



On A New Species of the Genus *Scaphoideus* (Hemiptera: Cicadellidae) Reported on Grapevine *Vitis vinifera* L.

KEYWORDS

Scaphoideus indica sp.n, description, pest insect, grapevine.

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ABSTRACT

: Jassids (Hemiptera: Cicadellidae) have tremendous economic importance since they cause damage to many agricultural, horticultural and forest crops by sucking cell sap, causing sooty moulds and affecting growth and yield. Therefore, a new species *Scaphoideus indica* sp.n (Hemiptera: Cicadellidae) has been described for the first time.

This species runs close to *S. insignis* Distant (Praveen et al., 2014) by having

- 1) General appearance
- 2) Intermediate and posterior tibiae spotted with black

However, it differs from above species by having following characters:

1. Head, pronotum and scutellum not uniformly light brown. Lateral transverse area brownish and mid portion whitish.
2. No small marginal spot on vertex.
3. Body beneath the legs not pale ochraceous.
4. Antennal formula.

INTRODUCTION

Jassids (Hemiptera: Cicadellidae) have tremendous economic importance since they cause damage to many agricultural, horticultural and forest crops by sucking cell sap, causing sooty moulds and affecting growth and yield (Kamble and Sathe, 2015). The genus *Scaphoideus* was erected by Uhler (1889) and placed under the tribe Scaphoideini of subfamily Deltocephalinae.

The genus *Scaphoideus* is characterized by having body colour brown or yellowish brown, mottled with dark brown, orange or yellow patterns, streaks and spots, beads or lines; head equal or narrower than pronotum; crown with bluntly pointed anterior margin; tegmina with well developed appendix, aedeagus with tubular shaft, elongate; seventh sternite (female) twice as long as sixth sternite.

Under this genus five species have been reported from India. A new species *Scaphoideus indica* sp.n has been described for the first time from India. Review of literature indicated that Walker (1851), Datta (1988), Melichar (1903), Destrinch (2005), Sathe et al. (2014), Praveen et al. (2015), etc. worked on taxonomy and diversity of jassids.

MATERIALS AND METHODS

Jassids were collected from Kolhapur agricultural, horticultural and forest crops by using light source with sticky yellow card sheets. Collected specimens were examined and described using compound microscope and identified by consulting appropriate literature cited in the references. The jassids have also been collected with the help of swift insect net. For taxonomical studies, head, thorax and abdomen with their appendage have been taken into account. Slides of antenna, wings, legs and genitalia have been made by dehydrating the material in different alcohol grades and clearing in xylene and mounting in DPX on the slides. The slides have been appropriately labeled. The

specimens have been dried in drying chamber at 60°C for 24 hours and pinned insects have been preserved in insect box.

RESULTS AND DISCUSSION

Scaphoideus indica sp. n.

MALE: (Fig. - 1-7)

Head: (Fig.-2) 0.53 mm long, 1.5 mm broad, broader than long, white in colour, black spots presents, not rounded, crown (Fig.-2) 0.53 mm long, 1.07 mm broad, white, pentagonal in shape. Compound eye 0.53 mm long, 0.35 mm broad, black, brown at lateral side, interocular distance 0.71 mm, ocelli two, orange, ocellar distance 0.50 mm. **Antenna** (Fig. - 3) 2.5 mm long, yellowish brown; long threadlike, scape 0.10 mm long, 0.007 mm broad, yellowish; pedicel 0.14 mm long, 0.035 mm broad; flagellum 1.78 mm long, 0.00035 mm broad, yellowish brown..

Antennal formula – S L/W = 14.28, P L/W = 40, F L/W = 5085, A = 5139.00

Thorax – (Fig.-2) 1.5 mm long, 1.42 mm broad, white at center, yellowish brown at lateral sides, small irregular pore like structures present on middle of thorax. Pronotum (Fig.- 2) 0.71 mm long, 1.42 mm broad, white at center, yellowish brown at lateral sides, not overlapping on scutellum (Fig.- 2); mesonotum 0.39 mm long, 1.07mm broad, white at center, yellowish brown at lateral sides; scutellum 0.32 mm long, 0.35 mm broad, white. **Wings**, Fore wing (Fig.- 4) 5 mm long, 1.25 mm broad, semitransparent, brownish colour, not elytra like; hind wing (Fig.-5) 4.82 mm long, 0.5 mm broad, white, membranous, transparent. **Hind leg** (Fig.- 6) 5 mm long, 0.35 mm broad, brownish yellow; coxa 1.78 mm long, 0.89 mm broad, pale yellowish brown; trochanter 0.35 mm long, 0.01 mm broad, pale yellow, three

spines; femur 1.07 mm long, 0.21 mm broad, pale yellow; tibia 2.85 mm long, 0.21 mm broad, brownish yellow with spines, black spot at base of each spine; tarsus 1.24 mm long, 0.01 mm broad, brownish yellow; pre-tarsus 0.71 mm long, 0.01 mm broad, yellowish brown. meso-tarsus 0.21 mm long, 0.01 mm broad, brownish yellow; meta-tarsus 0.32 mm long, 0.01 mm broad, yellowish brown.

Abdomen-(Fig.- 8) 2.92 mm long, 0.89 mm broad, white at lateral sides, 1 to 8 segments contain dark brown patch dorsally, 1 to 4 tergites with black spots. Abdomen whitish from ventral side. First segment 0.89 mm long, 0.35 mm broad, second segment 0.71 mm long, 0.35 mm broad, third segment 0.64 mm long, 0.35 mm broad, fourth segment 0.60 mm long, 0.35 mm broad, fifth segment 0.53 mm long, 0.35 mm broad, sixth segment 0.35 mm long, 0.35 mm broad, seventh segment 0.28 mm long, 0.35 mm broad, eighth segment 0.21 mm long, 0.35 mm broad.

Genitalia (Fig. - 7) plate triangular with spine like macrosetae pygofer variously modified, bluntly pointed posterior side, tapered gradually.

Host plants – Grapes (*Vitis vinifera* L.), grasses, it such the cell sap from leaves, flowering and fruiting bodies of host plants.

Holotype– Male, India, Maharashtra, Kolhapur. Coll. Chandani Kamble. 14-VIII- 2014, Antenna, wings, legs, genitalia on slide labeled as above, rest part on card sheet labeled as above.

Paratype – 7, Coll. Chandani Kamble, Oct. 2014 to Nov. 2014, Sept. 2015. Males- 5,

females- 2, pinned insects labeled as above.

Distribution – 2 males, Peth Vadgaon- Coll. Chandani Kamble, 14 Oct. 2014; 3

males, Kolhapur - Coll. Chandani Kamble, 03 Nov. 2014; 1 female, Kolhapur - Coll. Chandani Kamble, 14 Oct. 2014; 1 female, Peth Vadgaon - Coll. Chandani Kamble, 18 Sept. 2015.

REMARKS

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General appearance

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Fig.1- *S. indica* Adult (male)



Fig.-2 Head and thorax of *S. indica*



Fig.-3 Antenna and mouth parts of *S.*



Fig.4- S.indica forewing



Fig.5- S.indica hindwing



Fig. 6- S. indica foreleg



Fig.7- genitalia S. indica

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