

INTER-GENERIC MATING BETWEEN *TALICADA NYSEUS* (GUERIN-MENEVILLE, 1843) AND *PSEUDOZIZEERIA MAHA* (KOLLAR, [1844]) (LEPIDOPTERA: LYCAENIDAE) IN DELHI, INDIA

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ABSTRACT

The occurrence of inter-generic mating between two different species, *Talicauda nyseus* (Guerin-Meneville, 1843) - Red Pierrot and *Pseudozizeeria maha* (Kollar, [1844]) - Pale Grass Blue in a natural habitat was observed and digitally recorded at Neela Hauz adjacent to Sanjay Van, opposite the campus of Jawaharlal Nehru University, New Delhi, India.

INTRODUCTION

Inter-generic or inter-specific or inter-familial mating of two different species is quite rare in nature. As a matter of fact, in such rare phenomena, offspring are either not produced or if produced, are not viable, thereby confirming the fact that the mating is by different species.

One such intergeneric mating between Zebra Blue *Leptotes plinius* (Fabricius, 1793) and Pea Blue *Lampides boeticus* (Linnaeus, 1767) was reported from Jawaharlal Nehru University (Prakash & Singh, 2019). Saji & Chaya (2019) also

reported inter-generic mating in India. Smetacek (2005), observed inter-species courtship display from the Kumaon region of Himalayas while Bhakare & Smetacek (2010) reported their observations of two inter-generic matings in Lycaenidae in Maharashtra, India. Recently Mahato (2018) reported inter-generic mating *Catocrypsops strabo* (Fabricius, 1793) and *Lampides boeticus* from Purulia district, West Bengal, India. Wright (1906) proposed a ratio of 1:140 of inter-species mating in North American butterflies. Whereas Downcy (1962) observed 1:70 ratio from North America. He also suggested variation in mating patterns according to the range and distribution of the species that indicates some species may have 'less inter-species mating barriers' in some areas compared to 'more' in other areas. Interestingly, such matings have been more commonly observed in the Lycaenidae. In the present case, an instance of inter-generic mating between two different species, *Talicauda nyseus* (Guerin-Meneville, 1843) and *Pseudozizeeria maha* (Kollar, [1844]) was

recorded in nature at Neela Hauz adjacent to Sanjay Van, opposite the campus of Jawaharlal Nehru University, New Delhi, India.

MATERIALS AND METHODS

In the present observation, an instance of inter-generic mating between *Talica niseus* and *Pseudozizeeria maha*, was observed (Plate-1) and digitally recorded on the 9th of November 2023 at 3.30 pm near Sanjay Van at Neela Hauz, New Delhi (28°31'42"N 77°10'12"E). The incident was observed for nearly 5 minutes on a wild shrub.

We were unable to determine the sexes of the species in this interaction because they flew away into a thickly forested area. Also, the authors did not observe the courtship display of the said pairing.

DISCUSSION

According to the available references, there are quite a few instances of inter-generic mating in Lycaenidae family. Prakash & Singh (2019), Bhakare & Smetacek (2010) and Mahato (2018) have observed and reported inter-generic mating in Lycaenidae species. Smetacek (2005) observed courtship display in Nymphalidae species in Kumaon ranges of Himalayas. Arbogast (1976), Platt (1978) and others observed and reported inter-generic mating in Nymphalid species, Wagner (1978) in Papilionid species, Downey (1962) and Priestaf (1974) in Pierid species. In Indian Lycaenidae it has been proposed that *Heliophorus hybrida* (Tytler, 1912), is a hybrid between *Heliophorus brahma* (Moore, 1857) and

Heliophorus androcles (Westwood 1851) (Evans, 1932). Such inter-generic mating and courtship behavior has not been studied and reported in detail from India and abroad. Authors of this article have already published an article on one such occurrence of inter-generic mating in Lycaenidae family from Delhi. This article strongly suggests the theory of Downey (1962) that such pairings are common in some areas compared to others.

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Fig: Inter-generic mating between *Talicada nyseus* and *Pseudozizeeria maha*