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First Record Catius Rona Hedge Blue *Udara rona catius* (Fruhstorfer, 1910) (Lepidoptera: Lycaenidae) in Southern Sumatra, Indonesia

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ABSTRACT

An individual of the Catius Rona Hedge Blue *Udara rona catius* (Fruhstorfer, 1910) was found and photographed on 28 April 2018 in Jambul Highlands, South Sumatra province, Indonesia. After photographed, the butterfly was identified using major references. This incidental finding of *Udara rona catius* is a first record for southern Sumatra. The potential host plants of *U. rona catius* in Jambul Highlands are plants from family Euphorbiaceae (*Aporosa* sp., *Cleoxylon* sp., *Croton* sp., *Endospermum* sp., *Macaranga* sp. and *Phyllanthus* sp.) and Fagaceae (*Castanopsis* sp., *Lithocarpus* sp. and *Quercus subsericea*).

Keywords: Distribution, high elevation, Rhopalocera, South Sumatra, *Udara rona catius.*

INTRODUCTION

The family Lycaenidae are usually small to medium sized butterflies that comprise over 5.000 species (Holloway *et al.*, 2012). Recently, this family clasificatied into four subfamilies (Poritinae, Miletinae, Curetinae and Lycaeninae), and some of them with long tails, whilst others have “carnivorous” early stages, where the catterpilars feed or mealing bugs, coccids and aphids, instead of leaves of plants (Khoon, 2010). Most species are tropical and capable of rapid, darting flight and a large number are forest-dependent species (Scoble, 1992; Khoon, 2010).

One of subfamily of family Lycaenidae in Indonesia is subfamily Lycaeninae. This subfamily is a well known “blues”, by which the family Lycaenidae is known in general (Parsons, 1999). Most of butterflies of subfamily Lycaeninae are small and delicate butterflies, with a number of them sporting long elegant tails (Khoon, 2010). As other butterflies in family Lycaenidae, the butterflies from subfamily Lycaeninae most only be found in the bright sunshine, but they occur in variety localities, from sea-shore to jungle, and open country, up to over 5.000 feet (c. 1.500 m) above sea level (Fleming, 1989).

The genus *Udara* are small blue butterflies of the Lycaenopsis group of subfamily Lycaeninae that eyes rather small and hairy, palpi with second segment more or less shaggy, wing shape only weakly sexually dimorphic, forming cell slightly longer than half the wing

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(Eliot & Kawazoe, 1983). This genus is distributed from India, Sri Lanka, Southeast Asia, Japan, Australia, Papua New Guinea, and to Solomon island (Eliot, 1978; Eliot & Kawazoe, 1983; Corbet & Pendlebury, 1992). The Rona Hedge Blue *Udara rona* (Grose-Smith, 1894) is one species of genus *Udara*, distributed from West Malaysia, Sumatra, Java, Sulawesi, Moluccas and New Guinea (Eliot & Kawazoe, 1983; Corbet & Pendlebury, 1992; Parsons, 1999). One of subspecies, the Catius Rona Hedge Blue *Udara rona catius* (Fruhstorfer, 1910) is occur in Sumatra. Unfortunately, the record of *U. rona catius* in Sumatra is limited. Here, we report recent record of *U. rona catius* from Jambul Highlands, South Sumatra Province, Indonesia. This record is a constitute first record for southern Sumatra.

MATERIALS AND METHODS

On 28 April 2018, a fieldwork to Jambul Highlands was carried out to a biodiversity assesment purpose. The site is Talang Pisang village of Jambul Highlands (04°04'45"S, 103°20'48"E), Jarai Subdistrict, Lahat District, South Sumatra Province. The altitude of Jambul Highlands is about 2.000 m above sea level. Whitten *et al.* (2000) determined these altitude zones (1.200 to 2.100 m) as lower montane forest in Sumatra. Unfortunately, the butterfly were not collected because lacking of preservation materials during field visit. This butterfy was photographed, and identified based on the distinct morphological characters with some photographic images (Figure 1 and 2). The butterfly was identified using selected references (Eliot & Kawazoe, 1983; Corbet & Pendlebury, 1992; Parsons, 1999; Schroeder 2020).

RESULTS AND DISCUSSIONS

The small blue butterfy from Jambul Higlands is determined as Hedge Blue or genus *Udara* by its small size and blue colour on upperside of wing in male. This butterlfly has violet-blue in upperside wings, with the forewing border a thread and the the hindwing without marginal spots; and on the underside, the markings are rather small (Figure 1 and 2). This species could be misidentified with *Udara cardia* and *Udara dilecta*. The butterfly from Jambul Highlands is separated from *U. cardia* by lacking darker spots in hindwing beneath; and unrecognized as *U. dilecta* because *U. dilecta* has pale blue colour on upperside wings. Based on the characters above and refer to approriate references (Eliot & Kawazoe, 1983; Corbet & Pendlebury, 1992; Parsons, 1999; Schroeder 2020), the butterfly found in Jambul Highlands is identified as a male of *U. rona*.

There are two subspecies of *U. rona*, *U. rona catius* (Fruhstorfer, 1910) and *U. rona rona* (Grose-Smith, 1894) (Eliot & Kawazoe, 1983). The subspecies found in Sumatra is *U. rona catius*, and this subspecies also occur in West Malaysia and Java (Eliot & Kawazoe 1983, Corbet & Pendlebury 1992). The *U. rona catius* was reported occur in Sumatra from specimen collected in North Sumatra, or said "No. Sumatra", without further details on specific location (Fruhstorfer, 1910). Eliot & Kawazoe (1983) designate this specimen as lectotype of *catius* a male in BMNH labelled "/Type [red]/N.O. Sumatra Martin coll. H. Fruhstorfer/CMB i.95/*catius* Frhst. [in Fruhstorfer's hand]/" with lacks an abdomen. No elevation information provided for specimen of *U. rona catius* from Sumatra in BMNH. Corbet Pendlebury (1992) informed that three species of *Udara* in Malay Peninsula (*U. coalita*, *U. rona* and *U. toxopeusi*) occur in heights above 5.000 feet (c. 1.500 m above sea level). A specimen from

collected from Java was reported from Pengalengan in 4.000 feet (Eliot & Kawazoe, 1983). The finding of *U. rona catius* from Jambul Highlands convinced that *U. rona catius* is an high elevations species. The high elevation of habitats of *U. rona catius* could be a reason why this butterfly rarely reported in Sumatra.

Figure 1. Dorsal view of male *U. rona catius* found in Jambul Higlands, South Sumatra Province, 28 April 2018 (©Doni Setiawan).

Figure 2. Underside of male *U. rona catius* collected in Jambul Higlands, 28 April 2018 (©Doni Setiawan).

No information available on host plants of *U. rona catius* in its distribution range (Eliot & Kawazoe, 1983; Corbet & Pendlebury, 1992; Robinson *et al.*, 2001). Based the vegetation survey conducted in Jambul Highlands (Pragustiandi, 2020), and summarized host plants of genus *Udara* by Robinson *et al.* (2001), the potential host plants of *U. rona catius* in Jambul Highlands are Euphorbiaceae (*Aporosa* sp., *Cleoxylon* sp., *Croton* sp., *Endospermum* sp., *Macaranga* sp. and *Phyllanthus* sp.) and Fagaceae (*Castanopsis* sp., *Lithocarpus* sp. and *Quercus subsericea*).

As one of largest family of butterflies (approximately one-third of the total number of species of butterflies in the Oriental region), it is possible that a number of species and subspecies of family Lycaenidae remain to be discovered and described (d'Abrera, 1986). Further surveys and specimen collections are needed to improve better understanding of spatial distribution of familu Lycaenidae in Sumatra, particularly in area rarely visited, such as lower mountain forest. Recent surveys of butterflies in lower mountain forest of southern Sumatra have been fileld a gap on blank information of butterflies in Sumatra (Iqbal *et al.*, 2020; Setiawan *et al.*, 2020).

CONCLUSIONS

An individual of *U. rona catius* was found in Jambul Highlands of South Sumatra Province on 28 April 2018. In Sumatra, this species previously only known from North Sumatra in 1910. The recent finding of *U. rona catius* represent a first record in southern Sumatra. The potential host plants of *U. rona catius* in Jambul Highlands are plants from family Euphorbiaceae (*Aporosa* sp., *Cleoxylon* sp., *Croton* sp., *Endospermum* sp., *Macaranga* sp. and *Phyllanthus* sp.) and Fagaceae (*Castanopsis* sp., *Lithocarpus* sp. and *Quercus subsericea*).

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