

## OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at [www.threatenedtaxa.org](http://www.threatenedtaxa.org). All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.



## Journal of Threatened Taxa

Building evidence for conservation globally

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

### NOTE

**A CENTURY LATER THE MANIPUR ARGUS *CALLEREBIA SUROIA* TYTLER, 1914 (LEPIDOPTERA: NYMPHALIDAE: SATYRINAE) RECORDED IN ITS TYPE LOCALITY IN MANIPUR, INDIA**

Jatishwor Singh Irungbam, Harmenn Huidrom & Baleswor Singh Soibam

26 February 2017 | Vol. 9 | No. 2 | Pp. 9866–9869

10.11609/jott.2931.9.2.9866-9869



For Focus, Scope, Aims, Policies and Guidelines visit [http://threatenedtaxa.org/About\\_JoTT.asp](http://threatenedtaxa.org/About_JoTT.asp)

For Article Submission Guidelines visit [http://threatenedtaxa.org/Submission\\_Guidelines.asp](http://threatenedtaxa.org/Submission_Guidelines.asp)

For Policies against Scientific Misconduct visit [http://threatenedtaxa.org/JoTT\\_Policy\\_against\\_Scientific\\_Misconduct.asp](http://threatenedtaxa.org/JoTT_Policy_against_Scientific_Misconduct.asp)

For reprints contact [info@threatenedtaxa.org](mailto:info@threatenedtaxa.org)

Partner



Publisher/Host





ISSN 0974-7907 (Online)  
ISSN 0974-7893 (Print)

#### OPEN ACCESS



*Callerebia* (Butler, 1867) is a genus of the subfamily Satyrinae in the family Nymphalidae. The genus is restricted to the Sino-Himalayan region - ranging from Kashmir to southwestern China and central China (Bruna et al. 2000). The genus consists of approximately 12 species, composed of medium to medium-large butterflies with a dark brown coloration and a large bipupilled ocellus on the upper forewing. The butterflies of the genus possess small heads and bodies, and a prominent eye in relation to their broad, rounded wings. The hind wings are extended in a more or less prominent lobe at the anal angle. The antennal club is thin, only slightly thickening towards the tip. The markings are very variable but follow a fairly constant arrangement in all the species: the upper ground colour is dark brown to blackish; the forewing has a bi-pupilled apical ocellus; with or without one tornal spot in the upper hindwing; the under hind wings are often covered by whitish scales of different densities, tones and patterns: with or without one or two tornal ocelli in the under hindwing; in addition, some species have a set of up to four post-discal white dots on the under hindwing (Roy 2013).

The Shirui Kashong Peak (SKP) is located just 7km away from Shirui Village and 25km from Ukhrul Town. The peak is at 25°06'20.04"N and 94°27'23.91"E at 2,763m from sea level. It is located at Ukhrul District on the eastern part of the Manipur State. The peak and Shirui Village are bordered by Ukhrul in the west, Langdang Village in the south, Mapum Village in the

## A CENTURY LATER THE MANIPUR ARGUS *CALLEREBIA SUROIA* TYTLER, 1914 (LEPIDOPTERA: NYMPHALIDAE: SATYRINAE) RECORDED IN ITS TYPE LOCALITY IN MANIPUR, INDIA

Jatishwor Singh Irungbam<sup>1</sup>, Harmenn Huidrom<sup>2</sup> &  
Baleshwar Singh Soibam<sup>3</sup>

<sup>1</sup> Faculty of Science, University of South Bohemia, Ceske Budejovice 37005, Czech Republic

<sup>2</sup> Institute of Entomology, Biology Centre, Czech Academy of Science, Ceske Budejovice 37005, Czech Republic

<sup>2</sup> Yaikul Hiruhanba Leikai, Imphal West, Manipur 795001, India

<sup>3</sup> Ningombam Mayai Leikai, Imphal West, Manipur 795003, India

<sup>1</sup> jatishwor.irungbam@gmail.com (corresponding author),

<sup>2</sup> harshuidrom8@gmail.com, <sup>3</sup> balesh1moirangcha@gmail.com

east, Sihai Village in the northeast and Lunghar Village in the north.

During 12–16 July 2016, we conducted a survey on the Lepidoptera fauna of the Shirui Kashong Peak (25°06'20.04"N & 94°27'23.91"E) between 1,320m and 2,763m altitude (Figs. 1 & 2) and surrounding areas. Butterflies were observed at different altitudes of the peak and surrounding areas during the day. Light trapping was done for nocturnal moths at night. During the survey we encountered different species of butterflies and moths. In this present paper we report the sighting of the rare satyrid butterfly *Callerebia suroia* Tytler, 1914 after more than a century since Tytler (1914) describe the species from the same locality, Shirui Hills, Manipur.

DOI: <http://doi.org/10.11609/jott.2931.9.2.9866-9869> | ZooBank: urn:lsid:zoobank.org:pub:CF234619-5125-4123-B3EF-1FDF068AF68C

Editor: Purnendu Roy, London, UK.

Date of publication: 26 February 2017 (online & print)

Manuscript details: Ms # 2931 | Received 24 July 2016 | Final received 31 January 2017 | Finally accepted 06 February 2017

Citation: Irungbam, J.S., H. Huidrom & B.S. Soibam (2017). A century later the Manipur Argus *Callerebia suroia* Tytler, 1914 (Lepidoptera: Nymphalidae: Satyrinae) recorded in its type locality in Manipur, India. *Journal of Threatened Taxa* 9(2): 9866–9869; <http://doi.org/10.11609/jott.2931.9.2.9866-9869>

Copyright: © Irungbam et al. 2017. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: Czech Science Foundation (GA CR: 14-36098G) and Grant Agency, University of South Bohemia (GA JU 152/2016/P).

Competing interests: The authors declare no competing interests.

Acknowledgements: We wish to thank the unknown reviewers who provided useful comments on the earlier versions of the manuscript. The first author thanks the Czech Science Foundation (GA CR: 14-36098G) and Grant Agency, University of South Bohemia (GA JU 152/2016/P) for providing financial support to the work. We also thank the Principal Chief Conservator (Forest), Government of Manipur for providing us with the permit to study the lepidoptera fauna of Shirui Hills. We also sincerely thank the Village Chief and Shirui Youth Club, Shirui Village for providing support and encouragement during the conduct of the project.



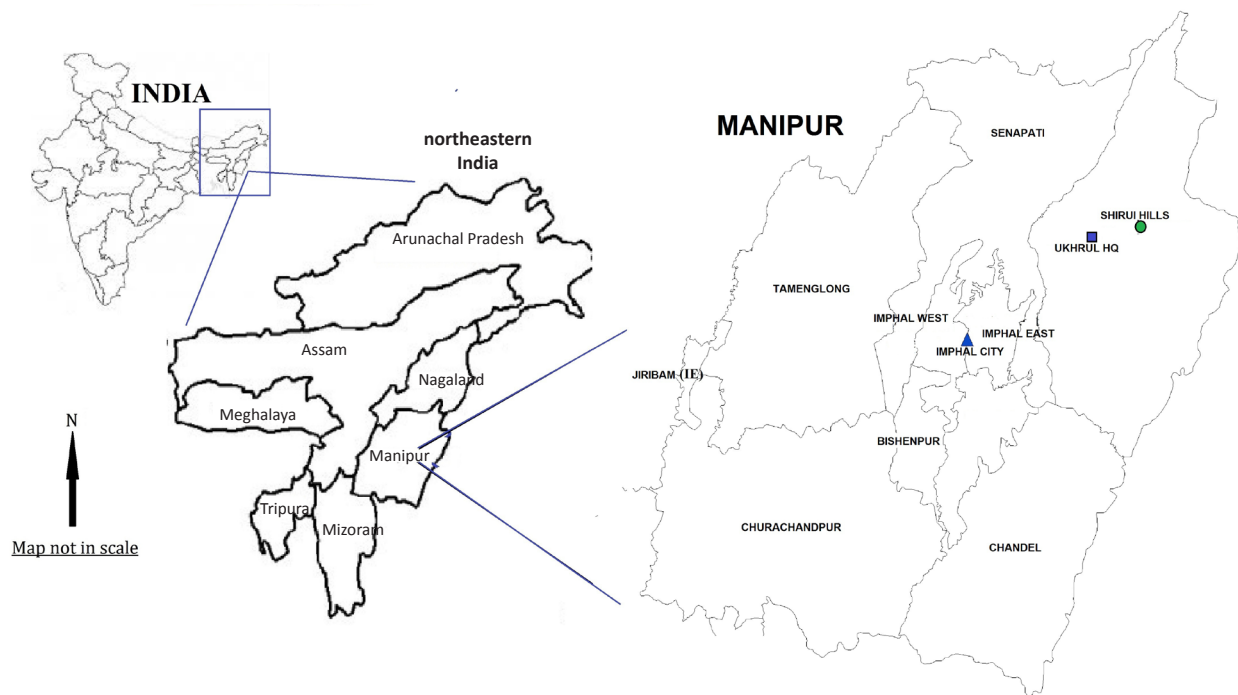
BIOLOGY  
CENTRE  
ASCR



Přirodovědecká  
fakulta  
Faculty  
of Science  
Jihočeská univerzita  
v Českých Budějovicích  
University of South Bohemia  
in České Budějovice



Entomologický ústav  
Institute of Entomology



**Figure 1. Study area; Shirui Kashong Peak and surrounding Shirui Village, Ukhrul District, Manipur, India (Map prepared by using DIVA GIS 7.1)**

#### **Manipur Argus *Callerebia suroia* Tytler, 1914**

*Callerebia suroia* Tytler, 1914 is only reported from Manipur in India (Varshney & Smetacek 2015). Outside India, the species is reported from northeastern Myanmar (Talbot 1947); Dali, Kunming at Yunnan province of China (Okano & Okano 1985; Huang 2003) and northern Vietnam (Inoyashi 2016). The species *C. suroia* Tytler, 1914 has been subject to several taxonomic revisions. Tytler 1914 described it as a species, distinguishing the species from *C. orixa* by morphological characters, Tytler makes no mention of *C. polyphemus*. Evans (1927), treated *suroia* as the synonym of *Erebia annada polyphemus*. Goltz (1939) treated *suroia* as a subspecies of *C. orixa*. Evans (1932) placed the species in the genus *Erebia* and treated it as a subspecies of *Erebia annada*. This arrangement was followed by Talbot 1947. Later Okano & Okano (1985) reinstated *suroia* as a valid species of *Callerebia* based on the different wing markings and also in the different shape of male genitalia vulva from *C. orixa*. Bruna et al. (2000) considered that *C. polyphemus* was a “widely distributed polytypic species” and thus treated *suroia* as a subspecies of *C. polyphemus* and raised the status of *C. annadina* to a distinct species, because of its sympatric distribution in northwestern Yunnan with *C. suroia*. Huang (2003), however found no difference between the male and female genitalia of *C. annadina* and *C.*

*polyphemus* thus treated *C. annadina* as a subspecies of *C. polyphemus* and *suroia* as a distinct species as originally described. Huang (2003) mentioned that there is no difference in androconia between male *C. suroia* and all the subspecies of *C. polyphemus*, but did find differences in the genitalia. Due to overlapping distributional pattern of *C. suroia* and *C. polyphemus*, separation of these two species is very difficult. The only reliable feature which separates *C. suroia* from *C. polyphemus confusa* is the appearance of fainter and thinner striation on the underside of the hindwing which is usually denser in *C. polyphemus confusa* (Huang 2003).

The detailed description of *C. suroia* is illustrated in Tytler (1914) (Image 3). The appearance of *C. suroia* is also very similar to *C. orixa*. “Upperside of forewing with a much broader orange ocellar ring, especially on the distal side of ocellus; Underside of forewing similar to above (*C. orixa*); hindwing with a sub basal and discal reddish-brown band, tornal ocellus absent, white striae denser and more conspicuous than in *C. orixa*” (Talbot 1947). *C. suroia* can be easily distinguished from all the subspecies of *C. polyphemus* by the more yellowish and broader ring of the forewing subapical ocellus; hindwing underside discal line is always clear; hindwing underside striation is fainter and usually denser than in *C. polyphemus* and *C. ulfi* and distal branch of valve is usually longer than in *C. polyphemus* and always much



**Figure 2.** Google Earth map showing the observation site of *Callerebia suroia* Tytler, 1914 at Shirui Kashong Peak, Ukhrul District, Manipur.



**Image 1.** Open wing posture of *Callerebia suroia* Tytler, 1914

longer than in *C. ulfi* (Huang 2003).

#### Sighting of Manipur Argus *Callerebia suroia* Tytler, 1914

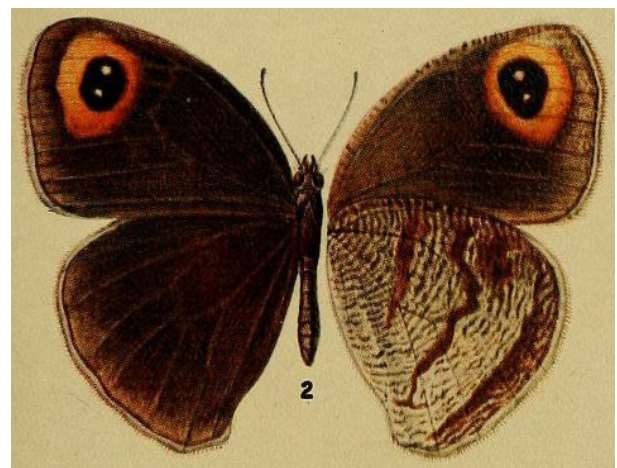
In this note we report the sighting of *C. suroia* Tytler, 1914 from Shirui Kashong Peak, which is the type locality of the species by Tytler (1914). On 13 July 2016 at around 14:30hr, we found the butterfly flying near the footpath leading to the peak of the summit (25°06'46.48"N & 94°26'56.67"E at an altitude of 2,330m) (Fig. 2). The butterfly settled for some time with open wings on soil (Image 1) and later it flew away and sat on a rock with closed wings (Image 2) and sipping on wet rocks. Later, due to the disturbance by hikers the butterfly flew away towards the cliff. The butterfly is mainly found near the rocks which are surrounded by perennial herbaceous plants like *Roscoea ngainoi* Mao & Bhaumik (Zingiberaceae), *Lilium mackliniae* Sealy (Liliaceae), *Allium* sp. (Amaryllidaceae), *Swertia* sp. (Gentianaceae), *Aconitum* sp. (Ranunculaceae) and many grasses which grow in much colder mountainous regions (Images 4 & 5). The day was quite cloudy with less sunshine and intermittent rain on the peak. The present sighting of the butterfly from Shirui Kashong Hill, Ukhrul District is important and significant because it is the first photographic record of this species after more than a century in India.

#### Conclusion

Some members of the genus *Callerebia* are known to be very local. Thus our sighting of *C. suroia* Tytler, 1914 in Shirui Kashong Peak (where the habitat is well



**Image 2.** Closed wing posture of *Callerebia suroia* Tytler, 1914



**Image 3.** Illustration of *Callerebia suroia* Tytler, 1914 from the original description of the species. (Photo courtesy: Tytler 1914, pl. 1, figure 2)



Image 4. Habitat of *Callerebia suroia* Tytler, 1914 at Shirui Kashong Hill range



Image 5. Rocks surrounded by perennial plants and grass; a suitable habitat for *Callerebia suroia* Tytler, 1915 at Shirui Kashong Hill range.

protected and undisturbed) gives us an opportunity to understand the ecology of this butterfly. Further studies on the ecology of this butterfly will give us an idea why butterflies of this genus are local which will help us to initiate further steps towards the conservation of habitats of these butterflies.

## References

- Bruna, C.D., E. Gallo & V. Sbordoni (2000).** *Guide to the Butterflies of the Palearctic Region, Satyridae. Part 2, Subfamily Satyrinae, tribe Ypthimini: Argestina, Boeberia, Callerebia, Grumia, Hemadara, Loxerebia, Paralasa, Protorebia.* Omnes Artes, Milan, 58pp.
- Evans, W.H. (1927).** *The Identification of Indian Butterflies.* Bombay Natural History Society, Bombay, 300pp+32pls.
- Evans, W.H. (1932).** *The Identification of Indian Butterflies.* Bombay Natural History Society, Bombay, 454pp+32pls.
- Goltz, D.H.V.D. (1939).** Die Callerebien der Ausbeute Hone. *Ent. Rdsch., Stuttgart* 55: 102–107. (esp.: 105)
- Huang, H. (2003).** A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongiang, China with descriptions of new species, and revisional notes. *Neue Entomologische Nachrichten* 55: 3–114.
- Kehimkar, I. (2008).** *The Book of Indian Butterflies.* Bombay Natural History Society, Oxford University, Delhi Press, 497pp.
- Okano, M. & T. Okano (1985).** New or Little known Callerebias from China (Lepidoptera: Satyrinae). *Artes Liberales* 36: 157–160+1pl.
- Roy, P. (2013).** *Callerebia dibangensis* (Lepidoptera: Nymphalidae: Satyrinae), a new butterfly species from the eastern Himalaya, India. *Journal of Threatened Taxa* 5(13): 4725–4733; <http://doi.org/10.11609/JoTT.o3293.4725-33>
- Talbot, G. (1947).** *The Fauna of British India, including Ceylon and Burma: Butterflies. Vol. 2.* Taylor and Francis, London, 486pp.
- Tytler, H.C. (1914).** Notes on some new and interesting butterflies from Manipur and the Naga Hills. Part-I. *Journal of the Bombay Natural History Society* 23: 216–229+1pl.
- Varshney, R.K. & P. Smetacek (2015).** *A Synoptic Catalogue of the Butterflies of India.* Butterfly Research Centre, Bhimtal and Indinov Publishing, New Delhi, ii+261pp.+8pls.
- Wynter-Blyth, M.A. (1957).** *Butterflies of the Indian Region.* Bombay Natural History Society, Mumbai, India, 523pp+72pls.



**OPEN ACCESS**

The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at [www.threatenedtaxa.org](http://www.threatenedtaxa.org). All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.

ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

February 2017 | Vol. 9 | No. 2 | Pages: 9777–9884

Date of Publication: 26 February 2017 (Online & Print)

DOI: 10.11609/jott.2017.9.2.9777-9884

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

**Article**

**Flora richness as an indicator of desert habitat quality in Kuwait**

-- Yahya Al-Shehabi & Kevin Murphy, Pp. 9777–9785

**Communications**

**Distribution of *Cryptopotamon anacoluthon* (Kemp, 1918) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong**

-- David John Stanton, Michael Robertson Leven & Tommy Chung Hong Hui, Pp. 9786–9794

**Moths of the family Limacodidae Duponchel, 1845 (Lepidoptera: Zygaenoidea) from Bhutan with six new generic and 12 new species records**

-- Jatishwor Singh Irungbam, Meenakshi Singh Chib & Alexey V. Solovyev, Pp. 9795–9813

**Odonates of Coimbatore District, Tamil Nadu, India**

-- M. Suhirtha Muhil & P. Pramod, Pp. 9814–9828

**Twenty-three new records of mantodea (Insecta) from some states of India**

-- Tushar Kanti Mukherjee, Geetha Iyer & Parbati Chatterjee, Pp. 9829–9839

**Short Communications**

**On the feeding habit of the Guiana Dolphin *Sotalia guianensis* (van Benedèn, 1864) (Mammalia: Cetartiodactyla: Delphinidae) in southeastern Brazil (~220S): has there been any change in more than two decades?**

-- Ana Paula Madeira Di Benedetto, Clara da Cruz Vidart Badia & Salvatore Siciliano, Pp. 9840–9843

**Additions to the scorpion fauna (Arachnida: Scorpiones) of Kerala, India, with an illustrated key to the genera**

-- K. Aswathi & P.M. Sureshan, Pp. 9844–9850

**Diversity of two families Libellulidae and Coenagrionidae (Odonata) in Regional Institute of Education Campus, Bhubaneswar, Odisha, India**

-- Priyamvada Pandey & Animesh Kumar Mohapatra, Pp. 9851–9857

**A report on occurrence of aphidophagous predators of *Aphis odinae* (van der Goot) (Hemiptera: Aphididae) in cashew ecosystem from Goa, India**

-- Ramasamy Maruthadurai & Narendra Pratap Singh, Pp. 9858–9861

**Notes**

**A new critical habitat for conservation of the White-bellied Heron *Ardea insignis* Hume, 1878 (Aves: Ardeidae) from Bhutan**

-- Karma Wangdi, Tashi Dhendup & Tsethup Tshering, Pp. 9862–9863

**First report of the parasitoid wasp *Piestopleura Förster* (Hymenoptera: Platygastroidea: Platygasteridae) from India**

-- Kamalanathan Veenakumari, Peter Neerup Buhl, Anandhan Rameshkumar & Prashanth Mohanraj, Pp. 9864–9865

**A century later the Manipur Argus *Callerebia suroia* Tytler, 1914 (Lepidoptera: Nymphalidae: Satyrinae) recorded in its type locality in Manipur, India**

-- Jatishwor Singh Irungbam, Harmenn Huidrom & Baleshwar Singh Soibam, Pp. 9866–9869

**First record of the predatory stinkbug *Eocanthecona concinna* (Walker, 1867) (Pentatomidae: Asopinae) from India**

-- Sadashiv Hanumant Waghmare & Sunil Madhukar Gaikwad, Pp. 9870–9873

**New records of Aplousobranch ascidians to Indian waters from Andaman Islands**

-- Jhimli Mondal, C. Raghunathan & K. Venkataraman, Pp. 9874–9880

**Additions to the flora of Coimbatore hills, Tamil Nadu, India**

-- K. Kiruthika, M. Sulaiman & R. Gopalan, Pp. 9881–9884