

## A Note on *Brachydiplax chalybea* Brauer, 1868: A first record from Nepal

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### Abstract

The first record of *Brachydiplax chalybea* Brauer, 1868 from Morang, Nepal is presented in this paper. During the odonata survey of Eastern Nepal this species was photographed and identified first time for Nepal. Medium sized dragonfly, *Brachydiplax chalybea* Brauer, 1868 commonly known as Rufous-Backed Marsh Hawk recorded in 9 August 2018 from running water of Gokarna resort, Sundarharaicha Municipality, Morang District, Nepal.

**Keywords:** first record, Rufous-backed marsh hawk, Morang, Nepal

### 1. Introduction

Insects are the most abundant species that they occupies about three-fourths of the animal kingdom (Westfall and Tennesen, 1996) [9]. Among them order odonata (dragonflies and damselflies) are most primitive winged carnivore insects. They show complex lifecycle; eggs and naid are aquatic while adults are terrestrial. They are excellent bioindicators of wetlands and plays important role in trophic network. Globally 6233 species under 685 genera have been reported (Schorr and Paulson, 2017) [3]. Among them VK. Thapa (2015) [7] prepared a checklist of 209 Nepalese odonata species belonging to 116 genera under 16 families. Historically in 1854, Selys recorded dragonflies for the first time from Nepal in which *Anotogaster nepalensis* and *Onychogomphus cerastic* were described. Selys (1859) [5] reported *Caliphaea confusa* from Nepal and *Neurothemis fulvia* was first public record in 1879. Later on G.S. Vick (1989) [8] described taxonomic studies of Nepalese odonata. This paper adds photographic record of one dragonfly species to the checklist of Odonata of Nepal, the Rufous-Backed Marsh Hawk *Brachydiplax chalybea* Brauer, 1868 of which there is no published records.

### 2. Material methods and study area

Sample was photographed during the course of odonata surveys of Eastern Nepal. This is the first photographic record of *Brachydiplax chalybea* Brauer, 1868 from Nepal. The author photographed a single individual of female on 9 August 2018 at 15:50 hr near running water (26°39'6.69"N & 87°17'28.13"E) at Sundarharaicha Municipality, Morang. The individual, a female, was seen flying around a garden then sat on the leaves of plants for 5 minutes, allowing to observe and photographed it with camera (Nikon D3400 with EOS 18-55mm lens). The information of this species is based on direct

observation from 15:50 hr to 16:30 hr. The species was identified by consulting available literature, viz., keys (Fraser 1936) [1] and field guides and books (Nair 2011; Subramanian 2009) [2, 6] and also from the online resources (<http://asia-dragonfly.net>) and then confirmed by experts.

### 3. Results

#### 3.1. Species Description

Recorded species was female: Thorax ochreous; Wings palely tinted with yellow at base; Abdomen ochreous with sutures and intersegmental joints finely black; Anal appendages black, shortly conical; vulvar scales half the length of segment 9, very broad (figure 1, 2, 3 and 4).



Fig 1: Female *Brachydiplax chalybea*

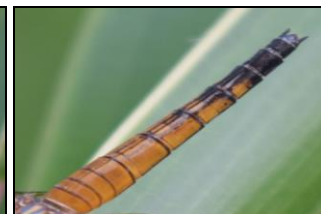


Fig 2: abdomen of Female *B. chalybea*

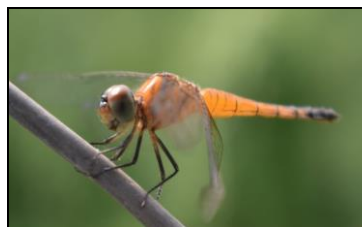


Fig 3: Lateral view of *B. chalybea*

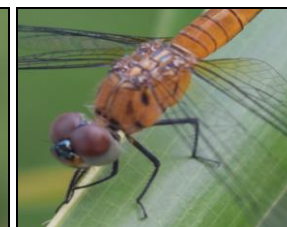


Fig 4: Head, thorax and wing base of *B. chalybea*

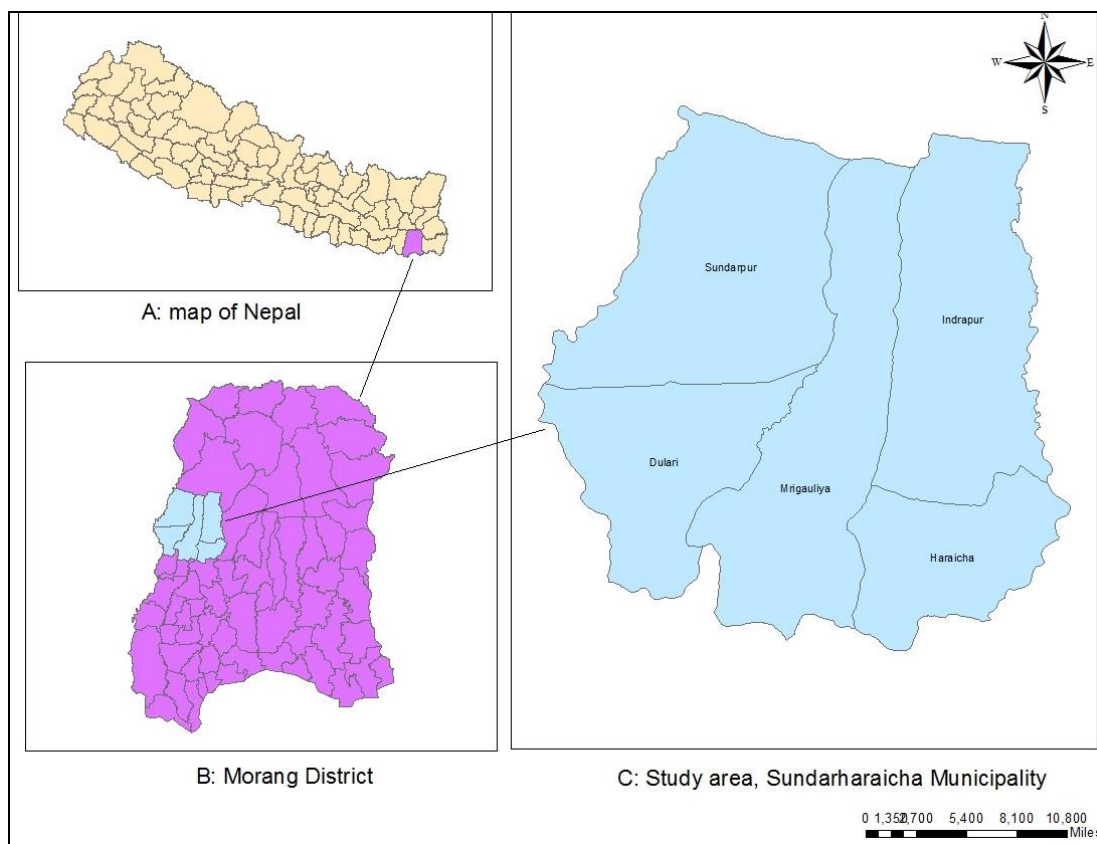


Fig 5: Map of Study area, Sundarharaicha Municipality, Morang, Nepal

### 3.2. Systematic position of *Brachydiplax chalybea* Brauer, 1868

**Class:** Insecta

**Order:** Odonata

**Infra Order:** Anisoptera

**Family:** Libellulidae

**Genus:** *Brachydiplax* Brauer, 1868

**Species:** *Brachydiplax chalybea* Brauer, 1868

### 4. Discussion

#### 4.1. Early distributional range

*Brachydiplax chalybea* Brauer, 1868 was previously recorded from Assam, Burma, Malaysia, Borneo, Celebes, Sumatra, Bangkok, Java (Fraser, 1936)<sup>[1]</sup>. It is common in India.

#### 4.2. Habitat structure of new locality

Sundarharaicha Municipality lies in Morang District, which is situated in Southern terai of eastern part of Nepal. It is at 115m altitude. In winter season, the temperature of Morang is 10–18 °C and increases to 30–42 °C during the summer season and about 2007 mm of precipitation falls annually. The author photographed a single individual of female near running water at Sundarharaicha Municipality, Morang, Nepal. This species prefer edges of slow flowing water.

### 5. Acknowledgements

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### 6. References

1. Fraser FC. The Fauna of British India including Ceylon and Burma, Odonata. Taylor and Fancis Ltd., London. 1936; 1:461.
2. Nair MV. Dragonflies and Damselflies of Orissa and Eastern India, Wildlife Organisation, Forest & Environment Department, Government of Orissa, 2011, 252.
3. Schorr M, Paulson D. World odonata list, 2017, <https://www.pugetsound.edu>. Assessed on.
4. Selys Longchamps EM. Monographie des calopterygines. Bruxelles et Leipzig, C. Maquardt, 1854, 291.
5. Selys Longchamps EM. Additions au synopsis des calopterygines. Bulletin de l'Academie Royale de Belgique. 1859; 2(7):102-103.
6. Subramanian KA. Dragonflies of India: A field guide. Vigyan Prasar, Department of Science and Technology, New Delhi, 2009, 168.
7. Thapa VK. Odonata. In Insect diversity in Nepal, 2015, 96-117.
8. Vick GS. List of the dragonflies recorded from Nepal, with a summary of their altitudinal distribution (Odonata), Opuscula Zoologica Flumnensia. 1989; 43:1-21.
9. Westfall MJ, Tennessen KJ. Odonata. In: Merritt, RW. and Cummins, KW. (eds.). An Introduction to the aquatic insects of North America, 3rd Edition. Kendall/Hunt Publishing Company, Dubuque, Iowa, 1996, 164-211.