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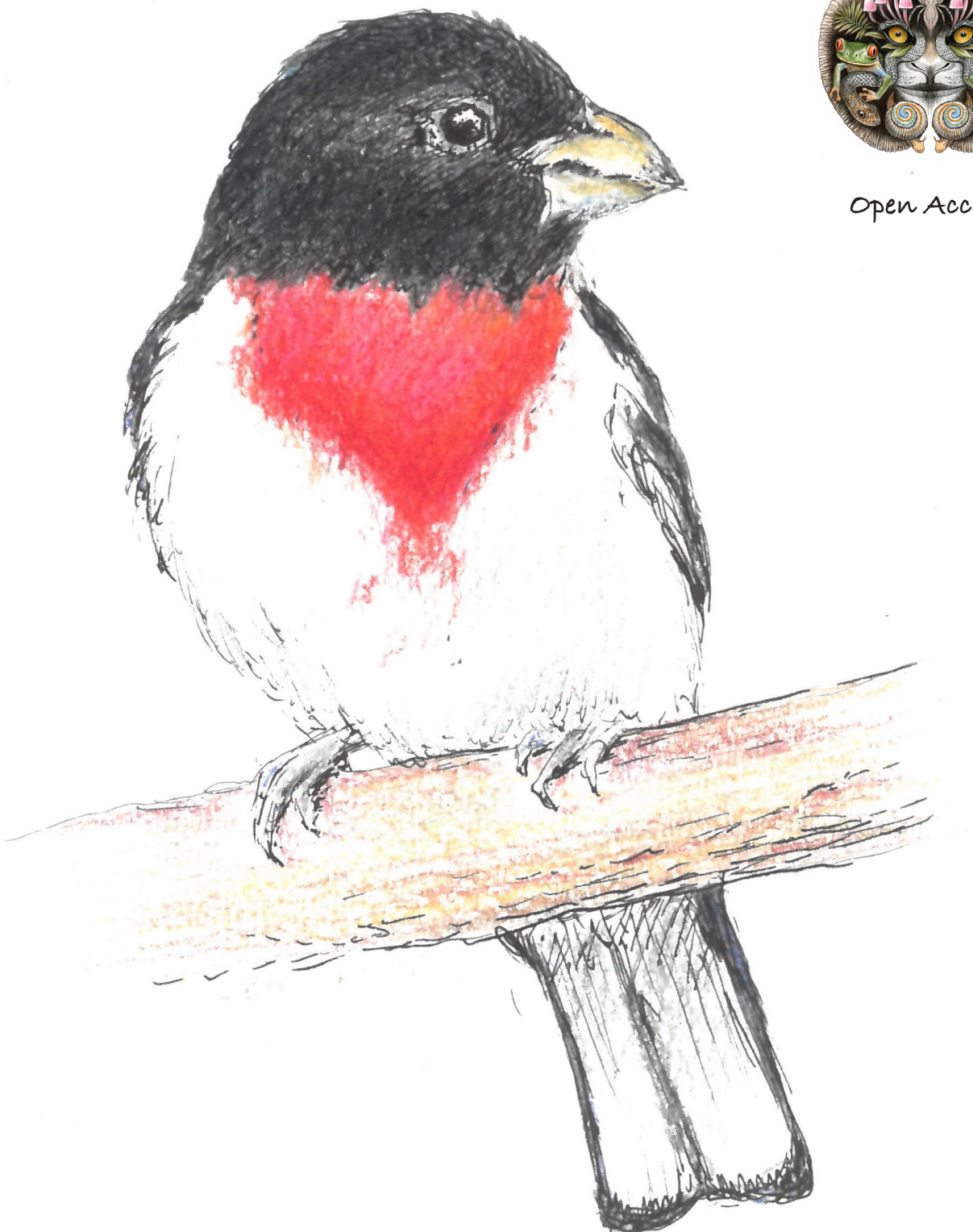
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Cover: Rose-breasted Grosbeak *Pheucticus ludovicianus*, pen & ink with colour pencil. © Lucille Betti-Nash.



New record of Giant Redeye *Gangara thyrsis thyrsis* (Fabricius, 1775) (Lepidoptera: HesperIIDae) from Garhwal region of western Himalaya, India

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The Giant Redeye, *Gangara thyrsis thyrsis* is the largest skipper with a wingspan of 70–76 mm, known for its quick darting flight, and occurring in the Indian peninsular region (Evans 1932). *G. thyrsis* prefers lowland forests and plantations having a flight period from January to December (Kehimkar 2016). It is an elusive butterfly owing to its crepuscular habit. *G. thyrsis* occurs as four subspecies – *clothilda* (Herrich-Schaffer, 1869) is endemic to Ceylon (Sri Lanka); *thyrsis* (Fabricius, 1775) has distribution extending in peninsular India from Maharashtra to Kerala, Andhra Pradesh, and in northeastern India from West Bengal to Sikkim & Arunachal. In northwestern India it has been reported only from Delhi & Kangra in Himachal Pradesh and also from Andaman & Nicobar Islands (Evans 1949); *pandina* (Evans, 1949) inhabits Java in Indonesia; and *philippensis* (Fruhstorfer, 1911) is found in Philippines (Evans 1932; Kehimkar 2014, 2016; Vashney & Smetacek 2015). *G. thyrsis* has also recently been reported from Chitwan National Park in central Nepal where it is ‘very rare’ and during April & August preferring ‘riverine’ and ‘sal forests’ habitats (Smith 1997). A single visual record of *G. thyrsis* during August 2015 is known from Pawalgarh Conservation Reserve, Nanital District and another one from Champawat District in Kumaon region of Uttarakhand (Sondhi & Kunte 2018). However, there is no other record of its occurrence within the Garhwal region of Uttarakhand and recent surveys have failed to

record this species in the state (Singh & Sondhi 2016; Singh 2021).

Present observations

On 24 October 2023, *G.t. thyrsis* (Fabricius, 1775) was recorded in the New Forest Campus of Forest Research Institute (30.3368° N & 77.9994° E; 663 m; 1035 h; Temp. 23.5° C; RH 43%), Dehradun, India. Only one individual was recorded, feeding on refuse along the roadside in a forested area. As it could not be properly identified on the wing, the specimen was collected, pinned, and preserved in the laboratory for further identification (Image 1a,b). This specimen was later identified as *G.t. thyrsis* on comparison with a museum specimen of *G.t. thyrsis* from Khasi Hills, Assam, India kept in the National Forest Insect Collection (NFIC) at the Forest Research Institute, Dehradun (Image 2a,b).

G. thyrsis is identified by some of its distinctive features like relatively large body size, large wine-red eyes, large quadrate semi-transparent yellow spots and three smaller apical spots on forewings and the underside of both wings dusted with grey scales forming distinct bands (Evans 1932; Kehimkar 2016). It is different from Palm Redeye, *Erionota thrax* (Linnaeus, 1767) which also occurs in its distribution range and is more common but lacks three apical spots on the forewings besides the absence of dusting of grey scales undersides of both wings (Kehimkar 2016) (Images 1 & 2).

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Figure 1. Map depicting the location of the present record of Giant Redeye *Gangara thyrsis thyrsis* in Dehradun Valley, Uttarakhand in relation to its records in other sites in northern India, as mentioned in text.

Furthermore, another individual of *G.t. thyrsis* had been previously observed feeding on refuse in the Vasant Vihar residential area (30.3285° N & 78.0006° E; 660 m; 07.vii.2023) in Dehradun, Uttarakhand at dusk.

The larval host plants of *G.t. thyrsis* belong to the family Arecaceae (Robinson et al. 2010), i.e., *Calamus* sp., *Calamus pseudofeanus*, *C. thwaitesii*, *C. rotang*, *Caryota urens*, *Chamaerops humilis*, *Cocos nucifera* (Wynter-Blyth 1957; Kunte 2000, 2006; Robinson et al. 2010), *Coryphaea brachyloma*, *Licuala grandis*, *Licuala chinensis*, *Phoenix acaulis*, *P. loureiroi* (Wynter-Blyth 1957; Kunte 2000, 2006; Nitin et al. 2018) (Arecaceae); *Zingiber officinale* (Zingiberaceae) (Kalesh & Prakash 2007); and *Cyperus alternifolius* (Cyperaceae) in Bengaluru (Saji et al. 2018). Robinson et al. (2010) have also reported *Saccharum officinarum* (Poaceae) as its unconfirmed larval host. In the New Forest Campus (botanical garden & plantations), a variety of larval host plants can be found. Notably, species such as *Calamus* spp., *Phoenix acaulis*, *Caryota urens*, *Phoenix rupicola*, *Sabal domingensis* are present, providing a favourable environment for the potential breeding of *G. thyrsis*.

This is the first known authentic record of *G.t. thyrsis* from the Garhwal region of Uttarakhand, India.



Image 1. Giant Redeye *Gangara thyrsis thyrsis* (Fabricius, 1775): a—Dorsal view | b—Ventral view. Specimen collected in New Forest Campus, Dehradun, Uttarakhand, India (24.x.2023, wingspan: 70 mm. Collection: Arun P. Singh, FRI; collector: Ankita Singh Sajwan.

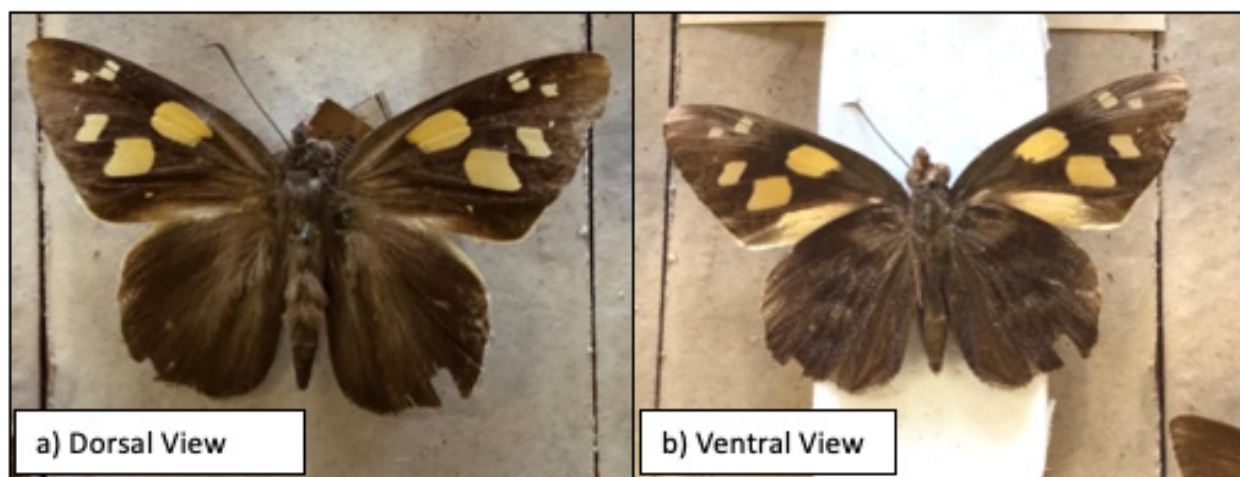


Image 2. Giant Redeye *Gangara thyrsis thyrsis* (Fabricius, 1775) from NFIC-FRI, Dehradun (Accession No.13407; Khasi Hills, Assam, India, coll. O.C. Ollenbach, 1916).

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