTIGMATA  
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INDE

**RÉSUMÉ :** Huit espèces de *Gamasellodes* ont été récoltées en Inde dont trois sont nouvelles pour la science (*G. islandicus*, *G. spinosus* et *G. sternalis*). Quatre autres sont signalées pour la première fois de l'Inde : *G. americanus* (Garman, 1948), *G. garmani* Hurlbutt, 1970, *G. insignis* (Hirschmann, 1962) et *G. vulgator* Athias-Henriot, 1961. *G. bicolor* (Berlese, 1918) est signalé d'une nouvelle localité. Une clé d'identification de ces huit espèces est fournie.

The origin of the genus *Gamasellodes* dates back to the year 1961 when ATHIAS-HENRIOT established the genus, with a new species, *G. vulgator* as its type-species. The species of the genus are commonly encountered in the decomposed soil of forest and grassland. Available records also indicate their insect (LINDQUIST, 1971) and nest associated (COSTA, 1961; BAKER *et al.*, 1976; KOYUMDJIEVA, 1981) habit.

Besides above workers, several acarologists (HIRSCHMANN, 1962; BERNHARD, 1963; HALLIDAY *et al.*, 1998; HURLBUTT, 1967, 1970, 1972; ISHIKAWA, 1976; JORDAAN, 1988; WALTER, 1987 etc.) also enriched the knowledge of *Gamasellodes* mites.

The genus is estimated to have a global strength of around fourteen described species. India harbors a diverse type of ecosystems, yet our knowledge of the genus is remarkably poorly known. In India the genus is known by only a single species. BHATTACHARYYA (1978) re-described and illustrated *G. bicolor* (Berlese) from West Bengal. PRAMANIK & RAYCHAUDHURY (1978) again reported this species from the same state which is incidentally the second report of the species. In view of its poor taxonomic information it is therefore timely to assess the state of knowledge of the genus in this country.

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## MATERIAL AND METHODS

Soil and litter samples were immediately extracted with the help of Berlese-Tullgren dry funnel extraction apparatus. The mites were prepared for study following the methods of EVANS (1992). Stage-calibrated eyepiece micrometers were used for measurements (in micrometers). Type-specimens were mounted individually in Hoyer's medium and sealed with good quality nail-polish.

Setal nomenclature of LINDQUIST & EVANS (1965) is used here. In the following description, the species are arranged alphabetically and distribution of each species is given statewise.

The specimens including types are deposited in the National Zoological Collection, Zoological Survey of India, Calcutta.

### Identification key of genus *Gamasellodes* (Indian species, based on the females)

1. Podonotal shield with 15 pairs of setae..... *insignis* (Hirschmann)
- Podonotal shield with more than 15 pairs of setae... 2
2. Podonotal shield with 16 pairs of setae..... 3
- Podonotal shield with 17 pairs of setae..... *spinus* sp. nov
3. Sternal setae st1 placed on pre-sternal area..... 4
- Sternal setae st1 placed on sternal shield ..... 5
4. Pre-sternal area with median groove, ventri-anal shield smooth posteriorly; peritreme extending beyond setae z1..... *islandicus* sp. nov.
- Pre-sternal area without any median groove; ventri-anal shield punctate posteriorly; peritreme not extending beyond setae z1 ..... *americanus* (Garman)
5. Tectum biramous ..... *sternalis* sp. nov
- Tectum triramous ..... 6
6. Movable chela unidentate ..... *bicolor* (Berlese)
- Movable chela bidentate..... 7
7. Genital shield punctate posteriorly; metapodal shield slender in shape ..... *vulgatior* Athias-Henriot
- Genital shield smooth posteriorly; metapodal shield ovoid in shape..... *garmani* Hurlbutt

## DESCRIPTION OF TAXA

### *Gamasellodes americanus* (Garman, 1948)

1948. *Gamasellodes (bicolor) americanus* Garman, *Bull. Conn. Agric. Expt. Stat.*, **520** : 9.

1970. *Gamasellodes americanus* Hurlbutt, *Acarologia*, **12**(3) : 475.

**FEMALE** : Dorsal shield collectively 325  $\mu$ m long, 180  $\mu$ m wide, anterior dorsal shield with sixteen pairs of setae; posterior dorsal shield with fifteen pairs of setae; Z5 largest of all setae. Peritreme extending anteriorly to posterior margin of coxa I.

Sternal shield truncate anteriorly, concave posteriorly with two pairs of setae, first pair of sternal setae on pre-sternal area. Ventri-anal shield punctate upto mid-region of shield posteriorly, with eleven setae; ventral membrane around ventri-anal shield with seven pairs of setae; metapodal shield slender in shape.

Tectum triramous, movable chela bidentate, fixed chela with a set of teeth of irregular size.

Leg setation normal for the genus (LINDQUIST & EVANS, 1965), *i.e.*, femora : 12-10-6-6; genua : 13-11-8-9, and tibiae : 13-10-8-10.

**MALE** : Unknown.

**MATERIAL EXAMINED** : Four females, Port Blair, Andaman and Nicobar Islands; ex. grass and soil; 24 January 1973; S.K. GUPTA. Two females, Crocodile Rearing Farm, Sasan Gir, Gujarat; ex. soil; 22 September 1997; A.K. BHATTACHARYYA .

**DISTRIBUTION** : INDIA : Andaman and Nicobar Islands, Gujarat. Other record: U.S.A.

**REMARKS** : The species is recorded for the first time from India.

### *Gamasellodes bicolor* (Berlese, 1918)

1918. *Gamasellus (Digamasellus) bicolor* Berlese, *Redia*, **13** : 135.

1961. *Gamasellodes major* Athias-Henriot, *Acarologia*, **3** : 486.

1961. *Digamasellus shelasi* Costa, *Ann. Mag. nat. Hist.*, (13) 4 : 486.  
 1962. *Iphidozercon bicolor* Hirschmann, *Acarologie*, 5 : 46.  
 1963. *Leioseius bicolor* Bernhard, *Beitr. Syst. Okol. Mitteleur. Acarina* 2 : 105.  
 1963. *Gamasellodes circuliiformes* Bernhard, *Beitr. Syst. Okol. Mitteleur. Acarina* 2 : 105.  
 1970. *Gamasellodes bicolor* Hurlbutt, *Acarologia*, 12 : 474.  
 1978. *Gamasellodes bicolor*, Bhattacharyya, *Indian J. Acar.*, 2 (2) : 85  
 1978. *Gamasellodes bicolor*, Pramanik & Raychaudhury, *Acarol. Newsl.*, 6 : 5.  
 1998. *Gamasellodes bicolor*, Halliday *et al.*, *Invertebr. Taxon.*, 12 : 21.

**FEMALE** : Anterior dorsal shield 118  $\mu$ m-125  $\mu$ m long, 67  $\mu$ m-88  $\mu$ m wide, with sixteen pairs of setae; posterior dorsal shield 105  $\mu$ m-177  $\mu$ m long, 98  $\mu$ m-105  $\mu$ m wide, with fifteen pairs of setae; both shields ornamented; lateral membrane with eleven pairs of setae. Peritreme visible dorsally, extending slightly beyond setae s1.

Tritosternum biramous, base longer than wide and laciniae pilose. Sternal shield with three pairs of setae; metasternal setae on ventral membrane between coxa III. Genital shield truncate posteriorly, with a pair of genital setae. Four pairs of ventral setae (except a pair of para- and a post-anal setae) lying on ventri-anal shield. Ventral membrane indistinctly striated, with four pairs of setae. Stigma situated at level of coxa IV; peritreme extending in a sinuate line close to ventro-lateral margin of body. Post-stigmatal extension of peritrematal shield partly curving around coxa IV.

Tectum three-tined. Palpal trochanter, femur and genu provided with two, five and six setae respectively; apotole two-tined. Ventrally gnathosoma with four pairs of setae. Each leg with pulvillus and two claws.

**MALE** : Anterior dorsal shield 102  $\mu$ m-107  $\mu$ m long, 79  $\mu$ m-85  $\mu$ m wide and posterior dorsal shield 83  $\mu$ m-88  $\mu$ m long, 72  $\mu$ m-79  $\mu$ m wide, reticulation essentially same as in female. Genital orifice pre-sternal; sterniti-genital shield bearing five pairs of setae. Ventri-anal shield with six pairs of setae (except a pair of para- and a post-anal setae); paired setae situated on finely striated ventral membrane. Stigma, peritreme and peritrematal shield same as in female. Fixed digit of chelicera tridentate, movable digit uni-

dentate with distally free spermatodactyl. Legs similar to those in female.

**MATERIAL EXAMINED** : Three females and one male, Sonarpur, West Bengal; ex. soil near stump of *Acacia arabica* Wild, 15 September 1965, S.K. BHATTACHARYYA. Four females, Agatti Island, Lakshadweep and Minicoy Islands; ex. litter from vegetable field; 10 December 1996; S.K. GUPTA

**DISTRIBUTION** : INDIA : West Bengal, Lakshadweep and Minicoy Islands. Other records : Australia, Austria, Brazil, Canada, Germany, Israel, Italy, South Africa, Spain, U.K., U.S.A.

**REMARKS** : First report from Lakshadweep and Minicoy Islands *i.e.*, occurrence from a new locality. The synonymy list is not intended to provide a complete catalogue, only the important works have been mentioned here.

#### *Gamasellodes garmani* Hurlbutt, 1970

1970. *Gamasellodes garmani* Hurlbutt, *Acarologia*, 12 : 476.

**FEMALE** : Anterior dorsal shield 125  $\mu$ m long, 107  $\mu$ m wide, without any ornamentation, with sixteen pairs of simple setae; posterior dorsal shield 126  $\mu$ m long, 120  $\mu$ m wide, faintly reticulated at posterior region, with fifteen pairs of setae. Lateral membrane with eight pairs of setae. Sternal shield concave posteriorly, with its anterior margin almost truncate; three pairs of sub-equal sternal setae placed on sternal shield; fourth pair of sternal setae on ventral membrane. Genital shield smooth, truncate posteriorly, not widening behind genital setae.

Ventri-anal shield rounded posteriorly, punctate, with four pairs of setae, excluding a pair of para- and a post-anal setae; anal shield small; four pairs of setae present around ventri-anal shield. Paired metapodal shield, small, slender. Peritreme reaching slightly anterior to setae s1. Tectum basically three-tined. Movable chela bidentate, fixed chela with five teeth. Leg chaetotaxy normal for the genus.

**MALE** : Unknown.

**MATERIAL EXAMINED** : Two females, Zoological Survey of India Compound, New Alipore, Calcutta,

West Bengal; ex. soil; 14 June 1996; A.K. BHATTACHARYYA.

DISTRIBUTION: INDIA : West Bengal. Other records : U.S.A.

REMARKS : This is the first report of the species from India.

*Gamasellodes insignis* (Hirschmann, 1962)

1962. *Iphidozercon insignis* Hirschmann, *Acarologie*, 5 : 42.  
1970. *Gamasellodes insignis* Hurlbutt, *Acarologia*, 12(3) : 474.  
1971. *Gamasellodes insignis*, Lindquist, *Can. Ent.*, 103 : 941.

FEMALE : Anterior dorsal shield (173  $\mu$ m long, 90  $\mu$ m wide) with sixteen pairs of simple setae; posterior dorsal shield (189  $\mu$ m long, 98  $\mu$ m wide) punctate, with fifteen pairs of setae.

Sternal shield with three pairs of sternal setae. Genital shield with paired genital setae. Metapodal shield two pairs in number, one smaller than the other. Peritrematal shield short, peritreme small, extending upto anterior portion of coxa II. Ventri-anal shield sparsely punctate posteriorly, with eleven setae; ventral membrane around ventri-anal shield lined. Tectum triramous. Leg setation normal for the genus.

MALE : Unknown.

MATERIAL EXAMINED : Two females, Gulmarg, Jammu and Kashmir; ex. soil with moss; 6 November 1997; S.K. BHATTACHARYYA.

DISTRIBUTION : INDIA : Jammu and Kashmir. Other records : Germany, Israel.

REMARKS : This is the first record of the species from India.

*Gamasellodes islandicus* sp. nov

(FIGS. 1-4)

FEMALE : Dorsal shield completely divided into two shields : anterior dorsal shield 122  $\mu$ m long, 160  $\mu$ m wide, with sixteen pairs of setae; posterior dorsal shield 160  $\mu$ m long, 122  $\mu$ m wide, with fifteen pairs of

setae (FIG. 1); setae j1, Z4, J5, Z5 and S5 are 12  $\mu$ m, 23  $\mu$ m, 10  $\mu$ m, 41  $\mu$ m and 25  $\mu$ m long respectively; lateral membrane with seven pairs of marginal setae, all dorsal setae simple. Peritreme visible dorsally, not extending beyond setae z1 anteriorly.

Base of tritosternum trapezoidal, laciniae slender, pilose. Pre-sternal area sclerotized. Sternal shield (78  $\mu$ m long along midline, 78  $\mu$ m wide between coxae II and III) with two pairs of setae; anterolateral region of sternal shield along with setae st1 extended to form a median groove (FIG. 2); metasternal setae freely placed on ventral membrane, posterior margin of sternal shield gently concave rather than truncate. Genital shield convex posteriorly, narrowing behind genital setae. Ventri-anal shield (98  $\mu$ m long along midline, 131  $\mu$ m wide at widest point) smooth, with four pairs of setae, excluding a pair of para- and a post-anal setae. Remnants of endopodal plates in the form of discontinuous strips present beside coxae III and IV. Peritrematal shield small, pointed posteriorly; stigma situated at level of coxa IV. Metapodal shield two pairs; distribution of scutellae and setae around genital and ventri-anal shield as figured.

Tectum triramous, with three small tines (FIG. 3). Movable cheliceral digit bidentate, fixed digit with six teeth (FIG. 4), seven teeth in a paratype. Deutosternum with four transverse rows of denticles, each with two to five teeth. Apotele of palpal tarsus two-tined; internal malae extending slightly beyond tips of corniculi.

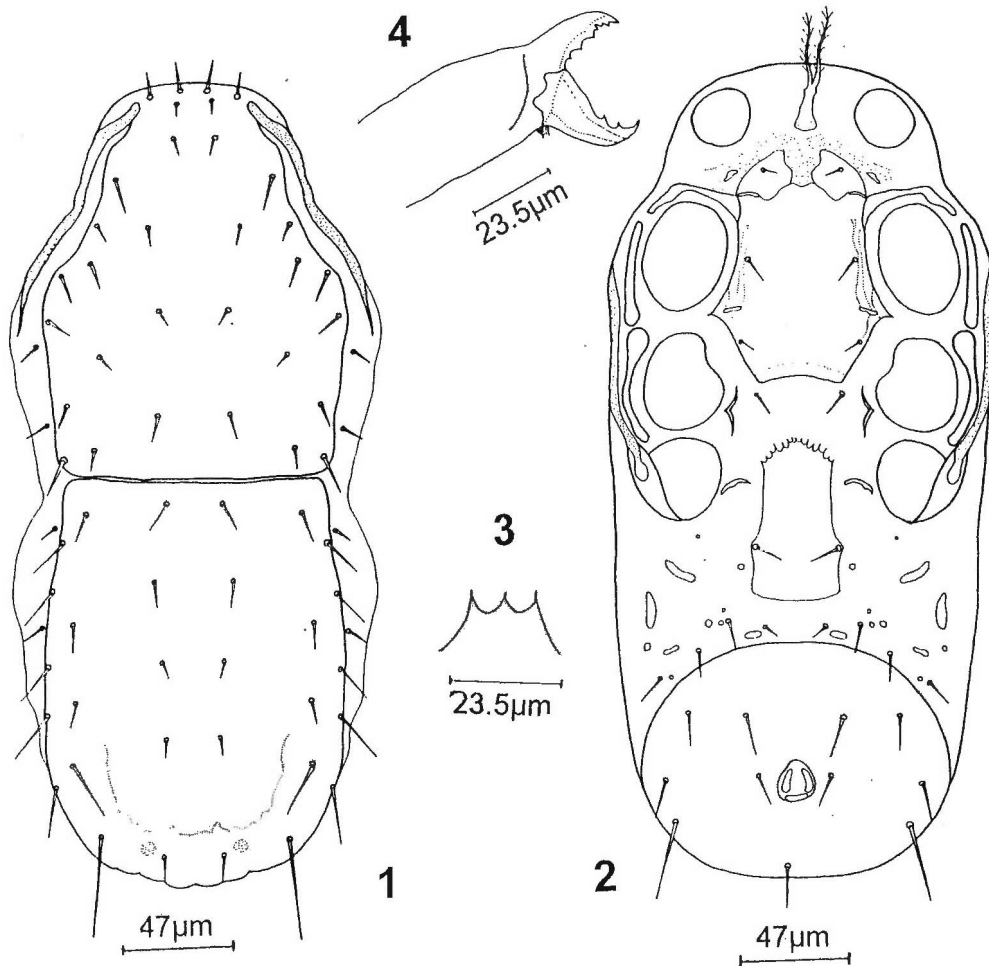
Legs I-IV with paired, well-developed claws; leg chaetotactic formulae normal for the genus; leg I (237  $\mu$ m) and leg IV (215  $\mu$ m) longer than leg II (178  $\mu$ m) and leg III (166  $\mu$ m); tarsus I with paired macrosetae.

MALE : Unknown.

TYPES : Holotype female, Nayachar Island, Haldia, West Bengal; ex. soil around Rest House; 2 February 1997; A.K. BHATTACHARYYA. Paratypes, ten females, data same as for holotype.

DISTRIBUTION : INDIA : West Bengal.

DIFFERENTIAL DIAGNOSIS : *Gamasellodes islandicus* sp. nov. shows striking similarities with its congeneric member, *G. bicolor* (Berlese). Two related species share their similarities in respect of total number of



FIGS. 1-4 : *Gamasellodes islandicus* sp. nov., female. 1. — Dorsal view, 2. — Ventral view, 3. — Tectum, 4. — Chelicera.

setae on podonotal and opisthonotal shield, shape of exopodal shield and presence of endopodal shield. However, the new species differs from its allied species in having non-reticulated dorsum, fewer marginal setae, shorter length of J3 and J4 setae, extended anterolateral corners of sternal shield, four pairs of ventral setae and in the shape of chelicerae and tectum.

ETYMOLOGY : The name *islandicus* alludes to the type-locality, Nayachar Island.

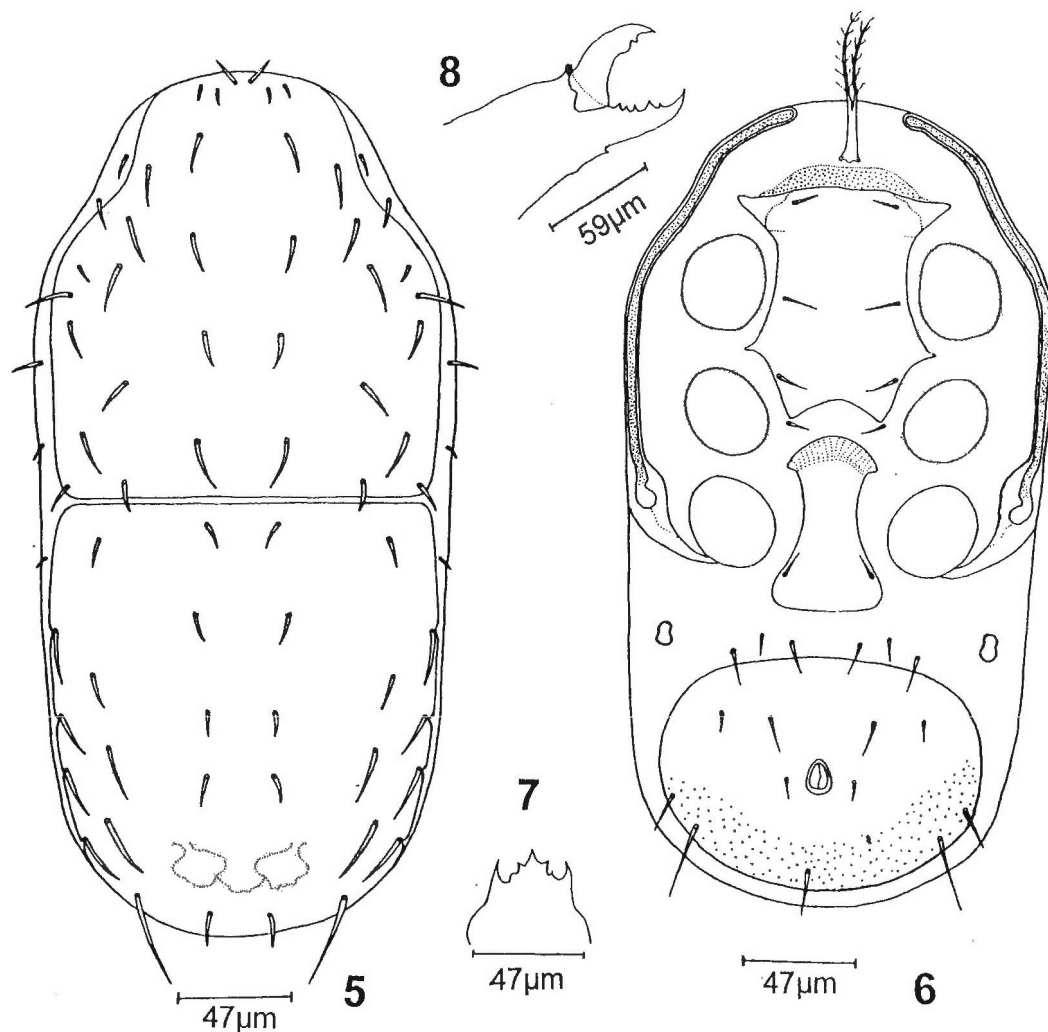
***Gamasellodes spinosus* sp. nov.**

(FIGS. 5-11)

FEMALE : Anterior dorsal shield 146 µm long, 128 µm wide, with seventeen pairs of simple setae;

posterior dorsal shield 160 µm long, 125 µm wide, bearing fourteen pairs of simple setae; lateral membrane with five pairs of marginal setae; characteristic shape of lateral margin of posterior dorsal shield as shown in FIG. 5; setae j1 and Z4 equal in length (14 µm); setae j2, Z5, J5 and S5 are 13 µm, 34 µm, 10 µm and 18 µm in length respectively.

Tritosternum bipartite with pilose laciniae. Pre-sternal area finely granulated; sternal shield (89 µm long, 68 µm wide) with three pairs of setae; setae st2 and st3 almost equal in length; posterior margin of sternal shield highly convex. Metasternal setae placed on ventral membrane. Genital shield rounded anteriorly and truncate posteriorly, with a pair of setae. Ventri-anal shield 92 µm long, 127 µm wide, with four pairs of setae (excluding a pair of para- and a post-anal setae), granulated posteriorly; ventral membrane between genital and ventri-anal shield



FIGS. 5-8 : *Gamasellodes spinosus* sp. nov., female. 5. — Dorsal view, 6. — Ventral view, 7. — Tectum, 8. — Chelicera.

with three pairs of setae. Paired, prominent metapodal plates present. Peritrematal shield tapered posteriorly; stigma at level of anterior region of coxa IV, preitreme extending anteriorly upto coxa I; post-stigmatal extension of peritrematal shield reaching upto coxa IV (FIG. 6).

Tectum basically three-pronged (FIG. 7). Movable digit of chelicera bidentate; dentition of fixed digit as shown in FIG. 8.

Legs I-IV with broadly rounded pulvilli and claws, without any spur.

**MALE:** Anterior dorsal shield 104  $\mu\text{m}$  long, 123  $\mu\text{m}$  wide, with twenty pairs of simple setae; posterior dorsal shield 123  $\mu\text{m}$  long, 133  $\mu\text{m}$  wide, with fifteen pairs of simple setae; paraverticlar setae z1 displaced laterally, j2 displaced anteriorly, s1 on edge of ante-

rior dorsal shield. Lateral membrane with five pairs of marginal setae (FIG. 9).

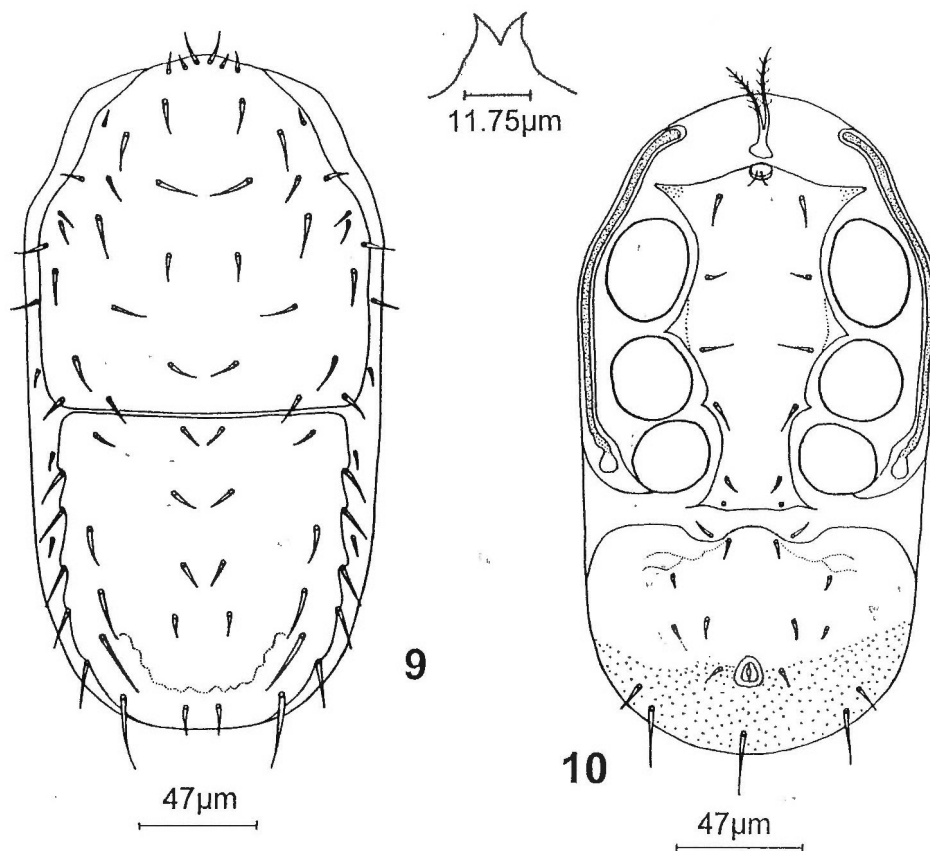
Bipartite tritosternum with wide base; laciniae finely pilose. Male genital aperture on anteromedian margin of sterniti-genital shield (FIG. 10); five pairs of setae on sterniti-genital shield; ventral membrane with a pair of setae between sterniti-genital and ventri-anal shield. Ventri-anal shield with six pairs of setae, excluding a pair of para- and a post-anal setae. Stigma at level of coxae IV; peritreme reaching slightly beyond coxa I.

Tectum two-tined (FIG. 11). Movable cheliceral digit with two teeth and short spermatodactyl; fixed cheliceral digit with six small teeth.

Length of legs I-IV : 205  $\mu\text{m}$ , 157  $\mu\text{m}$ , 144  $\mu\text{m}$  and 183  $\mu\text{m}$  respectively; none of leg setae elongated or



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FIGS. 9-11 : *Gamasellodes spinosus* sp. nov., male. 9. — Dorsal view, 10. — Ventral view, 11. — Tectum.

enlarged as macrosetae; chaetotactic formulae same as in female.

**TYPES :** Holotype female, Burdwan University Campus Agricultural Farm, Burdwan, West Bengal; ex. soil under grass and semi-decomposed creeper; 20 March 1995; A.K. BHATTACHARYYA. Paratypes, one male and one female, data same as for holotype.

**DISTRIBUTION :** INDIA : West Bengal.

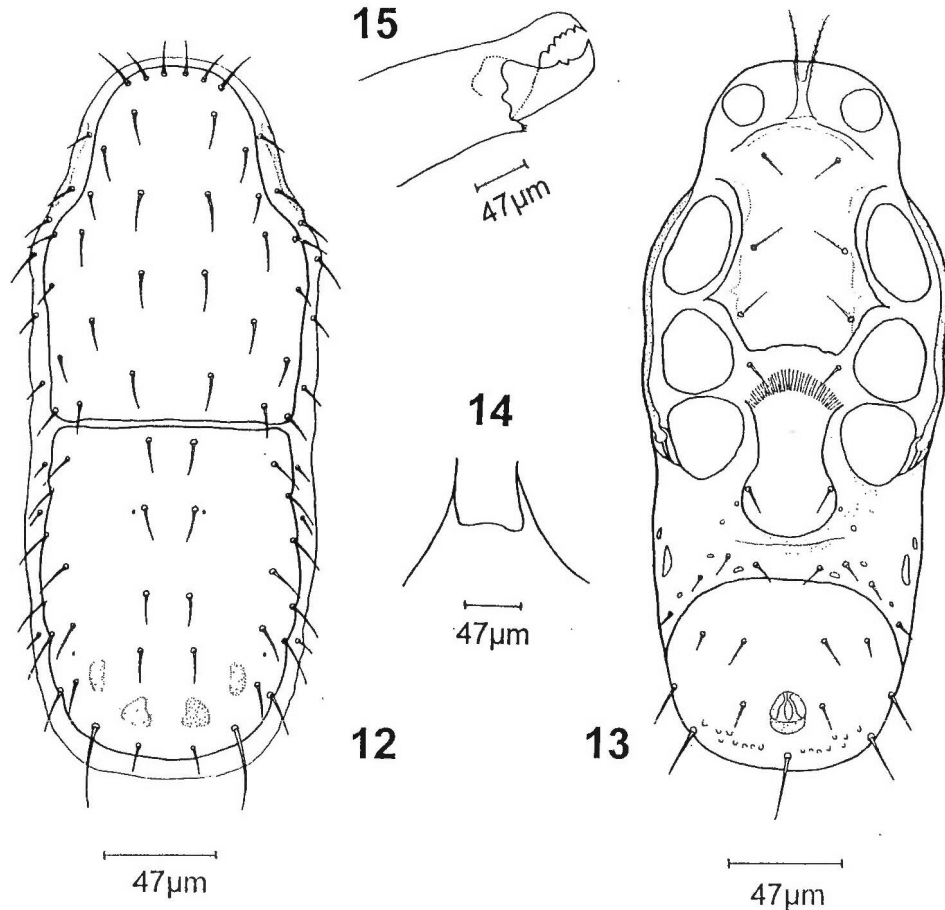
**DIFFERENTIAL DIAGNOSIS :** *Gamasellodes spinosus* sp. nov. shares its similarities with *G. vulgator* Athias-Henriot, in the number of dorsal setae and similar shape of dorsal and peritrematal shield but greatly differs from the latter in the dentition of chelicerae, shape of tectum and sternal shield as well as the structure and disposition of ventri-anal shield.

**ETYMOLOGY :** The species name *spinosus* refers to the spinelike nature of setae.

***Gamasellodes sternalis* sp. nov.**

(FIGS. 12-15)

**FEMALE :** Dorsal shield sclerotized, yellowish, completely divided to form two subequal shields; anterior dorsal shield (146 µm long, 94 µm wide) with sixteen pairs of simple setae; j2 displaced anteriorly to form a transverse line with z1 and j1 (FIG. 12); posterior dorsal shield (141 µm long, 132 µm wide) with fifteen pairs of simple setae; Z5 setae 2.5 times longer than J5 (35 µm); light refractive markings present between J4 and J5 and J4 and Z4. Lateral membrane with nine



FIGS. 12-15 : *Gamasellodes sternalis* sp. nov., female. 12. — Dorsal view, 13. — Ventral view, 14. — Tectum, 15. — Chelicera.

pairs of setae; s1 originating from margin of anterior dorsal shield.

Tritosternum with trapezoidal base and slender pilose laciniae (FIG. 13). Paired small strips present in the pre-sternal area, overlapping the third one. Sternal shield (70  $\mu\text{m}$  long, 70  $\mu\text{m}$  wide between coxae II and III) granulated, lineated along lateral margin, with three pairs of subequal (14  $\mu\text{m}$ ) sternal setae; anterior margin of sternal shield not discernible, posterior margin wavy in nature. Metasternal setae freely placed on ventral membrane. Genital shield rounded posteriorly, with paired genital setae. Ventri-anal shield (78  $\mu\text{m}$  long, 95  $\mu\text{m}$  wide) smooth anteriorly, punctate conspicuously on posterior half and restricted between setae Jv5; post-anal setae slightly longer than paired para-anal setae; anal aperture smaller in size, surrounded by sclerotized anal plates. Ventral membrane lineated, with four paired setae of almost

equal length; membranous fold present behind genital shield. Paired metapodal shields, one smaller than other, present laterally along body margin. Peritrematal shield smaller in size, present only beside coxa IV; peritreme narrow, extending slightly to anterior of setae s1; stigma small, placed beside coxa IV.

Tectum basically biramous, median portion between two tines slightly concave in shape (FIG. 14). Pedipalp five-segmented, palp apotele two-tined. Movable digit of chelicera bidentate, fixed cheliceral digit multidentate (FIG. 15). Six rows of deutosternal denticles present in capitular groove.

Ambulacra and paired claws present terminally on each leg. Leg I (188  $\mu\text{m}$ ) and leg IV (183  $\mu\text{m}$ ) of almost equal length, leg II and leg III about 141  $\mu\text{m}$  and 164  $\mu\text{m}$  in length respectively. Chaetotaxy of genua and tibiae of legs I-II-III-IV as observed : 13-11-8-9 and 13-10-8-10; macrosetae absent.



MALE : Unknown.

TYPES : Holotype female, 3 kms. away from Silver Cascade along Kodaikanal Highway, Kodaikanal, Tamil Nadu; ex. Oak leaf litter; 21 February 1982; S.K. BHATTACHARYYA. Paratype, one female, data same as for holotype.

DISTRIBUTION : INDIA : Tamil Nadu.

DIFFERENTIAL DIAGNOSIS : *Gamasellodes sternalis* sp. nov. shows similarities with *G. bicolor* (Berlese) in respect of similar number of setae on anterior and posterior dorsal shield, apparently same length of setae on ventri-anal shield, and shape of fixed and movable digit of chelicerae. However, closer examination of *G. sternalis* sp. nov. reveals a number of dissimilarities, such as position of j2, longer length of z1, shape of anterior portion of sternal shield, absence of endopodal and exopodal shield, shape of genital and ventri-anal shield, shape of tectum, differences in number of setae on ventral membrane around ventri-anal shield, and also in the number of components of metapodal shield.

ETYMOLOGY : The specific name refers to the characteristic shape of sternal shield.

*Gamasellodes vulgator* Athias-Herriot, 1961

1961. *Gamasellodes vulgator* Athias-Henriot, *Acarologia*, 3(4) : 482.

1970. *Gamasellodes vulgator*, Hurlbutt, *Acarologia*, 12(3) : 474.

FEMALE : Anterior dorsal shield (160  $\mu$ m long, 163  $\mu$ m wide) without any reticulation, with sixteen pairs of setae, seta r2 present on lateral integument; posterior dorsal shield (163  $\mu$ m long, 165  $\mu$ m wide) ornamented posteriorly between J4-J5, with fifteen pairs of setae; twelve pairs of marginal setae present on lateral integument; all dorsal setae simple; peritreme prominently visible dorsally, extending slightly posterior to setae s1.

Pre-sternal area with a very few lineation; sternal shield with three pairs of setae, anterolateral margin of sternal shield extended laterally. Genital shield punctate posteriorly, anteriorly with prominent epi-

gynial process, with paired genital setae. Metapodal shield paired, ovoid in shape. Posterior end of peritrematal shield curving behind coxa IV partly; stigma small, situated at level of coxa IV.

Tectum triramous. Movable chela with two teeth, fixed chela multidentate.

MALE : Unknown.

MATERIAL EXAMINED : Two females, Neelangarai, Madras, Tamil Nadu; ex. soil; 4 May 1997; A.K. BHATTACHARYYA .

DISTRIBUTION : INDIA : Tamil Nadu. Other record : Algeria.

REMARKS : This species is recorded for the first time from India.

#### ACKNOWLEDGEMENTS

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