



Three new butterfly records for peninsular India: Dusky Yellow-breasted Flat *Gerosis phisara* (Moore) (Hesperiidae), Common Gem *Poritia hewitsoni* Moore (Lycaenidae) and Great Nawab *Polyura eudamippus* (Doubleday) (Nymphalidae) from Similipal Hills, Odisha, India

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Similipal Hills ($21^{\circ}55'N$ & $85^{\circ}59'E$) in Mayurbhanj District of Odisha borders the states of Jharkhand and West Bengal, and harbours within its limits both a tiger reserve (with an area of 2750km^2) and a biosphere reserve (with an area of 5569km^2). The terrain is undulating and hilly, the altitude ranges from 300 to 1,200 m, and forest types range from dry deciduous and moist deciduous to semi-evergreen. Some consider Similipal as part of the Eastern Ghats (Sinha 1971), while others treat it as the south-eastern extension of the Chota Nagpur Plateau (Ray 2005). The area falls under the province of Chhotanagpur in Deccan Peninsula bio-geographic zone (Rodgers &

Panwar 1988).

During the course of an ongoing study on butterflies initiated in March 2006, intensively covering seven forest ranges within the core area of Similipal Tiger Reserve, out of a total of 188 species recorded, three species hitherto known only from the Himalayan region and northeastern India, viz. Dusky Yellow-Breasted Flat *Gerosis phisara* (Moore) Hesperiidae, Common Gem *Poritia hewitsoni* Moore Lycaenidae and Great Nawab *Polyura eudamippus* (Doubleday) Nymphalidae were also encountered, which constitute significant new locality records and range extensions for peninsular India (Evans 1932; Wynter-Blyth 1957; Haribal 1992; Smith 1994; Kunte 2000; Kehimkar 2008). All three species were photographed in the field, while dead individuals of the last two were collected and deposited in the Regional Museum of Natural History, Bhubaneswar. Here, I describe the known distributional range of these species in India, the specific locality records during the present study, broad habitat types and microhabitats where observed, interesting ecological/behavioural observations, their flight periods and status in the study area (Fig. 1).

Dusky Yellow-breasted Flat *Gerosis phisara* (Moore) (Hesperiidae: Pyrginae) (Images 1 & 2)

This uncommon hesperiid is known within Indian limits only from the foothills of the Himalaya and northeastern India, ranging from Himachal Pradesh in the west to Arunachal Pradesh in the east (Evans 1949). There were three records during the course of this study. A freshly emerged individual was photographed on 26 August 2007 near Joranda FRH, Nawana North range on a flowering *Stachytarpheta* thicket. A second record on 20 July 2008 was from Satnalia, Pithabata range, where a rather worn individual was seen mud-puddling near a hill-stream. When disturbed, it flew swiftly and settled underneath a leaf, where it was photographed. The third record was that of a pale individual fluttering around, and which subsequently perched on a small *Dalbergia pinnata* near Chingudia, Upper Barakamura range. Interestingly, the food-plant of *G. bhagava*, its congener, is *Dalbergia lanceolaria* (Kehimkar 2008). However, despite a prolonged wait, no egg-laying was seen. It is probably a very rare resident in Similipal, with a brief post-monsoon flight period.

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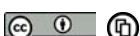
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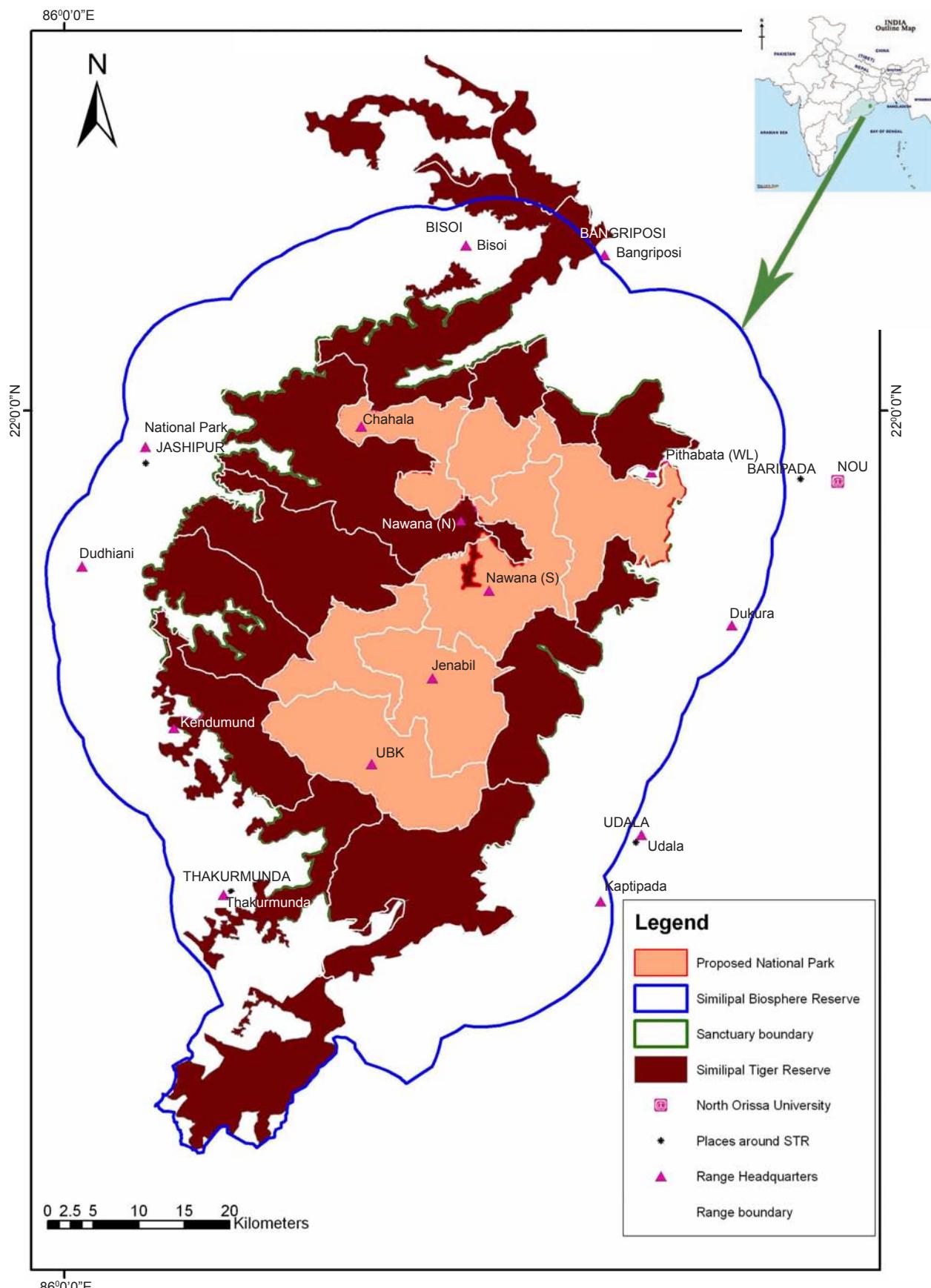


Figure 1. Similipal Biosphere and Tiger Reserve



Image 1. Fresh individual of Dusky Yellow-breasted Flat *Gerosis phisara*



Image 2. Dusky Yellow-breasted Flat *Gerosis phisara* on damp sand

Common Gem *Poritia hewitsoni* Moore

(Lycaenidae: Poritiinae) (Images 3 & 4)

This uncommon lycaenid is distributed from the Himalaya and northeastern India to Myanmar and Indo-China (Pinratana 1981). A handful of records from early October to November, were obtained during this study. On 02 October 2007, four individuals were seen during a two-hour walk along dense moist-deciduous and semi-evergreen forests in the Jenabil range of southern Simlipal, suggesting synchronous emergence. All were fresh males - one basking on a leaf at c. 1m height and which flew straight up to the canopy on being disturbed; one sitting with closed wings on a slushy road; and two lying dead, c. 2km away on the same forest road. Quite possibly, as Haribal (1992) has observed in

Sikkim, 'they are not seen easily as they presumably fly high among the trees and go unnoticed'. Possibly it is a rare resident with a brief flight period in Simlipal.

Great Nawab *Polyura eudamippus* (Doubleday) (Nymphalidae: Charaxinae) (Images 5 & 6)

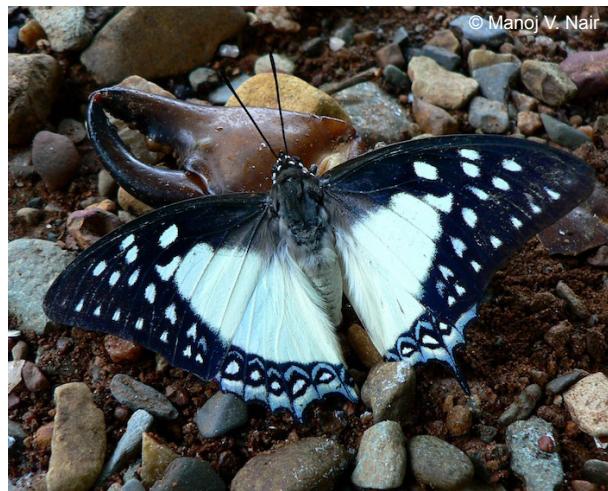
Within Indian limits, this spectacular nymphalid is known from Kumaon to Assam (Wynter-Blyth 1957; Kehimkar 2008). This study recorded 19 sightings from Jenabil, Upper Barakamura (UBK), Chahala and National Park ranges, mostly in and around hill-streams, all in semi-evergreen patches and once in an evergreen riverine patch inside moist deciduous forest. They flew very fast along roads and hill-streams, occasionally chasing one another. Mud-puddling individuals at UBK in March were seen mostly alone or in small groups. The largest group size recorded was



Image 3. Common Gem *Poritia hewitsoni* UN



Image 4. Common Gem *Poritia hewitsoni* UP

Image 5. Great Nawab *Polyura eudamippus* UNImage 6. Great Nawab *Polyura eudamippus* UP

a scattered cluster of nine individuals at Dhuduram, UBK in July 2009. Also seen once on dead crab remains and fresh elephant dung. They were wary but allowed close approach if one was persistent and returned to the same patch on being disturbed. Twice seen dead, run over by passing vehicles while mudpuddling on jeep-tracks. Possibly uses evergreen riparian corridors to spill out into the lower deciduous forests during rains, retreating again during summer to their evergreen habitats in the higher reaches. Thus, this species is most likely to be a localised resident in Similipal, not uncommon wherever they occur and has probably two broods—the first in which they emerge in early March, remaining on the wing till mid-May and the second lasting from July till mid-October.

Significance of these records

Apart from the fact that these records constitute the first instances of these species occurring outside the Himalayan foothills and northeastern India (thus forming important range extensions), there also exists a bio-geographical significance. Similipal Hills have long been known to be phytogeographically interesting with the presence of both Himalayan and southern Indian floral elements (Saxena & Brahmam 1989). Recent studies have highlighted this trend in other taxa like birds (Nair 2007, 2010) and herpetofauna (Dutta et al. 2009) as well, where northeastern Indian species have been recorded from this hill range. This study

extends the same pattern to butterflies and clearly emphasizes the importance of Similipal Hills as a repository of exceptional biodiversity, with a mixture of northeastern, discontinuously distributed, as well as autochthonous Indian elements. It also offers support to its putative role as a link habitat between northeastern India and the Western Ghats.

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