First report of *Lestes elatus* (Hagen in Selys, 1862) from West Bengal, India

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**ABSTRACT**

The first photographic record of the *Lestes elatus* (Hagen in Selys, 1862) from Howrah district, West Bengal, India is presented in this paper. During the Odonata survey of Howrah district of West Bengal this species photographed and identified first time for the state West Bengal. *Lestes elatus* (Hagen in Selys, 1862), commonly known as Emerald Spreadwing recorded in October, 2016. A medium sized pale brownish species documented from bush area of Amta 2 block of Howrah, West Bengal, India.

**Key words:** Photographic record, *Lestes elatus*, Emerald Spreadwing, Amta, Howrah, West Bengal.

**INTRODUCTION**

Insect is the largest group of animal kingdom which is the more than half of the total faunal species of the world (May, 1992). Among the insects order odonata, the dragonflies and damselflies are also a widely distributed group (Adarsh et al., 2014). They occurs closer to different water bodies (Tiple et al. 2008). Odonates are also valuable insects which act as an ecological indicator of environment (Rowe, 2003). Approximately 600 genera and 6000 species of 29 families have been described from all over the world (Silisby, 2011). From undivided India nearly 536 species of odonates recorded by Fraser (1933, 1934, 1936). In recent studies Mitra (2005) recorded 499 species and Subramanian (2005) 463 species from present India. The studies on odonates in W.B were started by Selys (1891) who recorded nearly 22 species from Kolkata. Srivastava and Sinha (1993) reported 178 species from W.B. Ultimately Mitra (2002) recorded 65 species from Kolkata and its surroundings Howrah. In another recent studies on of odonates 80 species listed from Kolkata and surrounding Howrah (Dawn, 2014). We present here the first photographic record of the *Lestes elatus* (Hagen in Selys, 1862) from Howrah district, West Bengal, India. Which is previously recorded from Odisha (Nair, 2011), Central part of India (Andrew et al., 2008), Peninsular India.
Emerald spreadwing (Lestes elatus) is a Least Concern species (ver 3.1) according to International Union for Conservation of Nature (IUCN). According to Srivastava and Sinha (1993) only one species Lestes thoracica Laidlaw found in West Bengal and Lestes platystylus Rambur recorded as Platylestes platystyla Rambur. After that Gupta and Mitra (1995) was also recorded Lestes platystylus Rambur from Kolkata region. Then Dawn (2014) included another species Lestes malabarica Fraser from Kolkata and its surroundings. In recent studies Nayak and Roy (2016) recorded Lestes umbrinus Selys from Burdwan district of West Bengal.

MATERIALS AND METHODS

Through Pollard Walk Method (Pollard 1977; Pollard and Yates 1993) during documentation of odonates of Howrah district; West Bengal, India (Fig.1) sample was photographed. This is first photographic record of Lestes elatus (Hagen in Selys, 1862) from the state West Bengal. On the day of 2016 (21.10.16) at around 12.30 hrs (12:23:44 PM) during the regular field surveys at the wetlands of this district of West Bengal we photographed one individuals of medium sized damselfly with narrow green thoracic stripes resting on small branches nearby wetland, which is situated Amta 2 block of Howrah district; West Bengal (extends between 22.587691 North latitude and 87.964703 east longitude) (Fig.2). Information on this species is based on observation from 12.23 PM to 12.47 PM. Specimen was photographed for further identification process with the help of High Resolution Digital Camera (Cannon 550 D with EOS 18- 55mm lens) and the identification was identified using documents of Subramanian, 2014; Nair, 2011 and confirmed by experts

RESULTS

Species description

A medium sized paler brown damselfly with diagnostic narrow metallic green thoracic stripes. Eyes are brownish. Thorax is pale brown in colour upperside marked with a pair of greenish to bluish stripes. Abdomen is stout. Wings are transparent with black spots. Upperside of abdomen is bluish in colour. Legs are brownish in colour (Fig.3-6). Sat with spread wings for several minutes, sometimes try to fly weakly and sat again.

Systematic position of Lestes elatus (Hagen in Selys, 1862)

Class: Insecta
Order: Odonata
Suborder: Zygoptera
Family: Lestidae
Genus: Lestes
Species: Lestes elatus (Hagen in Selys, 1862)
DISCUSSION

Early distributional range

*Lestes elatus* (Hagen in Selys, 1862) previously recorded from south, west and central India by several workers. Andrew, Subramanian and Tiple, 2008 recoded from central part of India, Tiple et al., 2012 from Jabalpur, Madhya Pradesh, Subramanian, 2014 from Peninsular India, Rathod et al., from Amravati, Maharashtra, Adarsh et al., 2014 from Thrissur, Kerala and Arulprakash and Gunathilagaraj, 2010 from Coimbatore and Salem of Tamilnadu, Rathod et al., 2016 from Southern Gujarat, Harisha, 2016 from Karnataka. From eastern India it is first recorded by Nair, 2011 from Odisha.

Habitat structure of new locality

West Bengal is a state of India located its eastern part. Neighbour states of West Bengal are Odisha, Jharkhand, Bihar, Sikkim and Assam. On the eastern side the country Bangladesh is situated. Howrah is a small district of the West Bengal. The Area of Howrah is 467 km². The Howrah district lies between 22°48’ N and 22°12’ N latitudes and between 88°23’ E and 87°50’ E longitudes. The specimen actually photographed in Amta 2 block, one of the 15 blocks of Howrah. The place of record lays 22.587691 North latitude and 87.964703 east longitude. The place is nearer to Damodar River. Annual normal rainfall in this district is 1461 millimeter per year. Annual maximum temperature varies between 32-39°C, whereas minimum temperature varies between 8-10°C.

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Fig 3: Full view of *Lestes elatus* (Hagen in Selys, 1862)

Fig 4: Close up thoracic view of *Lestes elatus* (Hagen in Selys, 1862)

Fig 5: Close up abdominal view of *Lestes elatus* (Hagen in Selys, 1862)

Fig 6: Close up view of right side wings of *Lestes elatus* (Hagen in Selys, 1862)

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