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### NOTE

#### ADDITION OF FOUR SPECIES TO THE BUTTERFLY CHECKLIST OF KALESHWAR NATIONAL PARK, HARYANA, INDIA

Sachin P. Ranade

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Four colorful butterflies—Dark Himalayan Oakblue *Arhopala rama* (Kollar, [1844]), Slate Flash *Rapala manea* (Hewitson, 1863), Gaudy Baron *Euthalia lubentina* (Cramer, [1777]), and Orange Oakleaf *Kallima inachus* Doyere, 1840—were recorded opportunistically, in the month of April 2005, at Kaleshwar National Park, Yamunanagar District,

Haryana.

The Kaleshwar National Park is situated in northeastern Haryana where the state shares a border each with Uttarakhand, Uttar Pradesh and Himachal Pradesh. The National Park comprises of 860km<sup>2</sup> area and its major area consists of Shivalik Hills. The forest mainly comprises deciduous flora. During a study of owl diversity, in the period 2004–2005, various beats and ranges of the National Park were visited on foot. By the first week of April 2005, there was the onset of summer with temperatures rising to around 35°C. The overall area was dry and hot but the ravines are called ‘Khol’ in the local language still had small water streams and a cool-pleasant ambiance. ‘Chikan khol’ (30.370624 N & 77.486735 E; Image 1) was one such destination favored by the Indian Eagle owl *Bubo bengalensis* for roosting and nesting. While studying the characteristics of this peculiar habitat, I recorded interesting flora and fauna around. Among the eye-catching members of the mud-puddling butterflies, a few were photographed, for example: Slate Flash *Rapala manea*, Orange Oakleaf *Kallima inachus*, Common Leopard *Phalanta phalantha*, Gaudy Baron *Euthalia lubentina*, Baronet *Symphhaedra nais*, Common Mormon *Papilio polytes* and Common

## ADDITION OF FOUR SPECIES TO THE BUTTERFLY CHECKLIST OF KALESHWAR NATIONAL PARK, HARYANA, INDIA

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Lime *Papilio demoleus*. While most of the butterfly species were identified, a couple of them remained unidentified including the Dark Himalayan Oakblue *A. rama*. The recent record of the Dark Himalayan Oakblue *A. rama* from Arunachal (Singh 2015) revived my interest. After comparison of my photographs with available photographs and literature, the identity of the Dark Himalayan Oakblue butterfly *A. rama* was confirmed (Images 2,3). My archive has a total of five individuals; two males and three females were photographed on 04 April 2005, along a 30m stretch of the stream. The individuals were taking salts on the wet, algae-covered rocks. It appears that the sighting and photographic records of Dark Himalayan Oakblue *A. rama* could be the first record for Haryana State. The Dark Himalayan Oakblue *A. rama* has been recorded from Jammu & Kashmir to Sikkim (Kehimkar 2008; Singh & Sondhi 2016). The recent nearest known distribution of this species is from Nainital, Bageshwar and Dehradun districts of Uttarakhand (Singh & Sondhi 2016). The known altitude preference of this species is mid elevation (900m) to high elevation (2,700m) of the Himalaya (Kehimkar 2008; Singh 2015), but Tytler (1915)

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**Image 1.** Chikan Khol, Kaleshwar National Park - a suitable habitat for butterflies in the harsh summer photographed on 04 April 2005.

mentioned the species in Manipur as common at low elevation. In my observations at the Kaleshwar National Park, the butterfly was observed at a lower altitude of about 300m. This suggests that apart from altitude, the factors like humidity and temperature may play an important role in its distribution. A possibility of local movements and migration also need to be studied.

The species Slate Flash *R. manea*, Orange Oakleaf *K. inachus* (Image 4) and Gaudy Baron *E. lubentina* (Image 5) are common in India, yet remain unreported from Haryana State as there is no comprehensive butterfly checklist available for the state. The Slate Flash *R. manea* has been recorded from all over India. The Orange Oakleaf *K. inachus* has its known distribution along the Himalaya, northeast as well as peninsular India. The Gaudy Baron *E. lubentina* is recorded from Himachal Pradesh to Arunachal Pradesh as well as in peninsular India. Its subspecies *Euthalia lubentina lubentina* is recorded from Haryana, Odisha, and Himachal Pradesh to northeastern India and West Bengal while the subspecies *Euthalia lubentina arasada* is recorded in the Western Ghats and peninsular India (Kehimkar 2008; Varshney & Smetacek 2015; Kunte et al. 2016). A butterfly survey in Kaleshwar National Park (Sethy &



**Image 2.** Dark Himalayan Oakblue *Arhopala rama* female mud-puddling 04 April 2005.



**Image 3.** Dark Himalayan Oakblue *Arhopala rama* & Slate Flash *Rapala manea* mud-puddling 04 April 2005.

Ray 2010) had recorded 35 species of butterflies but did not include these four species. My observations provide recent location and photographic records from Haryana for these species.

Butterflies are considered as indicators of diversity of vegetation and health of the ecosystem (Vu 2007; Nelson 2009; Bonebrake et al. 2010; van Swaay et al. 2012). But to utilize the knowledge, one needs to develop baseline information. The current available knowledge of butterfly fauna in Haryana is scanty and based only on opportunistic studies and amateur nature-lovers' knowledge. Planned and intensive surveys in Kaleshwar National Park and the whole of Haryana State would



Image 4. Orange Oakleaf *Kallima inachus* 04 April 2005.



Image 5. Gaudy Baron *Euthalia lubentina* mud-puddling 04 April 2005.

render a much higher diversity of butterflies.

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