

**NEW RECORD OF HASORA ANURA (DE NICÉVILLE, 1889) (INSECTA:  
LEPIDOPTERA: HESPERIIDAE) IN BANGLADESH**

Dipto Biswas<sup>1</sup>, Ashikur Rahman Shome<sup>1</sup>, Md. Mazaharul Islam<sup>2</sup>, Tanvir Mia<sup>1</sup>,  
Abdul Halim Mirza<sup>1</sup>, Md. Mahabub Alam<sup>1\*</sup>

*Faculty of Biological Sciences, Department of Zoology, University of Dhaka  
Dhaka 1000, Bangladesh.*

Bangladesh covers Indo-Himalayas and Indo-China sub-regions which make the country as transitional zone for both flora and fauna among the Southeast Asia (Stanford 1991 and IUCN Bangladesh 2015). This country has also endowed with evergreen to mixed-evergreen hill forests, deciduous forests and mangrove forests (Khan 2008 and Mukul 2008). These forest habitats offer a shelter to many insect species including butterfly (Larsen 2004, Chowdhury & Hossain 2013, Habib *et al.* 2013, Bashar 2014 and Hossain *et al.* 2015). For instance, Larsen (2004) made a checklist of 311 species of butterflies in Bangladesh with another 116 species to be expected. A total of 305 species of butterflies have been assessed by IUCN Bangladesh (2015). Chowdhury & Hossain (2013) documented 225 species of butterflies by photographic evidence but this list may exceed to 400 species. Ahmad *et al.* (2009) compiled 148 species and Shihan (2015) reported some noticeable range extended species from author study site. Furthermore, Bangladesh is experiencing the age of discovery in butterfly research. Many new records have been confirmed from Bangladesh in recent years and this process is still going on (Shahadat *et al.* 2015, Rahman *et al.* 2016, Sadat *et al.* 2016, Neogi *et al.* 2018, Dey *et al.* 2020 and Paul *et al.* 2021).

Satchari National Park of northeastern Bangladesh is consists of mixed evergreen forest with many hills, streams, valleys and plain lands (Mukul 2008 and Khan 2018). This area is rich with flora (Arefin *et al.* 2011 and Chowdhury *et al.* 2004) as well as fauna with at least 195 species of butterflies has been recorded from the site (Hasan *et al.* 2018). In addition, presence of many host plants and available foods has made this area as an ideal habitat for many butterfly species (Bashar 2014). *Hasora anura* was previously recorded from Sikkim, Khasi hill, Mishmi hill, Naga Hills and Manipur of India (Evans 1949). These parts of India are closer to northeastern part of Bangladesh and has

\*Author for corresponding: <mahabub.zoo@du.ac.bd>, <sup>2</sup>Department of Oceanography, University of Chittagong, Chittagong, Bangladesh.

international border with the country (Banglapedia 2015). Furthermore, their appears to be a broad similarity between the hilly forest habitats of India and mixed evergreen hilly forests of northeastern Bangladesh (Slik *et al.* 2018). These similarities might provide an opportunity to share *H. anura* in northeastern Habiganj district of Bangladesh. Literature records indicated that *Hasora anura* has not previously been recorded in Bangladesh. Here in, based on the photographic evidence, the authors described it as new country record from Satchari National Park of northeastern Bangladesh.

*Distribution:* The genus *Hasora* (Moore, 1881) has three species in Bangladesh: *Hasora chromus* (Cramer 1780), *Hasora badra* (Moore, 1857) and *Hasora vitta* (Butler 1870) (Chowdhury & Hossain 2013; IUCN Bangladesh 2015). *H. chromus* and *H. badra* were distributed in forested areas of Bangladesh (Chowdhury & Hossain 2013, IUCN Bangladesh 2015) while the distribution of *H. vitta* is unknown to the country (IUCN Bangladesh 2015). *Hasora anura* (de Nicéville 1889), on the other hand, has a distribution from North India to Thailand, Vietnam, China, Taiwan Myanmar (Chiba 1995, Evans 1949, Hsu *et al.* 2005 and Chiba 2009). This species has also four subspecies: *Hasora anura anura* (de Nicéville, 1889), *H. a. danda* (Evans 1949), *H. a. china* (Evans 1949) and *H. a. taiwana* (Hsu *et al.* 2005) (Chiba 1995 and Chiba 2009). Later, Chiba (1995) concluded *Hasora anura anura* and *H. a. danda* are conspecific and pointed out that the diagnostics characters of *H. a. danda* used by Evans match with those of *H. a. anura*.

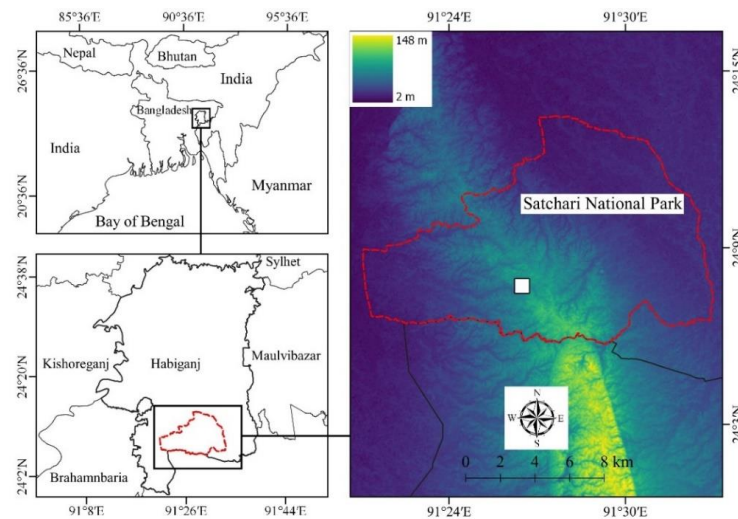


Fig. 1. Map of study area. White rectangle indicated the new record in Satchari National Park, Habiganj district, Bangladesh.

**Observation:** On 08 March 2021, an individual of *Hasora anura* was discovered with undetermined sex from Satchari National Park (SNP) (24.12° N, 91 .44°E, and 75m) (Fig. 1). This individual was puddling on mud followed by resting on student dormitory wall about 1.5–2m above the ground. The specimen was not collected following the rules of Wildlife Conservation and Security Act 2012. Upon spotting the animal, photograph was taken with a Nikon D7100 DSLR Camera with 70–300 mm VR lens for identification and deposited in the Professor Md. Kazi Zaker Husain Museum, Department of Zoology, University of Dhaka, Bangladesh (photographic voucher number BU001E). Later, species identity was confirmed according to Evans (1949) and (Kehimkar 2016). *Papilio nephelus* (Yellow Halen), *Jamides celeno* (Common Cerulean), *Papilio polytes* (Common Mormon) and *Junonia atlites* (Grey Pansy) were also observed near to *Hasora anura*.

**Identification:** *Hasora anura* matched the characteristics listed by Evans (1949) and Kehimkar (2016) as well, including dark brown underside with slaty purple glaze; underside of hind wing has a broad dark central band free from purple gloss; basal area of hind wing underside was darker than the outer area and the dark area was well-defined. White dot was not confirmed in the ventral side of the hind wings that also lack in some specimens of its conspecific *Hasora anura danda* (Chiba 2009) (Fig. 2). *Hasora anura* is the first record for Bangladesh, increasing to four the number of genera as well as species under the Hesperiiidae family. In addition, Bangladesh is second country for this new record after the India among South Asia; indicated that the known distribution of this species might be expanding among other South Asian countries.

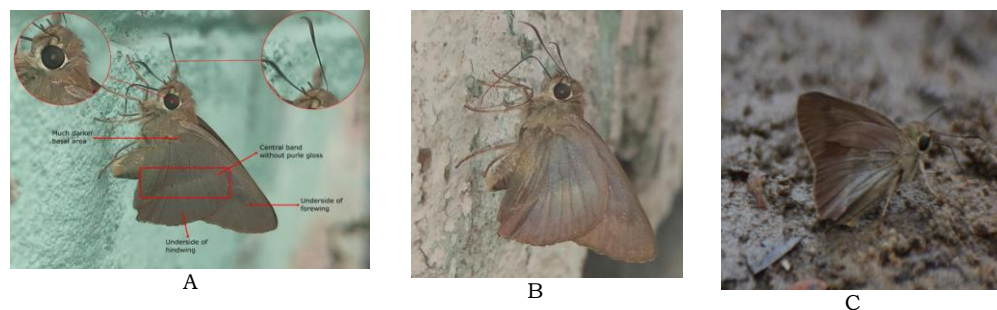


Fig.2. A. Marking with ID keys. B. *Hasora anura* resting on wall C. Mud-puddling behavior of *H. anura* from Satchari National Park, Habiganj district, Bangladesh. Photo by Dipto Biswas.

#### LITERATURE CITED

- AHMAD, M., KABIR, S.M.H., AHMED, A.T.A., RAHMAN, A.K.A., AHMED, Z.U., BEGUM, Z.N.T., HASSAN, M.A. and KHONDKER, M. (eds).2009. *Encyclopedia of Flora and Fauna of Bangladesh, Vol. 21(III)*. The Asiatic Society of Bangladesh, Dhaka, Bangladesh, 460 pp.

- AREFIN, K.M., RAHMAN, M.M., UDDIN, Z.M. and HASSAN, A.M. 2011. Angiosperm flora of Satchari National Park, Habiganj, Bangladesh. *Bangladesh Journal of Plant Taxonomy*. **18**(2): 117-140
- BANGLADESH WILDLIFE (CONSERVATION AND SECURITY) ACT .2012. Government of the People's Republic of Bangladesh, Gazette. **30** (25): 1-127.
- BANGLAPEDIA. 2015. National Encyclopedia of Bangladesh. Assessed on: 23 June 2021. Available at: [http://en.banglapedia.org/index.php/Habiganj\\_District](http://en.banglapedia.org/index.php/Habiganj_District).
- BASHAR, M. 2014. *Butterflies of Bangladesh: A broad approach for nature lovers*. Biodiversity Conservation Trust Fund Publications, Dhaka, Bangladesh, 514 pp.
- CHIBA, H. 1995. A revision of the subfamily Coeliadinae of the world (Lepidoptera: Hesperiiidae). PhD Thesis, University of Hawaii, Honolulu, Hawaii.
- CHIBA, H. 2009. A revision of the subfamily Coeliadinae (Lepidoptera: Hesperiiidae). *Bulletin of the Kitakyushu Museum of Natural History and Human History Series A*. **7**: 1-102.
- CHOUDHURY, J.K., BISWAS, S.R., ISLAM, S.M., RAHMAN, O. and UDDIN, S.N. 2004. Biodiversity of Shatchari reserved forest, Habiganj. IUCN Bangladesh country office, Dhaka, Bangladesh, 30 pp.
- CHOWDHURY, S.H. and HOSSAIN, M. 2013. *Butterflies of Bangladesh-A Pictorial Handbook* (Revised and enlarged version), Skylark printers, Dhaka, Bangladesh, 260 pp.
- DEY, R., AL HAIDAR, I.K., RUDRA, S. AND ISLAM, M.R. 2020. First record of Banded Lineblue *Prosotas aluta* Druce, 1873 (Insecta: Lepidoptera: Lycaenidae) from Bangladesh. *Journal of Threatened Taxa*. **12**(4): 15507-15509.
- EVANS, W.H. 1949. *A Catalogue of the Hesperiiidae from Europe, Asia and Australia in the British Museum (Natural History)*. Trustees of the British Museum, London, UK, 1876-1956.
- HABIB, M.S.A., ISLAM, M.S., BATTACHATJEE, A., JEWEL, M.M., HAQUE, S.N., IQBAL, K.H., SAIF, S. and CHOWDHURY, M.A. 2013. *Butterflies of Bangladesh. Inventory-second phase*. Jiban Bikash karjocrom, Dhaka, Bangladesh, 95 pp.
- HASAN, M.A.U. 2018. An inventory of butterfly species in relation to food sources and climatic factors influencing their diversity and richness in a semi evergreen forest of Bangladesh. *Arthropods*. **7**(3): 53-68.
- HOSSAIN, M.M., HABIB, M.S.A., ISLAM, M.S., AKTER, F., KHAN, S.H., SULTANA, S. and RIMA, N. 2015. Record of *Thaumantis diores* and *Gerosis sinica* butterflies from Bangladesh. *Bangladesh Journal of Zoology*. **43**(2): 321-326.
- HSU, Y.F., TSUKIYAMA, H. and CHIBA, H. 2005 *Hasora anura* de Nicéville from Taiwan (Lepidoptera: Hesperiiidae: Coeliadinae) representing a new subspecies endemic to the island. *Zoological Studies-Taipe*, **44**(2): 200-209.
- INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE BANGLADESH. 2015. *Red List of Bangladesh Volume 7: Butterflies*. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, 400 pp.
- KEHIMKAR, I. 2016. *The book of Indian Butterflies*. Bombay Natural History Society, 497 pp.

- KHAN, M.M.H. 2008. *Protected Areas of Bangladesh- A. Guide to Wildlife*. Nishorgo Support Program, Bangladesh Forest Department, Dhaka, Bangladesh, 304 pp.
- KHAN, M.M.H. 2018. *A Photographic Guide to Wildlife of Bangladesh*. Arannayk Foundation, Dhaka, Bangladesh, 488 pp.
- LARSEN, T.B. 2004. *Butterflies of Bangladesh- An Annotated Checklist*. IUCN Bangladesh Country Office, Dhaka, Bangladesh, 104 pp.
- MUKUL, S.A. 2008. Biodiversity Conservation Strategies in Bangladesh: The State of Protected Areas. *Tiger Pape.*, **34**(4): 28-32.
- NEOGI, A.K., ISLAM, M.J., SHALAUDDIN, M., MONDAL, A.C. AND HOSSAIN, S. 2018. The first record of The Blue Admiral *Kaniska canace* Linnaeus, 1763 (Nymphalidae: Lepidoptera) from Bangladesh. *ournal of Threatened Taxa*. **10**(10): 12429-12431.
- PAUL, P., ISLAM, S. and DEY, R. 2021. First record of *Lestranicus transpectus* (Moore, 1879) and *Graphium macareus* (Godart, 1819) (Insecta: Lepidoptera: Papilionoidea) in Bangladesh. *Revista Chilena de Entomología*. **47**(1):115-119.
- RAHMAN, M. S., AL HAIDAR, I.K., NEOGI, A.K., UL HASAN, M.A., RAHMAN, M.M. and IMAM, S.M.S. 2016. First record of six species and subspecies of butterflies (Insecta: Lepidoptera) in Bangladesh. *Journal of insect Biodiversity and Systemtics* **2**(3): 373-380.
- SADAT, M.N., NEOGI, A.K., RAHMAN, M.S. and MONDAL, A.C. 2016, Notes On Two Lycaenid Butterflies Confirm To Bangladesh. *Biolife*. **4**(1): 213-215.
- SHAHADAT, O., AHMED, T., NEOGI, A.K., KHAN, T. and KHAN, M.A. (2015) Notes on two Nymphalid butterflies new to Bangladesh. *Journal of Asian Biodiversity: Taprobanica*. **7**(4): 260-261.
- SHIHAN, T.R. 2015. Some Notable Records of Butterflies in Kaptai National Park, Rangamati District, Bangladesh. *Zoo's Print*. **30**(7): 4-5.
- SLIK, J.W.F., FRANKLINB, J., and ARROYO-RODRÍGUEZC, V. ET AL. 2018. Phylogenetic classification of the World's tropical forests. *PANS*. **115**: 1-6.
- STANFORD, C.B. 1991. The capped langur in Bangladesh: behavioral ecology and reproductive tactics (Vol. 26). *Karger Medical and Scientific Publishers*, XVIII + 180 pp.

(Manuscript received on 10 December, 2021 revised on 30 December, 2021)