Scientific note

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RECORD OF *THAUMANTIS DIORES* AND *GEROSIS SINICA* BUTTERFLIES FROM BANGLADESH

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Bangladesh is rich in butterfly biodiversity and about 325 butterflies have already been recorded (Ameen and Chowdhury 1968, Baksha and Choudhury 1983, Baksha and Choudhury 1985, Alam and Ullah 1995, Chowdhury and Mohiuddin 2003, Hossain *et al.* 2003, Larsen 2004, Bashar *et al.* 2006, Razzak *et al.* 2007, Ahmad *et al.* 2009, Shefa and Hossain 2010, Islam *et al.* 2011, Habib *et al.* 2012, Chowdhury and Hossain 2013, Habib *et al.* 2013, Islam *et al.* 2013, Khandokar *et al.* 2013, Bashar 2014, Khan *et al.* 2014, Hossain *et al.* 2014, Hossain, 2014 a,b and Neogi *et al.* 2014).

IUCN Bangladesh initiated "Updating Species Red List of Bangladesh" by revising the previous Red List which was prepared in the year 2000. This is for the first time that butterflies have been included in the Red list of Bangladesh. It has been decided to study the present status of the taxon, their abundance, population size, GPS coordinate, habitat condition and their threats. Accordingly, survey work was conducted to different areas of Bangladesh for collecting information in a view to strengthen the existing data. Thanchi is hilly area and situated in Bandarban hill district of Bangladesh. It has scattered forests of mixed-evergreen type. Important tree species include *Ficus* sp., *Bursera serrata*, *Syzygium* sp., *Michelia champaca,* etc. (Islam *et al.* 2010). The main river is the Sangu (Shankha) has traversed the forest area. This forest harbour unique flora and fauna including enormous number of butterflies (District Statistics-Bandarban 2013).

During the present survey (29 March to 31 March 2014) a total of 21 species of butterflies under 8 families were recorded from Thanchi of Bandarban district. Out of these recorded butterflies, a photonics butterfly, Jungle Glory (*Thaumantis diores* Doubleday 1845) was rediscovered from Thanchi (21°48.932' N 92°26.299' E - 21°48.920' N 92°26.364' E, Plate 1) after 132 years of its last record (Marshall and Niceville 1883). This species was described first by Doubleday (1845) from Sylhet and later Marshall and Niceville (1883) from the same geographical location in Bangladesh. The forewing of Jungle Glory is 95-

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115 mm in length. Upper sides of the wings are dark brown, with a prominent large iridescent blue discal patch (Plate 2). It has characteristic jerky flight through the foliage and branches. This species has also been recorded from India, Laos, Myanmar, Nepal, Thailand and Vietnam (Evans 1932, Talbot 1978, Kehimkar 2008, Inayoshi 2015). Scientists from Japan and China showed that wings of Jungle Glory contain photonic structures that are effective solar energy collectors (Li Bo *et al.* 2004, Han *et al.* 2009). This photonic structures is known to be the best structural models in the design of photoanodes for dye-sensitized solar cell (DSSC) to improve solar energy conversion efficiency (Li Bo *et al.* 2004, Han *et al.* 2009).

The Sundarbans Reserve Forest (SRF) is the largest mangrove forest in the world (latitude 21° 27′ 30″ and 22° 30′ 00″ North and longitude 89° 02′ 00″ and 90° 00′ 00″ East) and with a total area of 10,000 km^2, 60% of the land lies in Bangladesh and the rest in India (Hossain 2014a). This forest is a heaven of unique flora and fauna including huge number of different insects. It is known that insects including bees and butterflies play a pivotal role in maintaining the mangrove ecosystem by pollination. So far a total of 38 species of butterflies have been identified in this mangrove forest (Chowdury 2004 and Hossain, 2014a,b). Besides, many research works have been conducted on different aspects of vegetations. The major plants species include khulshi (*Algeciras corniculatum*), goran (*Ceriops decandra*), baen (*Avicennia officinalis*), keora (*Sonneratia apetala* and *S. acida*), gewa (*Excoecaria agallocha*) and passur (*Xylocarpus mekongenesis*). In addition, there are many herbs, shrubs and climbers such as baoli lata (*Sarcolobus globosus*), asam lata (*Mikania scandens*), Iswarmul (*Aristolochia* sp.), dodhi lata (*Tylophora indica*), akond (*Calotropris procera*), wedellia (*Wedelia chinensis*, *W. biflora),* hargoza (*Acanthus illicifolius*) and Ipomoea (*Ipomoea illustris*) (Hussain and Acharya 1994, Biswas *et al.* 2007, Iftekhar and Saenger 2008) which are also good attractants for various butterflies, particularly for nectar collection and egg laying (Hossain 2014a).

During the survey (24 to 28 October, 2014) of the IUCN Red List team, a butterfly White Yellow-breasted Flat (*Gerosis sinica* Felder and Felder 1862) was recorded from Supoti area of Sundarbans, Bangladesh (Plate 3). The *Gerosis sinica* is a rare butterfly species and it's a first record from Bangladesh. The forewing of the butterfly is 35-45 mm in length (Plate 4). Forewings with discal white patch in space 1 and 2 that extended to dorsum and hindwings are with a broad white transverse medial band. The Supoti area is situated at the eastern border of the Bangladesh Sunderbans (N 22°02.932´ E 89°49.646´) and is covered by dense forest. This species has also been recorded from India, Borneo, Myanmar, Malaysia, Singapore, Thailand and Vietnam (Inayoshi 2015, IFB 2015). It has been reported that this butterfly species prefers dense forested areas and rests usually under a leaf and hardly seen on flowers. The larval host plant and habitat of the butterfly species need to explore immediately. In this approach, long term study is very much essential to find out more specimens of

the butterflies. Initiative should also been taken to identify the specific host plants and take necessary measures for increasing the population of the butterfly species.

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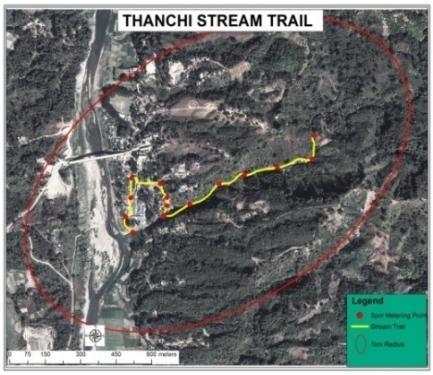

Plate 1. Map of the study area of Thanchi

Plate 2. *Thaumantis diores* at Thanchi, Bandarban

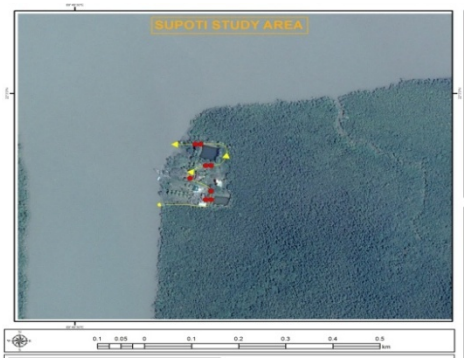

Plate 3. Map of the study area of Supoti, Sundarban

Plate 4. *Gerosis sinica* at Supoti, Sundarban

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