



The Journal of Threatened Taxa (JoTT) 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. 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, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

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

NOTE

RANGE EXTENSION OF THE LILAC SILVERLINE *APHARITIS LILACINUS* TO SOUTHERN RAJASTHAN AND A REVIEW OF THE LITERATURE

K.S. Gopi Sundar, Swati Kittur, Vijay Kumar Koli & Utkarsh Prajapati

26 June 2020 | Vol. 12 | No. 9 | Pages: 16180–16182

DOI: [10.11609/jott.5800.12.9.16180-16182](https://doi.org/10.11609/jott.5800.12.9.16180-16182)



For Focus, Scope, Aims, Policies, and Guidelines visit <https://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-0>
For Article Submission Guidelines, visit <https://threatenedtaxa.org/index.php/JoTT/about/submissions#onlineSubmissions>
For Policies against Scientific Misconduct, visit <https://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-2>
For reprints, contact [<ravi@threatenedtaxa.org>](mailto:ravi@threatenedtaxa.org)

The opinions expressed by the authors do not reflect the views of the Journal of Threatened Taxa, Wildlife Information Liaison Development Society, Zoo Outreach Organization, or any of the partners. The journal, the publisher, the host, and the partners are not responsible for the accuracy of the political boundaries shown in the maps by the authors.

Member



Publisher & Host





Range extension of the Lilac Silverline *Apharitis lilacinus* to southern Rajasthan and a review of the literature

K.S. Gopi Sundar¹, Swati Kittur², Vijay Kumar Koli³ & Utkarsh Prajapati⁴

^{1,2} Nature Conservation Foundation, 1311, “Amritha”, 12th Main, Vijayanagar 1st Stage, Mysuru, Karnataka 570017, India.

^{3,4} Wildlife Research Laboratory, Department of Zoology, Mohanlal Sukhadia University, Udaipur, Rajasthan 313001, India.

¹gopi@ncf-india.org (corresponding author), ²swatikittur@ncf-india.org, ³vijaykoli87@yahoo.in, ⁴utkarsh41995@gmail.com

The Lilac Silverline *Apharitis lilacinus* (taxonomy following Varshney & Smetacek 2015) is an exceedingly rare species of butterfly of the family Lycaenidae (also referred to as “the blues” or “gossamer-winged butterflies”) that was first described in 1884 from a specimen with unknown origin (Moore 1884). Little is known of its ecology, distribution, and conservation status in India. In this note, we describe a recent observation of the species that constitutes a range extension. We also provide a thorough review of literature relating to this species with the intent to collate dispersed information to develop a better understanding of the ecological requirements of the Lilac Silverline.

On 18 February 2020, during a visit to the southern part of Kumbhalgarh Wildlife Sanctuary in southern Rajasthan, we spotted a lycaenid butterfly sunning itself perched on a rock in an area that was severely degraded by cattle grazing, with few scattered trees of *Butea monosperma*, *Lannea coromandelica*, *Acacia* species, and *Mallotus philippensis* amid sparse *Lantana camara* (Image 1a,b). The butterfly sighting was <50m from a dried stream bed. We uploaded images of the butterfly to the online repository iNaturalist.org as an unidentified Lycaenidae (www.inaturalist.org/observations/38831801).

Multiple reviewers identified the species as the Lilac Silverline, and we too confirmed the identification with butterfly experts and with photographs available on the world wide web. The specimen we photographed was a dry season form with a part of one wing missing possibly due to a predation attempt (Image 1a). This is the first record of this butterfly species from the Aravalli Hills and is also the first record from Rajasthan State (Sharma 2014; Jangid et al. 2016). Careful observations for this species throughout the year will help to confirm if it is resident in the area or a seasonal visitor.

Historic literature points to the Lilac Silverline always being rare in locations it has been recorded in. Early collections of butterflies include a few specimens of the Lilac Silverline 40km from Rawalpindi, Pakistan in November 1885 (described incorrectly as a new species called *Azanus uranus*; Butler 1886), and from Mhow in Madhya Pradesh (described as a new species called *Aphnaeus aestivus*; Swinhoe 1886). Very small numbers of the species have also been collected from Kasauli (Himachal Pradesh), Malda (West Bengal), Bengaluru (Karnataka) and north Lakhimpur (Uttar Pradesh) of both the wet and dry forms (Riley 1925). Observations have

Editor: B.A. Daniel, Zoo Outreach Organization, Coimbatore, India.

Date of publication: 26 June 2020 (online & print)

Citation: Sundar, K.S.G., S. Kittur, V.K. Koli & U. Prajapati (2020). Range extension of the Lilac Silverline *Apharitis lilacinus* to southern Rajasthan and a review of the literature. *Journal of Threatened Taxa* 12(9): 16180–16182. <https://doi.org/10.11609/jott.5800.12.9.16180-16182>

Copyright: © Sundar et al. 2020. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use, reproduction, and distribution of this article in any medium by providing adequate credit to the author(s) and the source of publication.

Funding: No funding was received for this work.

Competing interests: The authors declare no competing interests.

Acknowledgements: We thank R. Bhanumati, A.K. Firos, and S. Karthikeyan for several discussions, useful background information, and unpublished personal observations. This observation was made while on field work towards understanding Sloth Bear ecology in southern Rajasthan. We thank the Chief Wildlife Warden of Rajasthan for permits to work in Kumbhalgarh Wildlife Sanctuary and staff for their assistance during the field work.



been made of the species' habits at Chandigarh (Punjab), Hardwar (Uttaranchal), and at Palmaner in Chittoor District (Andhra Pradesh; Wynter-Blyth 1957). These early records point to the species being widespread but always sparse.

More recent observations of the Lilac Silverline have been few but significant. The species was rediscovered in Bengaluru after a century by A.R. Nitin on 23 December 2012 (de Nazareth 2013), and is now regularly photographed throughout the year, at Hessarghatta Lake with eggs and caterpillars indicating that the location has a resident breeding population of the species (Sheshadri et al. 2013; Sengupta et al. 2020). Another photographic record was obtained for the first time in northeastern India in May 2018 in Daying Ering Wildlife Sanctuary in Arunachal Pradesh (Kaman 2018). The Lilac Silverline was also photographed on 25 September 2019 from the Agastya Campus in Chittoor District, less than 60km from Hessarghatta Lake in Bengaluru, constituting a rediscovery of the species in Andhra Pradesh (R. Bhanumati pers. comm. 2020). The Agastya Campus has been restored to a scrub-savanna mixture from fallow fields, and only one sighting of the Lilac Silverline has been made there despite multiple years of observations for butterflies (R. Bhanumati pers. comm. 2020).

Both historic and current observations match the distribution provided by Varshney & Smetacek (2015) for the Lilac Silverline: "Gujarat to Karnataka; Himachal Pradesh to Assam". Our record from Rajasthan adds to the distribution range, and to existing conclusions that the species is widespread in the Indian subcontinent (Wynter-Blyth 1957; Varshney & Smetacek 2015; Sengupta et al. 2020). One-time observations have been made across India in January, February, May, and

September, and the species is resident in Bengaluru. Available information is therefore inadequate to comment on the seasonality of the species in other locations.

A few observations are available of the habitats required by the Lilac Silverline. Wynter-Blyth (1957) notes that the species is scarce but widespread in open plains, scrubby hills, and in gram fields. Hessarghatta, where recent observations of the species have been made, is an urban wetland heavily disturbed by human activity (Sheshadri et al. 2013), and the recent sighting in Chittoor is from an institutional campus (R. Bhanumati pers. comm. 2020). Our observation of the Lilac Silverline was from a heavily degraded part of the Kumbhalgarh Wildlife Sanctuary (see Image 1). The observations collectively suggest that the Lilac Silverline frequents a range of habitats, perhaps most commonly using areas that experience human activity, including low levels of urbanization, cropping, and cattle grazing. The sightings at Hessarghatta and our observation at Kumbhalgarh were made close to natural water sources suggesting that this species is often found near surface water.

It is fortunate that the Lilac Silverline is so widespread and appears to be compatible with several forms of human disturbance given the high protection status of the species (Schedule II of the Indian Wildlife Protection Act 1972; Sengupta et al. 2020). In some locations like Bengaluru, the rarity of this butterfly species has attracted photographers in large numbers whose traversing of the habitat in vehicles indiscriminately appear to be destroying its host plant species in the only site where the species is confirmed to have a breeding population (Sheshadri et al. 2013). Such uncontrolled activities require to be curtailed to enable



© K.S. Gopi Sundar



© Swati Kittur

Image 1. a—the dry season form of the Lilac Silverline photographed in Kumbhalgarh Wildlife Sanctuary, Rajasthan on 18 February 2020 | b—the location where it was photographed looking toward the dried stream that flowed in the valley.

long-term persistence of the few known populations of this species. Additional surveys in locations such as Kumbhalgarh Wildlife Sanctuary, especially including locations that have human presence and are not solely protected areas, are likely to help provide additional information on the habits and conservation status of the Lilac Silverline.

References

- Butler, A. (1886).** On lepidoptera collected by Major Yerbury in Western India. *Proceedings of the Scientific Meetings of the Zoological Society of London* 1886(3): 355–395.
- de Nazareth, M. (2013).** A lilac lovely in the sky. *The Hindu* (Jan 18, 2013). Electronic version accessed 22 February 2020. <https://www.thehindu.com/features/metroplus/a-lilac-lovely-in-the-sky/article4319685.ece>
- Jangid, A.K., D. Yadav, D. Meena, V. Sharma & J.B.S. Kachhawa (2016).** *Butterflies of Central Aravalli Ranges*. Published by Centre for Advance Research and Development, Jaipur, India, ix+92pp.
- Kaman, P. (2018).** Rare butterfly species spotted in DEWS. *Arunachal Times* (May 28, 2018). Electronic version accessed 22 February 2020. <https://arunachaltimes.in/index.php/2018/05/28/rare-butterfly-species-spotted-in-dews/>
- Moore, F. (1884).** Descriptions of some new Asiatic diurnal *Lepidoptera*; chiefly from specimens contained in the Indian Museum, Calcutta. (Communicated by the Natural History Secretary). *Journal of the Asiatic Society of Bengal* 53 Part II (1): 16–52.
- Riley, N.D. (1925).** The species usually referred to the genus *Cigaritis* Boisd. (Lycaenidae). *Novitates Zoologicae* 32: 70–95.
- Sengupta, A., R. Nitin, G.S.G. Kumar & V. Nagraj (2020).** *Apharitis lilacinus* (Moore, 1884) – Lilac Silverline. In: Kunte, K., S. Sondhi & P. Roy (eds.) *Butterflies of India*. v. 2.74. Indian Foundation for Butterflies. Electronic version accessed 22 February 2020. <http://www.ifoundbutterflies.org/sp/2125/Apharitis-lilacinus>
- Sharma, G. (2014).** Studies on Odonata and Lepidoptera fauna of foothills of Aravalli Range, Rajasthan. *Records of the Zoological Survey of India*, Occasional Papers No. 353: 1–104.
- Sheshadri, K.S., M.B. Krishna, S. Balakrishna, M.S. Kumar, B.S. Prabhakar, R. Nitin, S.B. Kishan, K.S. Vinay, G.S. Gautham, V. Narayan, S. Potdar, P. Daga & T.P. Kumar (2013).** Ruining the ecology of Hesaraghatta Lake – the role of bird photographers. Electronic version accessed 22 February 2020. https://www.conservationindia.org/wp-content/files_mf/small_Hesaraghatta-Photographers.pdf
- Swinhoe, C. (1886).** On the Lepidoptera of Mhow, in Central India. *Proceedings of the Scientific Meetings of the Zoological Society of London* 1886(4): 421–465.
- Varshney, R.K. & P. Smetacek (2015).** *A Synoptic Catalogue of the Butterflies of India*. Butterfly Research Center, Bhimtal and Indinov Publishing, New Delhi, 261pp.
- Wynter-Blyth, M.A. (1957).** *Butterflies of the Indian Region*. Bombay Natural History Society, Bombay, India, 523pp.





PLATINUM
OPEN ACCESS



The Journal of Threatened Taxa (JoTT) 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. 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, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

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

June 2020 | Vol. 12 | No. 9 | Pages: 15967–16194

Date of Publication: 26 June 2020 (Online & Print)

DOI: 10.11609/jott.2020.12.9.15967-16194

www.threatenedtaxa.org

Communications

Dusky Langurs *Trachypitecus obscurus* (Reid, 1837) (Primates: Cercopithecidae) in Singapore: potential origin and conflicts with native primate species
– Andie Ang, Sabrina Jabbar & Max Khoo, Pp. 15967–15974

A new report on mixed species association between Nilgiri Langurs *Semnopithecus johnii* and Tufted Grey Langurs *S. priam* (Primates: Cercopithecidae) in the Nilgiri Biosphere Reserve, Western Ghats, India
– K.S. Chetan Nag, Pp. 15975–15984

A review of the bacular morphology of some Indian bats (Mammalia: Chiroptera)
– Bhargavi Srinivasulu, Harpreet Kaur, Tariq Ahmed Shah, Gundena Devender, Asad Gopi, Sreehari Raman & Chelmala Srinivasulu, Pp. 15985–16005

Status of the Critically Endangered Bengal Florican *Houbaropsis bengalensis* (Gmelin, 1789) in Koshi Tappu Wildlife Reserve, Nepal
– Hem Sagar Baral, Tek Raj Bhatt, Sailendra Raj Giri, Ashok Kumar Ram, Shyam Kumar Shah, Laxman Prasad Poudyal, Dhiraj Chaudhary, Gitanjali Bhattacharya & Rajan Amin, Pp. 16006–16012

Observations on breeding behaviour of a pair of endangered Egyptian Vultures *Neophron percnopterus* (Linnaeus, 1758) over three breeding seasons in the plains of Punjab, India
– Charn Kumar, Amritpal Singh Kaleka & Sandeep Kaur Thind, Pp. 16013–16020

Additions to the cicada (Insecta: Hemiptera: Cicadidae) fauna of India: first report and range extension of four species with notes on their natural history from Meghalaya
– Vivek Sarkar, Cuckoo Mahapatra, Pratyush P. Mohapatra & Manoj V. Nair, Pp. 16021–16042

The perceptions of high school students on the habitat of the crab *Ucides cordatus* (Linnaeus, 1763) (Crustacea: Decapoda: Ucidae) in northern Rio de Janeiro State, southeastern Brazil
– Laiza Fernanda Quintanilha Ribeiro, Laura Helena de Oliveira Côrtes & Ana Paula Madeira Di Benedetto, Pp. 16043–16047

Woody species diversity from proposed ecologically sensitive area of northern Western Ghats: implications for biodiversity management
– M. Tadwalkar, A. Joglekar, M. Mhaskar & A. Patwardhan, Pp. 16048–16063

Resolving taxonomic problems in the genus *Ceropegia* L. (Apocynaceae: Asclepiadoideae) with vegetative micromorphology
– Savita Sanjaykumar Rahangdale & Sanjaykumar Ramlal Rahangdale, Pp. 16064–16076

A checklist of angiosperm flora of low elevation lateritic hills of northern Kerala, India
– K.A. Sreejith, V.B. Sreekumar, P. Prashob, S. Nita, M.P. Prejith & M.S. Sanil, Pp. 16077–16098

Phytodiversity of chasmophytic habitats at Olichuchattam Waterfalls, Kerala, India
– Arun Christy & Binu Thomas, Pp. 16099–16109

Contribution to the macromycetes of West Bengal, India: 51–56
– Diptosh Das, Entaj Tarafder, Meghma Bera, Anirban Roy & Krishnendu Acharya, Pp. 16110–16122

Short Communications

Catalogue of herpetological specimens from peninsular India at the Sâlim Ali Centre for Ornithology & Natural History (SACON), India
– S.R. Ganesh, S. Bhupathy, P. Karthik, G. Babu Rao & S. Babu, Pp. 16123–16135

Osteological description of Indian Skipper Frog *Euphylyctis cyanophlyctis* (Anura: Dicroglossidae) from the Western Ghats of India
– Pankaj A. Gorule, Sachin M. Gosavi, Sanjay S. Kharat & Chandani R. Verma, Pp. 16136–16142

Member



DNA barcode reveals the occurrence of Palearctic *Olepa schlei* Witt et al., 2005 (Lepidoptera: Erebidae: Arctiinae) from peninsular India with morphological variations and a new subspecies
– Aparna Sureshchandra Kalawate, Shital Pawara, A. Shabnam & K.P. Dinesh, Pp. 16143–16152

Present status of the genus *Sphrageidus* Maes, 1984 (Lepidoptera: Erebidae: Lymantriinae) from India
– Amritpal Singh Kaleka, Devinder Singh & Gagan Preet Kour Bali, Pp. 16153–16160

Early stages of Nilgiri Grass Yellow *Eurema nilgiriensis* (Yata, 1990) (Lepidoptera: Pieridae), with a note on its range extension in the Kerala part of the Western Ghats, India
– Balakrishnan Valappil & V.K. Chandrasekharan, Pp. 16161–16165

Notes

Breeding site records of three sympatric vultures in a mountainous cliff in Kahara-Thathri, Jammu & Kashmir, India
– Muzaffar A. Kichloo, Sudesh Kumar & Neeraj Sharma, Pp. 16166–16169

First distribution record of Elongated Tortoise *Indotestudo elongata* (Blyth, 1853) (Reptilia: Testudines: Testudinidae) from Bihar, India
– Arif, Sourabh Verma, Ayesha Mohammad Maslehuddin, Uttam, Ambarish Kumar Mall, Gaurav Ojha & Hemkant Roy, Pp. 16170–16172

The niche of shrimp stocks (*Xiphopenaeus kroyeri* Heller, 1862) from southeastern Brazil: a stable isotope approach
– Keltony de Aquino Ferreira, Leandro Rabello Monteiro & Ana Paula Madeira Di Benedetto, Pp. 16173–16176

First record of the White Tufted Royal *Pratapa deva lila* Moore, [1884] (Lepidoptera: Lycaenidae: Theclinae) from Himachal Pradesh, extending its known range westwards
– Sanjay Sondhi, Pp. 16177–16179

Range extension of the Lilac Silverline *Apharitis lilacinus* to southern Rajasthan and a review of the literature
– K.S. Gopi Sundar, Swati Kittur, Vijay Kumar Koli & Utkarsh Prajapati, Pp. 16180–16182

A record of gynandromorphism in the libellulid dragonfly *Crocothemis servilia* (Insecta: Odonata) from India
– R.V. Renjith & A. Vivek Chandran, Pp. 16183–16186

Carcass consumption by *Nasutitermes callimorphus* (Blattodea: Isoptera) in highland forests from Brazil
– Igor Eloi, Mário Herculano de Oliveira & Maria Avany Bezerra-Gusmão, Pp. 16187–16189

New records of nasutiform termite (Nasutitermitinae: Termitidae: Isoptera) from Meghalaya, India
– Khirod Sankar Das & Sudipta Choudhury, Pp. 16190–16192

Corrigendum

Corrections to A citizens science approach to monitoring of the Lion *Panthera leo* (Carnivora: Felidae) population in Niokolo-Koba National Park, Senegal
– Dimitri Dagorne, Abdoulaye Kanté & John B. Rose, Pp. 16193–16194

Publisher & Host

