



Notes on two Nymphalid butterflies new to Bangladesh

Among the insects, butterflies occupy vital position in ecosystems and their occurrence and diversity are considered as an indicator of the health of any given terrestrial biotope (Kunte, 2000). As herbivorous insects, the distribution of larval and nectar host plants has a distinct impact on the status of butterfly diversity (Culin, 1997). As a sub-tropical country, Bangladesh is a realm of biological diversity. However, in Bangladesh the butterfly fauna is not well documented. The most distinguished study has been carried out by Larsen (2004). Considering the floral diversity and habitat variations, it is estimated that between 500 and 550 butterfly species should be present in Bangladesh (Larsen, 2004). With the aim to document the diversity and distributions of butterflies, the present study was conducted in an area within the eastern region of Bangladesh.

During our study, two butterfly species belonging to the Nymphalidae (Order: Lepidoptera) *Bassarona teuta teuta* (Doubleday, 1848), the Banded Marquis and *Lexias pardalis* (Moore, 1878), the Archduke, were recorded for the first time in Bangladesh. It is noteworthy that these two butterflies were previously considered restricted to India and Myanmar (Kehimkar, 2013).

On 14 April 2013 at 08.30 hr (GMT +06.00) the Banded Marquis was first photographed perched on a moist stone near Madhabkunda waterfall in the Moulvibazar District (24°38'N, 92°13'E). On 19 March 2014 a worn individual was seen resting on the upper surface of a Banana leaf (*Musa* sp.), about one-half of a kilometer from the location of the initial sighting (Fig. 1). Our identification of these specimens was based on a combination of diagnostic morphological characteristics as follows: black tipped antenna; black-brown UP with prominent white spots on

both wings forming a discal band; top most spot of discal band shifted in from other spots on UPF and UPH; red tornal spot absent; UPF discal band narrowing towards costa.

The Madhabkunda waterfall is situated near a dense forest in Moulvibazar, a northeastern region of Bangladesh. This powerful, swift flier prefers heavily forested regions at low to moderate elevations, confined to forested hills. It is seen to bask on the stones with spread-out wings and is attracted to stream edges, damp patches of soil, animal droppings and partially shady wet areas. It is also fond of juice flowing from bark and over ripe fruits. Our observations confirm the prediction of Larsen (2004) that the Banded Marquis which is known from Arakan, Cachar, and 'Sylhet' would be in Bangladesh.

On 28 April 2014 at 09.45 hr another nymphalid butterfly, the Archduke, was first photographed at Rampahar, a part of Kaptai National Park under the Chittagong Division (22°27'N, 92°05'E) (Fig. 2). The Kaptai National Park within the Chittagong Division is known as a realm of high butterfly diversity in Bangladesh and for its floristic composition of tropical wet evergreen forests and the streams. From previous data, two other species of *Lexias*, *L. cyanipardus cyanipardus* (Butler, 1868), the Great Archduke, and *L. dirtea* (Fabricius, 1793), the Dark Archduke, are also recorded from the Chittagong Division (Chowdhury, 2013).

Our identification of *L. pardalis* was based on a combination of diagnostic morphological characteristics as follows: sexual dimorphism is prominent in *L. pardalis*, yellow-tipped antenna on the apical topside; the UPF of males is velvet-black with a few yellow-white specks along the costa; a distinct round white spot before the apex and traces of a broad green-blue margin that does not reach the apex; the UPH shows a blue dorsum from base to tornus bearing a row of black spots; females are dark

brown on UP with bands of yellow spots on both wings.

This forest-dwelling butterfly occurs at low elevations in thick jungle habitat. Adults are attracted to animal droppings and juices flowing from overripe fruits, such as mangoes and pineapples. Adults were also observed to visit in sunny patches within the forest and along stream edges.

Butterfly diversity is high in these neglected but notably bio-diverse mountain ranges. Our observations suggest that these areas support a substantial number of butterfly species that are rare in Bangladesh. Therefore, vegetation damage, commercial logging, human settlement or any other destructive activities in the habitats should be stopped to facilitate the conservation of butterflies and the many species yet to be recorded there. In particular, information on the distribution of butterflies is needed through systematic data collections from all parts of the country, a project that is essential for compiling a checklist on the butterfly fauna of Bangladesh.

Acknowledgements

Authors would like to acknowledge Tarun Karmakar (Research Assistant, National Center for Biological Science of India) for confirming the species; Farzana Islam for valuable comments; and Mohan Kumar Dash for field assistance during the survey.

Literature cited

Chowdhury, S. H., M. Hossain, 2013. *Butterflies of Bangladesh-A Pictorial Handbook (Revised and enlarged version)*: Skylark printers, Dhaka, Bangladesh: 260.

Culin, J. D., 1997. Relationship of butterfly visitation with nectar qualities and flower color in butterfly bush, *Buddleia davidii*. *News of the Lepidopterist's society*, 39: 35–39.

Kunte, K. J., 2000. *Butterflies of Peninsular India*. Indian Academy of Sciences, Bangalore and University Press, Hyderabad.

Larsen, T. B., 2004. *Butterflies of Bangladesh- an annotated checklist*: IUCN Bangladesh Country Office, Dhaka, Bangladesh: 104.

Submitted: 22 Jan. 2015, Accepted: 5 Feb. 2015
Sectional Editor: Jeffrey Miller

O. Shahadat¹, T. Ahmed^{1,4}, A. K. Neogi¹,
T. Khan² & M. A. Khan³

¹ Department of Zoology, Jagannath University,
Dhaka 1100, Bangladesh

² Borshijorra Forest Beat, Sonapur Road,
Moulvibazar 3200, Bangladesh

³ Forest Ranger, Sathchari Forest Range, Habiganj,
Bangladesh

⁴ shaikot2023jnu@gmail.com

PLATE 11



Figure 1: A live banded Marquis (not collected) near Madhabkunda waterfall, Moulvibazar District, Bangladesh



Figure 2: A live Archduke (not collected) at Rampahar, Kaptai National Park, Chittagong Division, Bangladesh