

**NEW RECORD OF *NABIS BREVILINEATUS* SCOTT  
(HEMIPTERA: NABIDAE: NABINAE) FROM INDIA  
ALONG WITH REDESCRIPTION**

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**ABSTRACT:** *Nabis brevilineatus* Scott, 1874, of family Nabidae recorded for the first time from Uttarakhand, India and redescribed along with additional diagnostic characters.

**KEY WORDS:** Nabidae, *Nabis brevilineatus*, new record, India

The family Nabidae consist of 31 genera and representing 386 species (Lattin, 1989; Cassis & Gross, 1995; Zoological Record, 1996-2007), which is a small group of important generalist predators. They are commonly known as "damsel bugs" and can be easily separated from the family Reduviidae by having four-segmented rostrum, the basal segment being short and usually stout. Although they are mostly terrestrial and some are found in moist areas on the ground or at the edge of streams, pond and marshes. They prey on a variety of small invertebrates. This family comprises of two subfamilies viz. Nabinae and Prostemmatinae (Schuh & Stys, 1991). Prostemmatines are largely ground-dwelling predators, nabines are frequently found on plants and are often used in biological control of crop pests (Lattin, 1989). Present study deals with a new record of *Nabis brevilineatus* Scott of subfamily Nabinae from India. Earlier Distant (1904) reported *Nabis capsiformis* Germar, 1837, *N. funebris* Distant, 1904, *N. indicus* (Stal, 1873) and *N. nigrescens* Distant, 1904 from India, however *N. tibialis* from Sri Lanka and *N. brevilineatus* Scott, 1874 from Myanmar and Japan. Chandra et al. has further recorded *Nabis tibialis* Distant from India.

#### **MATERIALS AND METHODS**

This study is based on the materials collected from a field survey from Dehra Dun and Ramgarh Districts of Uttarakhand. The specimens are deposited in the National Zoological Collection of Zoological Survey of India, Hemiptera Section, Kolkata. Different body parts were measured and their ratios were calculated for the establishment of additional diagnostic characters. Measurement and photographs of the species were taken with the aid of Leica M 205A. All measurements are in millimetres.

#### **OBSERVATION AND RESULTS**

##### ***Nabis* Latreille, 1802**

**Type species:** *Nabis apterus* Fabricius

**Distribution:** Cosmopolitan.

##### ***Nabis brevilineatus* Scott, 1874**

1874. *Nabis brevilineatus* Scott, A.M.N.H., (4) 14 : 40.

1904. *Nabis brevilineatus*, Distant, Fauna Brit. India, Rhynchota, 2: 401-402.

**Material examined:** 1ex., INDIA: Uttarakhand: Dehra Dun District : Musouri, 22.IX.2000, coll. G.C. Sen; 1ex., Nainital District : Ramgarh, 4.X.2004, coll. M. Ghosh and party.

**Redescription:**

**Colour:** Body yellowish brown (Fig. 1); posterior lobe of the pronotum and hemelytra dull in hue and opaque; anterior lobe of pronotum with transverse reddish striae extending upto base of posterior lobe (Fig. 3); a central spot to scutellum, basal halves of claval and subclaval areas, a linear spot near apex of corium, discal shading to membrane, two broad annulations to anterior femora, two annulations on intermediate and posterior femora, an annulation near apex and base of intermediate and posterior tibia, apex of first and second segments of antennae, spots on connexivum above and beneath, dark brown; clavus, corium and connexivum spotted with reddish markings; apex of intermediate and posterior femora and base of intermediate and posterior tibia, reddish.

**Structure:** Body oblong or subelongate.

**Head:** Head sub-cylindrical, longer (1.08 mm) than broad (0.48 mm) between eyes (Fig. 3), ratio of length of head (HL= 1.08): maximum width of head across compound eyes (HW= 1.04) = 1.00:0.96; eyes longer (0.42 mm) than broad (0.28 mm) and well separated from anterior margin of pronotum, ratio of width of compound eye (WCE=0.28 mm): length of compound eye (LCE=0.42 mm)= 0.66:1.00; antennae finely pilose, first segment (2.28 mm) longer than head (1.08 mm), subequal in length to second segment (2.38 mm), ratio of length of head (HL=1.08 mm): length of first antennal segment (A1= 2.28 mm) = 0.47:1.00; rostrum long, extending beyond the anterior coxae, first segment (0.45 mm) very short, second segment (1.35 mm) longest, ratio of rostral segments: I:II:III:IV = 0.33:1.00:0.70:0.34 (Fig. 2).

**Thorax:** Pronotum strongly narrowed anteriorly and near middle transversely impressed, anterior lobe (1.13 mm) slightly longer than posterior lobe (1.02 mm) which is thickly granulate (Fig. 3), ratio of length of pronotum (PL= 2.15 mm): width of pronotum (PW= 2.45 mm) = 0.87:1.00, ratio of width of pronotum (PW=2.45 mm): maximum width of head across compound eyes (HW=1.04 mm)= 1.00: 0.42; scutellum broader than long, ratio of length of scutellum (LSC=0.80 mm): width of scutellum at base (WSC=1.10 mm)= 0.72:1.00; legs long, slender, anterior femora very strongly incrassated and minutely serrate beneath, anterior and intermediate femora slightly longer than tibia, posterior tibia (5.79 mm) longer than femora (4.67 mm) (Fig. 2).

**Abdomen:** Abdomen longer (4.85 mm) than broad (1.75 mm), sinuate at middle, broadened and projecting beyond middle; membrane passing abdominal tip (Fig. 1).

**Measurements:** (1 female in mm). Body length 9.79; head length 1.08, width between eye 0.48, width across eye 1.04; length of collar 0.19; length of eye 0.42, width of eye 0.28; rostral length 3.22, length of rostral segments I : 0.45, II : 1.35, III : 0.95 and IV: 0.47; length of pronotum 2.15; length of anterior pronotal lobe 1.13, posterior pronotal lobe 1.02, width of anterior pronotal lobe 1.42, posterior pronotal lobe 2.45; length of scutellum 0.80, width of scutellum 1.10; length of hemelytra 6.58, width of hemelytra 2.43; length of fore coxa: 1.84, trochanter: 0.62, femur: 3.80, tibia: 3.11, tarsus: 0.83, claws: 0.14; mid coxa: 0.83, trochanter: 0.49, femur: 3.77, tibia: 3.69, tarsus: 0.85, claw: 0.15; hind coxa: 0.85, trochanter: 0.50, femur: 4.67, tibia: 5.79, tarsus: 0.99, claw: 0.18.

**Distribution:** INDIA: Uttarakhand. Elsewhere: Myanmar, Japan.

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### LITERATURE CITED

- Chandra, K., Kushwaha, S., Biswas, B. & Mukherjee, P.** 2013. *Nabistibialis* Distant (Hemiptera: Nabidae), A first record from India. *Munis Journal of Entomology and Zoology*, 9: 178-181.
- Distant, W. L.** 1904. The Fauna of British India including Ceylon and Burma, Rhynchota, 2: 198-389.
- Henry, T. J.** 2009. Biodiversity of Heteroptera, *Insect Biodiversity Science and Society* (By Robert, G. Foottit & Piter, H. Adler eds.): 224-263.
- Lattin, J. D.** 1989. Bionomics of the Nabidae. *Ann. Rev. Entomol.*, 34: 383-400.
- Schuh, R. T. & Stys, P.** 1991. Phylogenetic analysis of cimicomorphan family relationship (Heteroptera). *J. N. Y. Entomol. Soc.*, 99: 298-350.



**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

Figures 1-4. *Nabis brevilineatus* Scott. 1. Dorsal view of female; 2. ventral view of female; 3. dorsal view of head and pronotum; 4. abdominal tip of female, ventral view.