

An Observation of Blue Duffer *Discophora necho* (Rhopalocera: Nymphalidae) Fed on Carrion of Blue Coral Snake *Calliophis bivirgatus* (Serpentes: Elapidae)

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ABSTRACT

Studies on the exploration of different food resources by adult butterflies in Indonesia have been relatively little attention. On 24 September 2022, a Blue Duffer *Discophora necho* has been observed feeding on carrion of snake (Blue Coral Snake *Calliophis bivirgatus*) in the remaining secondary forest in Batu Gane Village, South Sumatra Province. This observation is a very interesting record, due to the lacking information on different food sources by adult butterflies in Sumatra, particularly when a butterfly feeding on the carrion of a snake.

Keywords: Lepidoptera, diet, Rhopalocera, *Discophora necho*, *Calliophis bivirgatus*.

INTRODUCTION

Butterflies (Lepidoptera: Rhopalocera) are predominantly herbivorous as caterpillars whereas adults fed on a much wide variety of plants, particularly in the Oriental region (Robinson *et al.*, 2001). Certain plants protect butterfly larvae with a variety of indigestible, unpalatable, or poisonous chemicals, and any herbivores must overcome these defenses to feed on a particular plant species (Ek-Amnuay, 2012). The larvae of most species of butterflies will only eat the leaves of one or two certain species of plants, and they will die if they fed on the wrong type of plants (Hoskins, 2015).

Many studies have focussed on the role of larvae host plants specify in butterflies, but studies on the explanation of different food resources by adults in this context have been little known (Hamer *et al.*, 2006). In this paper, we report our observation of a butterfly (Blue Duffer *Discophora necho*) fed on the carrion of a snake (Blue Coral Snake *Calliophis bivirgatus*).

MATERIALS AND METHODS

On 24 September 2022, a medium butterfly has been observed in the remaining secondary forest in Batu Gane

Village (03°09'17"S, 102°37'32"E), Selangit Subdistrict, Musi Rawas District, South Sumatra Province. The area is c. 120 m above sea level. This butterfly has been observed feeding on a carrion of snake. The butterfly and snake were identified based on the morphological features in photographic images (Figures 1 and 2).

RESULTS AND DISCUSSIONS

The medium butterfly found in Batu Gane Village of South Sumatra Province is identified as Blue Duffer *Discophora necho* by having upperside of forewing with a pale blue interrupted subapical bands and blue submarginal (seen in the field), and the hindwing has two dark rounded brands at a region of the vein (Fig. 1). These characters are features of Blue Duffer based on appropriate field guides (Corbet & Pendlebury, 2020; Iqbal *et al.* 2021). Furthermore, the dead snake is identified as Blue Coral Snake by having the combination of dark dorsum; and red head, tail and ventral side (Fig. 2). Refer to the appropriate field guides, these characters are features of Blue Coral Snake.



Figure 1. Blue Duffer *Discophora necho* that fed on a Blue Coral Snake's *Calliophis bivirgatus* carrion, Batu Gane Village, South Sumatra Province, 24 September 2022 (©Muhammad Iqbal).



Figure 2. Blue Coral Snake *Calliophis bivirgatus* found dead in Batu Gane Village, South Sumatra Province, 24 September 2022 (©Muhammad Iqbal).

Observation of Blue Duffer fed on the carrion of Blue Coral Snake is interesting. Most of the butterflies feed on nectar that they obtain from flowers, and males of some species are fond of feeding on animal excreta and carrion (Kirton, 2014). Adler *et al.* (1982) listed the following sources other than flora or extrafloral nectaries: carrion, mud puddles, soil, dung, urine, crushed bodies of conspecifics, moist ashes from a campfire, saliva, exposed head of basking turtles, soap suds, lachrymal secretions and pus, perspiration, plain salt, blood, frog-hopper larval secretion, aphid honeydew, nectar gland secretion of lycaenid larvae, rotten fruit, sound fruit, cocoa seeds, fermented milk, rotten cheese, borage plants, tree sap, red wine, ink, honey, and pollen steeped in nectar, damp walls, floors, and ceiling of abandoned, crumbling cement structures, owl pellets, wet rocks, certain woods in the form of prepared and exposed timber, bird droppings, fungi, and certain withered plants from which pyrrolizidine alkaloids are obtained.

Blue Duffer is uncommon species, and it is reported as an extremely rare species in the Malay Peninsula (Corbet & Pendlebury, 2020). In Borneo, this species was reported to fed on plantain squirell carcass (Adrus & Rahim 2018). The observations of feeding on the carrion of

snake in Sumatra and plantain squirrel carcasses in Borneo by Blue Duffer must be provided salts and nutrients in the form of proteins and amino acids. Carrion contains proteins and amino acids, and some butterfly species show preferences for these components in the context of nectar feeding and puddling (Beck *et al.*, 1999; Boggs & Dau, 2004; Molleman & Midgley, 2009).

Due to the lacking information on different food sources by adult butterflies in Sumatra, a record of Blue Duffer fed on the carrion of Coral Blue Snake is very important information to fill a gap of knowledge. Further studies are needed in the future to learn about different food resources of adult butterflies, particularly in Sumatra, where tropical rainforests are well known as the center of insect diversity.

CONCLUSIONS

An observation of Blue Duffer *Discophora necho* (Rhopalocera: Nymphalidae) fed Carrion of Blue Coral Snake *Calliophis bivirgatus* (Serpentes: Elapidae) on 24 September 2022 in Sumatra is a very interesting record. Many studies have focussed on the role of larvae host plants specify in butterflies, but studies on the explanation of different food resources by adult context have been little known.

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