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NOTE

A NEW LOCALITY RECORD OF THE RARE ANOMALOUS NAWAB *POLYURA AGRARIUS* (SWINHOE, 1887) (LEPIDOPTERA: NYMPHALIDAE: CHARAXINAE) FROM CENTRAL INDIA

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Polyura Billberg, 1820 butterflies are restricted to the Indo-Malayan/Australasian archipelago (Toussaint et al. 2015). *Polyura* contains 26 morphologically delineated species (sensu Smiles 1982). They are large, fast-flying butterflies that advertise typical patrolling, fighting, hill-topping behaviour, and preferably like to feed on carrion, dung, rotten

fruits and oozing sap. They are distributed from India to Fiji and from the Ryukyu Archipelago to south-eastern Australia (Toussaint et al. 2015). *Polyura agrarius* (Swinhoe, 1887) is more of an enigmatic species in terms of its taxonomic status and geographic distribution. Swinhoe (1887) first described *P. agrarius* under the genus *Charaxes* from Mhow and Assirghur (=Asirghar), Madhya Pradesh, India. Later on, Rothschild & Jordan (1899) lowered the status of *P. agrarius* to a subspecies of *P. bharata* Felder, 1867 (then *P. athamas* (Drury, 1773)) and treated it merely as the latter's pale dry seasonal form from southern India. Smiles (1982) followed Swinhoe (1887) and treated *P. agrarius* as a distinct species although he himself was not confident of its treatment and mentioned that there was a possibility that the latter was merely a form of *P. bharata*. Following this interpretation, subsequent authors like Bingham (1905), Evans (1932) and Wynter-Blyth (1957) treated *P. agrarius* merely as the pale southern Indian form of *P. bharata*. D'Abbrera (1985) was also uncertain about the validity of the species status of *P. agrarius* and wing measurement records given by Smiles (1982) which he thought were indeed likely to be misinterpreted subjectively. This taxonomic puzzle couldn't be solved, until recently when Toussaint et al. (2015) raised *P. agrarius* to species level on the basis of molecular studies.

A NEW LOCALITY RECORD OF THE RARE ANOMALOUS NAWAB *POLYURA AGRARIUS* (SWINHOE, 1887) (LEPIDOPTERA: NYMPHALIDAE: CHARAXINAE) FROM CENTRAL INDIA

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As a result of this taxonomic confusion, and the difficulty of field identification of *P. agrarius* and *P. bharata*, there is not much information available on the distribution, habits and habitat preferences of *P. agrarius* (Smetacek 1999). Yates (1935) reported the nominate species from Nilgiri District and Coorg. Smiles (1982) enlisted the localities for the distribution of *P. agrarius* within India as follows: Tiruchirappalli, Nilgiri, Coonoor, Kallar, Mysore (=Mysuru), Hyderabad, Mhow, Kumaon, Kullu, Dharamshala, and Orissa (=Odisha). The status of *P. agrarius* in the Nilgiri Hills seemed rare to Larsen (1987) as his records were based merely on three specimens he found only in Kallar. According to Gaonkar (1996) the distribution of *P. agrarius* in the Western Ghats did not extend up to Maharashtra State. The records from the past decade, however, (Tiple & Khurad 2009; Sharma 2012; Padhye et al. 2013; Patwardhan 2013, 2014) validate the occurrence of *P. agrarius* in Maharashtra. Smetacek (1999, 2012) confirmed the occurrence of *P. agrarius* in Kumaon Himalaya. Singh & Sondhi (2016) also reported *P. agrarius* to be rare in Garhwal. Literature review also helped to conclude that

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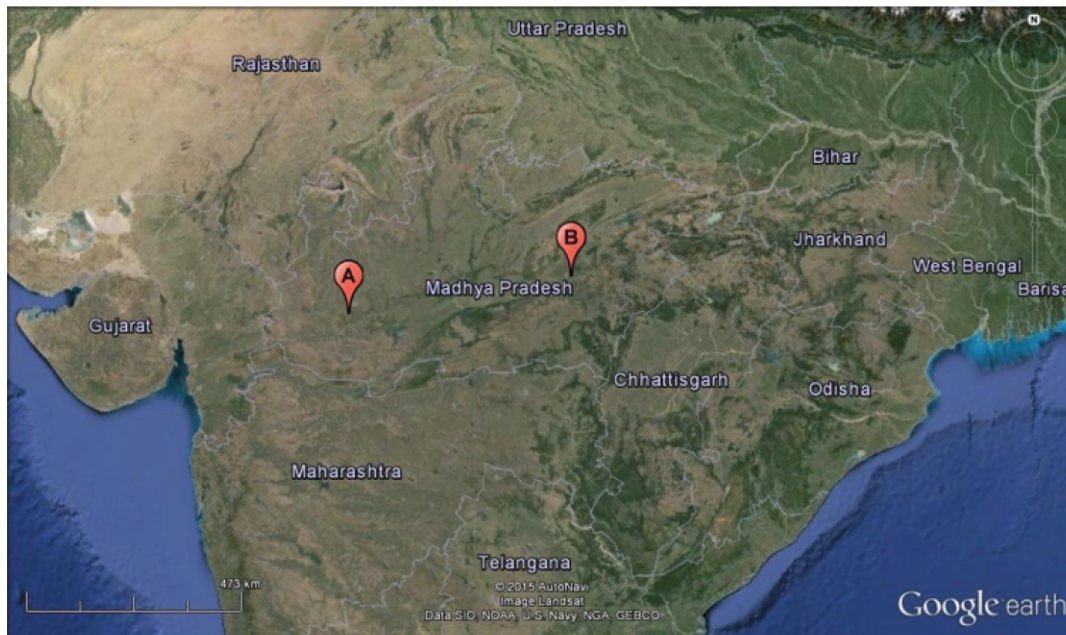


Image 1. Map showing old and new known localities of *Polyura agrarius* (Swinhoe, 1887) in Madhya Pradesh. Mhow, Madhya Pradesh (A); new locality from Dumna Nature Reserve, Jabalpur, Madhya Pradesh (B).

there is a paucity in the reports of *P. agrarius* from the central provinces (Madhya Pradesh and Chhattisgarh). Tiple & Ghorpadé (2012) gave a review based record of the nominate species from Achanakmar-Amarkantak Biosphere Reserve, Chhattisgarh and Madhya Pradesh; nevertheless, their personal observations pertained only to the specimens observed in Nagpur, Maharashtra. Chandra et al. (2014) contradictorily showed no records of *P. agrarius* from Chhattisgarh, central India. Lovalekar et al. (2017) also provided no reference records of *P. agrarius* in the state of Madhya Pradesh on the website <http://www.ifoundbutterflies.org>. All these queries make us skeptical of recent records of *P. agrarius* in Madhya Pradesh.

Till date, except for the first records given by Swinhoe (1887) (from Mhow and Asirgarh) no other published records for the nominate species in the state of Madhya Pradesh exist. Smiles (1982) probably considered Mhow as a distribution locality in the courtesy of Swinhoe and did not have any personal observations to his own credit. Smetacek (1999) discussed the distribution of *P. agrarius* in the Western Ghats and Eastern Ghats and northern India, but completely omitted its distribution in the central province of the country and made no comments about it.

Current records: On 12 November 2015, one male specimen of *P. agrarius* was recorded in Dumna Nature Reserve, Jabalpur, Madhya Pradesh, India. Again, on 14 November 2015 at 13:24hr, another male specimen

(Image 2A) was encountered from the same locality. No specimens were collected. The species was identified on the basis of the presence of two sub-apical pale spots on the forewing from photographs. The first individual was recorded patrolling while the second one was recorded perching on a decomposing leaf and sucking sap, on the bank of a water body (Image 2B) in Dumna Nature Reserve.

Dumna Nature Reserve (23.16694 N & 79.95000 E, elevation 403m) is an important ecotourism spot situated 10km southeast of Jabalpur City, Madhya Pradesh, India. Dumna Nature Reserve includes mountains of the Vindhya Range, a small dam and Sal forests. It is located 241.1km north of Nagpur City, Maharashtra, India and 186.23km west of Achanakmar-Amarkantak Biosphere Reserve, which is the nearest known locality for *P. agrarius*. Further, Dumna Nature Reserve is located 435km east of Mhow which is the oldest and the only published locality for *P. agrarius* in Madhya Pradesh, India (Image 1).

These findings confirm the occurrence of *P. agrarius* in Madhya Pradesh, central India after a long time span. Intensive surveys are required however to determine its exact population status in Madhya Pradesh. *Polyura agrarius* is sympatric with *P. bhārata* and both the species prefer similar habitats. The latter is much more common throughout its range and this could be attributed to the scarcity of *P. agrarius*, as they might be competing for the available resources. The updated distribution



Image 2. A - *Polyura agrarius* (Swinhoe, 1887); B - Micro habitat where the second specimen was photographed.

of the *P. agrarius* range is from south to central India includes Gujarat, Rajasthan, northern India (Uttarakhand, Punjab and Himachal Pradesh), northeastern India, and Myanmar.

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