

SHORT COMMUNICATION

RECORD OF THE GIANT IMPERIAL *Purlisa gigantea* DISTANT, 1881 (LEPIDOPTERA: LYCAENIDAE) IN DEMPO MOUNTAIN, SOUTH SUMATRA, INDONESIA

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ABSTRACT

A specimen of the Giant Imperial *Purlisa gigantea* Distant, 1881 (Lepidoptera: Lycaenidae) was collected on 5th February 2020 from lower Dempo Mountain, South Sumatra Province, Indonesia and preserved. This finding is likely to represent the first record of *P. gigantea* in Dempo Mountain, South Sumatra Province, Indonesia.

Keywords: Dempo Mountain, distribution, Indonesia, *Purlisa gigantea*, Rhopalocera

ABSTRAK

Satu spesimen *Purlisa gigantea* Distant, 1881 (Lepidoptera: Lycaenidae) dari bawah kaki Gunung Dempo, Wilayah Selatan Sumatera, Indonesia telah dikumpulkan pada 5 Februari 2020 dan diawetkan. Penemuan ini ialah rekod pertama untuk *P. gigantea* di Gunung Dempo, Wilayah Sumatera Selatan, Indonesia.

Kata kunci: Gunung Dempo, taburan, Indonesia, *Purlisa gigantea*, Rhopalocera

Lycaenid butterflies or Family Lycaenidae are small to medium-sized butterflies that comprise over 5,000 species (Holloway et al. 2001). This family approximately one-third of the total number of butterflies in the Oriental region (the fauna region defined by the southern watershed of the Himalayan range, thence eastwards south of a line running through China, Japan, South to Weber's line which marks the western boundary of the Sahul shelf), and it is possible that an additional number of species and races may remain to be discovered and described (D'Abrera 1986; Fleming 1983). Adult butterflies of this family usually have the full complement of six fully developed legs for walking, and many species are capable of rapid, darting flight and a large number are forest-dependent species (Khoon 2010).

Purlisa is a monotypic genus of Family Lycaenidae consisting of only single species, Giant Imperial *Purlisa gigantea* (Corbet & Pendlebury 1992; D'Abrera 2001). This species has been reported from Thailand, Peninsular Malaysia, Singapore, Sumatra and Borneo (Ballmer 2008; Corbet & Pendlebury 1992; D'Abrera 1986, 2001). Although it has been reported from Sumatra, its status needs further clarification. In this paper, based on our finding of a single specimen of *P. gigantea* from lower Dempo Mountain, South Sumatra, we revisited the status of *P. gigantea* in Sumatra.

A specimen of lycaenid butterfly has been sampled using sweep net on 5 February 2020 in Kampung Empat village, Dempo Selatan subdistrict, Pagar Alam district, South Sumatra Province, Indonesia (4°02'83"S, 103°08'99"E) (Figure 1). The site is a lowland mountain forest bordering with a tea plantation in Dempo Mountain. This mountain is the largest in southern Sumatra. The vegetation described by Setiawan et al. (2020) for this habitat is the height canopy of various plants, including *Ficus* spp., *Clibadium surinamensis*, *Pandanus* sp., *Alsophila junghuhniana*, *Litsea* sp., *Lithocarpus* sp., *Schima wallichii* and *Vanda* sp. The altitude is 1,600 m above sea level, an area defined as a lower montane forest in Sumatra range 1,200 – 2,100 m (Whitten et al. 2000). The specimen was preserved immediately after sampled (Figure 2a) and deposited in the biological museum of the Department of Biology of Sriwijaya University, with the collection number Musbio/En/Coll.01.05022020 (Figure 2b & 2c). This lycaenid butterfly was identified to species level following selected butterfly guides. On 16-19 August 2020, a revisit to Dempo Mountain has been carried out, but unfortunately, no further specimen of *P. gigantea* was successfully recorded. Up to this, only a single specimen of this species collected from Dempo Mountain, South Sumatra.

A lycaenid butterfly sampled in lower Dempo Mountain has 55 mm wingspan and 30 mm forewing; having shining blue upperwing, black at apical half of forewing, and with a broad black border of hindwing; underwing has grayish with inwardly diffused brown postdiscal based on both wings; hindwing has a long ciliate and a short tail (Figure 2). The sizes and characters are fitted well for *P. gigantea* as described in butterflies guides (Corbet & Pendlebury 1992; D'Abrera 1986, 2001; Ek-Amnuay 2012; Fleming 1983). This butterfly was sampled when perching on mistletoe *Helixanthera* sp. (cf. *Helixanthera cylindrica*). Ballmer (2008) was reported *P. gigantea* ovipositing on mistletoe *Helixanthera cylindrica*, which suggests this plant is significant as the hostplant.

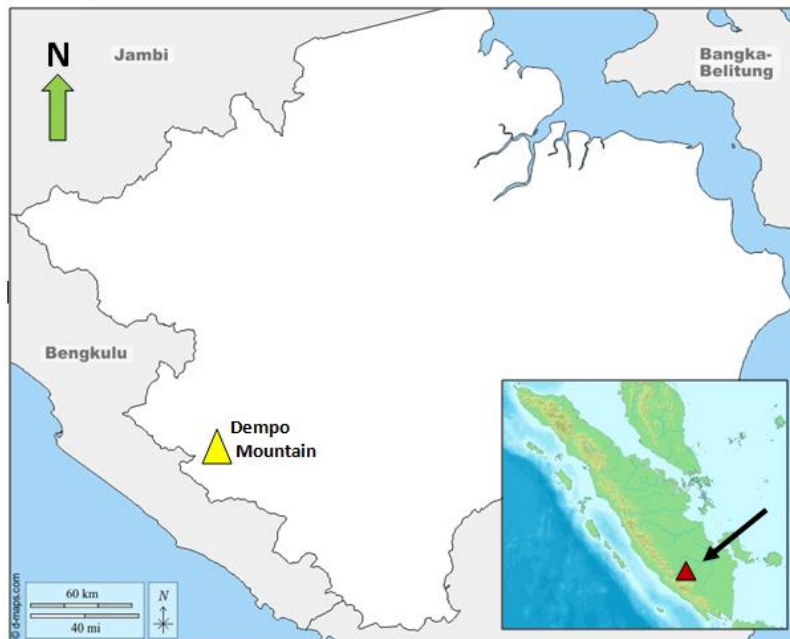


Figure 1. The location where *P. gigantea* sampled in Dempo Mountain, South Sumatra Province, Sumatra

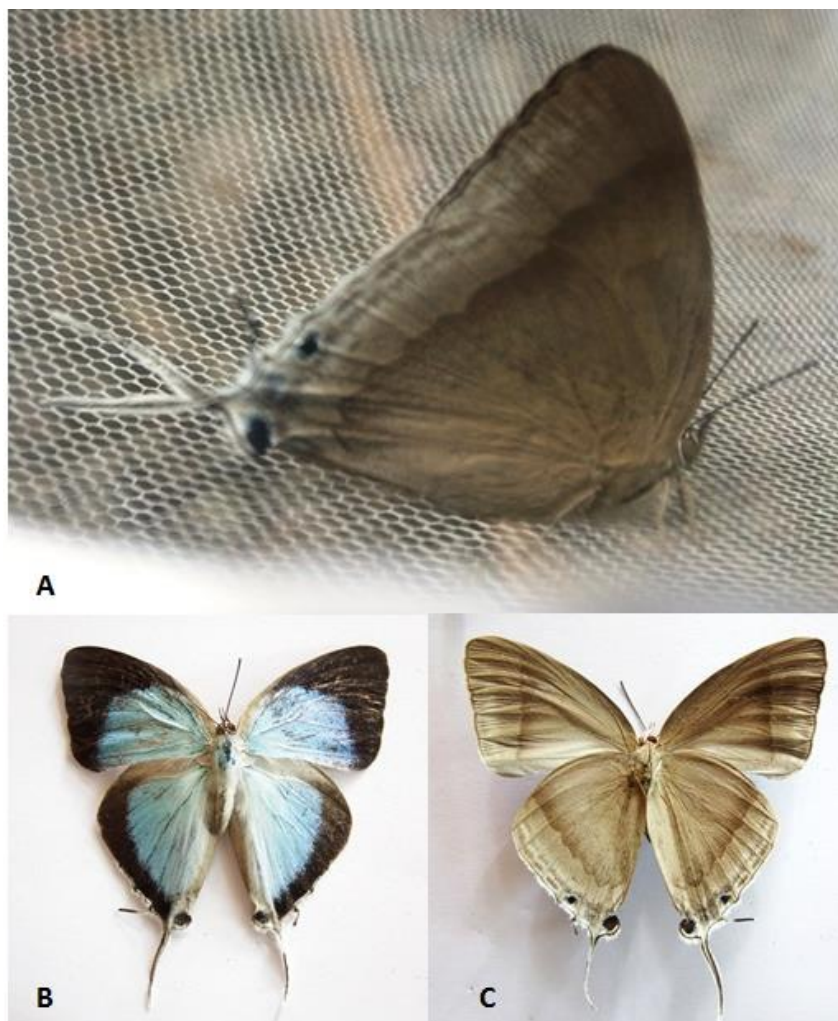


Figure 2. Specimens of *P. gigantea*; (a) life specimen, (b) dorsal view of preserved specimen, (c) ventral view of preserved specimen

Purlisa gigantea is described first time by Distant (1881) based on a specimen from “Penang”. After a few years later, Fruhstorfer (1904) described specimen *P. gigantea* from Sarawak, Malaysian Borneo, established Bornean population as separate subspecies *borneana*, different from previous specimens from “Perak”. In 1912, Fruhstorfer review lycaenids butterflies from Indo-Australian, and it is said *P. gigantea* (as *Tajuria gigantea gigantea*) from “Perak, Sumatra” (Fruhstorfer 1912). Based on the statements above, it is clear that “Perak” and “Penang” are states of Malay Peninsula (West Malaysia), not Sumatra as cited by Fruhstorfer (1912). This was the reason why de Niceville & Martin (1896) did not listed *P. gigantea* on their checklist of butterflies of Sumatra. Seki et al. (1991) stated *P. gigantea gigantea* occur in Thailand-Malay peninsula, Langkawi, Singapore, Bintan and Sumatra. The record of Bintan island needs further clarification. It is possible that Seki et al. (1991) presumed Penang (Malay Peninsula) as Pinang or Tanjung Pinang (a city in Bintan island, Sumatra), with very close similarity in pronunciation.

Previous records of *P. gigantea* in Sumatra remain unclear, particularly in mainland of the island. This species is a rare butterfly in Thailand and Peninsular Malaysia, and possibly extinct in Singapore (Ballmer 2018; Corbet & Pendlebury 1992; Ek-Amnuay 2012; Jain et al. 2018). Our record of *P. gigantea* in lower Dempo Mountain is likely to represent the first confirmed record of this species on the mainland Sumatra. In Sumatra, this species has been reported from Belitung island, Southeast of Sumatra, as *P. gigantea borneana* (Seki et al. 1991; Shiraiwa 2019). As the status of *P. gigantea* is rare in neighboring countries, the status in Sumatra is almost identical. Further study and specimen collections in the future are needed to give a better understanding of the status of *P. gigantea* in Sumatra.

Based on a single specimen of this species collected on 5 February 2020 from lower Dempo Mountain, (South Sumatra Province, Indonesia), the record of *P. gigantea* occurs in mainland Sumatra herein presented.

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