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### ***Strongylovelia lillyae* sp. nov. (Hemiptera: Gerromorpha: Veliidae) from Tamil Nadu, India: the first species of the genus described from the Indian subcontinent**

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#### **Abstract**

*Strongylovelia lillyae* sp. nov. is described from Kanyakumari district, Tamil Nadu, India and constitutes the first species of the genus from Indian subcontinent. The new species is closely related to *Strongylovelia setosa* Zettel & Tran and *S. vasarhelyii* Zettel & Tran from Vietnam. A distribution map and photographs of *S. lillyae* sp. nov. are presented here.

**Key words:** Haloveliinae, taxonomy, Kanyakumari district

#### **Introduction**

Members of the limnic genus *Strongylovelia* Esaki (1924), are very small tear-shaped water striders, ranging in size between 0.89 mm and 1.80 mm, and belonging to the subfamily Haloveliinae of family Veliidae. The subfamily Haloveliinae contains five known genera, of which, three are marine - *Halovelia* Bergroth (1893), *Xenobates* Esaki (1927) and *Haloveloides* Andersen (1992) - and two are freshwater - *Strongylovelia* Esaki (1924) and *Entomovelina* Esaki (1930). The members of *Strongylovelia* are distributed across the Indomalayan (Sri Lanka, India, southern and southwest China, Vietnam, Thailand, Indonesia, Borneo, Malaysia and Philippines) and Australasian (New Britain and New Guinea) regions. Presently, 27 species and 2 subspecies are recognized, including the new species described here (Esaki, 1924, 1926, Lundblad, 1933, Polhemus, 1979, Lansbury, 1993, Lansbury & Zettel, 1997, Zettel, 2003a,b, Chen *et al.* 2006, Zettel & Tran, 2006, 2009 and Ye *et al.* 2015). *Strongylovelia* can easily be separated from other known genera in the subfamily Haloveliinae by the presence of a single large sordid white or yellow mark (sometimes with two round or elongate yellow spots) on the mesonotum, and by the head near the dorsal eye margin sometimes bearing yellow markings (Figs. 1A, B). Moreover, *Strongylovelia* can be easily distinguished from its closely related limnic genus *Entomovelina* by the presence of a long second antennal segment, a long first hind tarsal segment, a less hirsute body (Lansbury & Zettel, 1997) and subequal hind tarsal segments.

The members of the subfamily Haloveliinae have very long middle legs and a short metathorax, which are the characters thought to be evolved from the family Gerridae (Andersen, 1982). The resemblance of Haloveliinae with the family Gerridae especially in regard to the long and slender middle femora, the hind femora much surpassing the apex of the abdomen, the middle and hind legs inserted distinctly far beyond the fore legs, led Esaki (1924) to erect the genus *Strongylovelia* under the subfamily Halobatinae of family Gerridae. Later, to hold the four genera *Halovelia* Bergroth, *Xenobates* Esaki, *Entomovelina* Esaki and *Strongylovelia* Esaki, the subfamily Haloveliinae was proposed by Esaki (1930), under the family Gerridae. However, Bergroth (1893) had previously described the marine genus *Halovelia* within the family Veliidae. The placement of Haloveliinae within the family Veliidae was confirmed by China (1957), and the same classification was followed for *Strongylovelia* by J. Polhemus (1979) when recording *S. formosa* from Sri Lanka.

The genus *Strongylovelia* was previously recorded from mainland India by Andersen (1982), Thirumalai & Krishnan, (2000), Thirumalai (2002, 2004) and from Andaman Islands by Polhemus & Starmühlner (1990). However, these authors did not assign any species name to the *Strongylovelia* recorded from India. Thirumalai (2009) suspected that the *Strongylovelia* sp. recorded from Tamil Nadu, India, might be *S. formosa* and he mentioned the species name with a question mark. However, there is no possibility of the occurrence of *S. formosa* in Indian subcontinent, because the species was first described from Taiwan Province of China and so far as is now understood, this species is restricted only to Taiwan and Guangdong Provinces of China.