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New record of the species *Delias descombesi* boisduval, 1836 (Lepidoptera: Pieridae: Pierinae) from floodplain of Bihar

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Abstract

In the present manuscript, a new species of genus *Delias*, Swainson, 1820, i.e., *D. descombesi*, Boisduval, 1836 are reported for the first time from Bihar, India. Earlier, *D. descombesi* was reported from Sikkim, Arunachal, Tripura, Assam, West Bengal, and Chennai region of India.

Keywords: *Delias descombesi*, Lepidoptera: Pieridae: Pierinae, floodplain

Introduction

More than half of the Earth's diversity comprises of insect. About 20,000 species of butterflies are estimated worldwide (Holloway *et al.* 1987)^[4], among these, 1318 species of butterfly fauna are documented from India (Varshney & Smetacek, 2015)^[14]. As they visit a wide range of flowering plant, they play a crucial role in pollination (Thakur & Mattu, 2010)^[12] and also act as a biological indicator (Syaripuddin *et al.* 2015)^[11].

The family Pieridae includes about 76 genera containing about 1,100 species (Braby *et al.* 2006)^[2]. Among these, 92 species are found in India (Kehimkar, 2016)^[7] and only 12 species of pieridae are listed in Bihar and Jharkhand state (Varshney *et al.* 1981)^[16]. The genus *Delias descombesi* is one of the species belonging to this family and is mainly diagnosed by blackish forewings and rich-chrome yellow hindwings with black margins and a prominent red coloured spot along leading edge of the hind wings. Under hindwing of male are rich chrome yellow whereas female have dull yellowish white underwing (Kehimkar, 2016)^[7].

Only a few efforts have been made to study the butterflies of Bihar. The present paper is based on the sighting of a new butterfly recorded for the first time from the state of Bihar during the survey conducted in the year 2020.

Material and Methods

Study area

Bhagalpur is the 3rd largest city of Bihar state located at the bank of Ganga River and lies at 25.25°N and 87.03°E with an elevation of 52 meters. It covers an area of 30.17 km² (11.65 sq mi). The average temperature of this city is ranges from 31.9 °C to 21.9 °C and average rainfall in 1206 mm. It is also known as silk city. The sighting of Red Spot Jazebel was done at Sultanganj (25.254° N and 86.737° E), Bhagalpur.

Specimen identification

The butterfly was recorded from the study area during the butterfly survey from November 2019 to December 2020. The species was photographed by the Nikon P900 camera. Capturing and killing of species are avoided. Identification of the specimen was done by following literature and keys: Evans, 1932^[3]; Varshney, 1993^[17]; Kunte, 2006^[8]; Pajni *et al.*, 2006^[9]; Singh, 2010^[10]; Varshney and Smetacek, 2015^[14]; Kehimkar, 2014, 2016^[6-7].

Results

Systematic Account

Phylum- ARTHOPODA

Class- INSECTA

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Order- LEPIDOPTERA

Family- PIERIDAE

Subfamily- PIERINAE

Genus- *Delias*, Swainson, 1820

Species- *descombesi*, Boisduval, 1836

Description

During a regular survey of butterflies in Bhagalpur, Bihar at the bank of river Ganga from November 2019 to December 2020, an individual of whittish and yellow butterfly was spotted sitting on the plant of Lantana at 25.254° N and 86.737° E.



Fig 1: *Delias descombesi* Boisduval, 1836 (Red Spot Jazebel)

Distribution

India (Sikkim, Arunachal, Tripura, Assam, West Bengal, Chennai), Nepal, Bhutan Bangladesh.

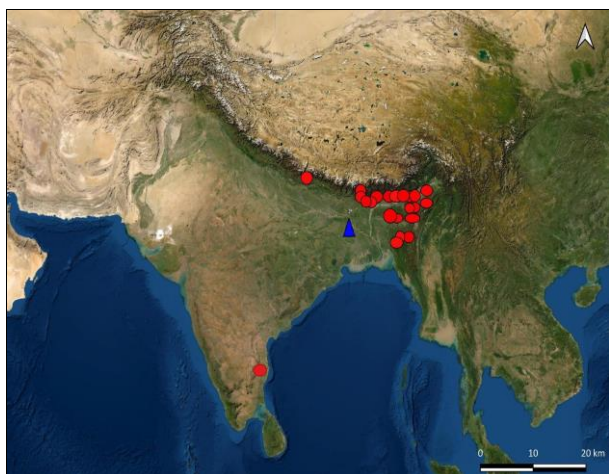


Fig 2: Map showing global distribution of Red Spot Jazebel (*Delias descombesi*).

Red dots indicate earlier recorded localities and the blue dot (triangle) indicates recent recorded locality.

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