



Parthenos

Newsletter of DiversityIndia



Monkey Puzzle

Wildlife on Islands

Treating Black Kite

Abnormal Silverline

ODKF

Kabini and Vythiri

January 2011

Rare Sighting

Abnormal Silverline *Spindasis abnormis*

Spindasis abnormis, the endemic Abnormal Silverline butterfly of the Western Ghats, southwestern India (Lepidoptera, Lycaenidae)

Rohan Lovalekar¹, Gaurav Agavekar², Krushnamegh Kunte³

1: Sahyadri Nisarga Mitra, Chiplun, Ratnagiri District, Maharashtra, India. Email: rohan.lovalekar85@gmail.com

2: Joshi Ali, Pag, Chiplun, Ratnagiri District, Maharashtra, India. Email: agavekar.gaurav@gmail.com

3: FAS Center for Systems Biology, Harvard University, 52 Oxford St., Cambridge, MA 02138, USA. Email: krushnamegh@ifoundbutterflies.org

Affiliation: Indian Foundation for Butterflies

Abstract: In this article we describe a sighting of the *Spindasis abnormis* butterfly from Kumbharli Ghat, Ratnagiri District, Maharashtra, in the northern Western Ghats. The species is extremely rare, endemic to the Western Ghats, and had not been seen at least for the past several decades. Our record confirms that the species is not endemic to the Nilgiris-Kodagu Districts in the southern Western Ghats, as previously believed, but extends much further north.

Keywords: endemic species; Theclinae; Aphnaeini; Konkan

Introduction: There is renewed interest in butterflies of the Indian Region due to increased awareness among Indian citizens about butterflies, their biology and conservation issues. This is fueling resurgence of natural history in India, with the result that new information is being generated at a rapid pace. In this article we describe sighting of a very rare and endemic butterfly species, and provide notes on its habitat and habits, along with first pictures of a living specimen.

Spindasis abnormis (Moore, 1883), the Abnormal Silverline butterfly (Lycaenidae, Theclinae, Aphnaeini), is very little known and endemic to the Western Ghats. Virtually nothing is published about it besides a handful of records from just two localities. It was described based on males taken from Coonoor (Moore 1883). Coonoor is a small town in the Nilgiris District, Tamil Nadu, southwestern India (11.35°N, 76.82°E), with the average elevation of 1,500m asl (Fig. 1). It is a popular hill station in southern India. The original vegetation of the area was mid-elevation evergreen forest, but the neighborhood of the town is now mostly tea plantations, with occasional small forest fragments.

Moore did not specify the number, origin or collection dates of type specimens, but Wynter-Blyth stated that "The species was originally based on a pair caught at Coonoor in the '80's of the last century." (Wynter-Blyth 1957). Wynter-Blyth further mentioned, "Since then several more have been caught in the same locality and it was also recorded many years ago in Coorg." [see below for Coorg, which is an anglicized version of Kodagu].

Larsen later offered further details: "It was described after a few Coonoor specimens collected in 1880. A very few were then taken in the Coorg area. Florence found additional specimens near Coonoor early this century since then very little additional material has come to hand. One must assume that this South Indian endemic is strictly localized, and in all probability linked to some fairly obscure species of ant, since the genus has one of the closest symbiotic relationships with ants of all the Lycaenidae." (Larsen 1987). The Florence records were also mentioned by Wynter-Blyth (Wynter-Blyth 1945), but Wynter-Blyth and Larsen themselves never encountered any specimens in the Nilgiris. The Kodagu (Coorg) record is by Hannington (Wynter-Blyth 1944), but we are unable to extract the exact locality.

Kodagu is a fairly large and hilly district (total area: 4,100 km², in the neighborhood of 12.42°N, 75.73°E) from southwestern Karnataka, ranging in elevation from 900-1,750m asl. The predominant vegetation type was evergreen forest, but deciduous forests occurred in smaller patches. Coffee and teak plantations now predominate the landscape, although large evergreen forest patches still exist in many parts of the district. The precise habitat of *S. abnormis* in this mosaic is unknown.

Gaonkar mentioned distribution of the species from Tamil Nadu (Coonor), Karnataka (Kodagu) and Maharashtra but not Goa (Gaonkar 1996). Gaonkar has not published the details of his Maharashtra record(s), and the basis of his Maharashtra record(s), if any specimens or photographs exist, is unknown to us.

This is, practically, all the known information on this species. Due to the paucity of records, the species has been described as “Extremely local” and “very rare” (Evans 1932; Wynter-Blyth 1957). Nothing is known of its habits, habitat or exact distribution. Its early stages and larval host plants have not been reported (Robinson *et al.* 2001). It was either not covered in many significant books on Indian butterflies (Antram 1924; Bingham 1907; Kehimkar 2008; Kunte 2000), or covered with only a statement that nothing was known about the species beyond the Coonor records (de Nicéville 1890; Swinhoe 1911-1912). In his meticulously detailed series of papers on butterflies of the erstwhile Bombay Presidency, Thomas Bell did not mention the species in the central and northern Western Ghats in the issue in which he covered other Aphnaeini known from the area by the 1910s (Bell 1919). There are no specimens in the Madras Government Museum (Satyamurti 1966). However, the upper and undersides of both sexes have been illustrated by Swinhoe and d’Abrera from the specimens in the Natural History Museum, London (d’Abrera 1986, p. 605; Swinhoe 1911-1912, plate 735).

Sighting of *Spindasis abnormis* from Kumbharli Ghat, Maharashtra: Kumbharli Ghat, approximately 30 km from the town of Chiplun

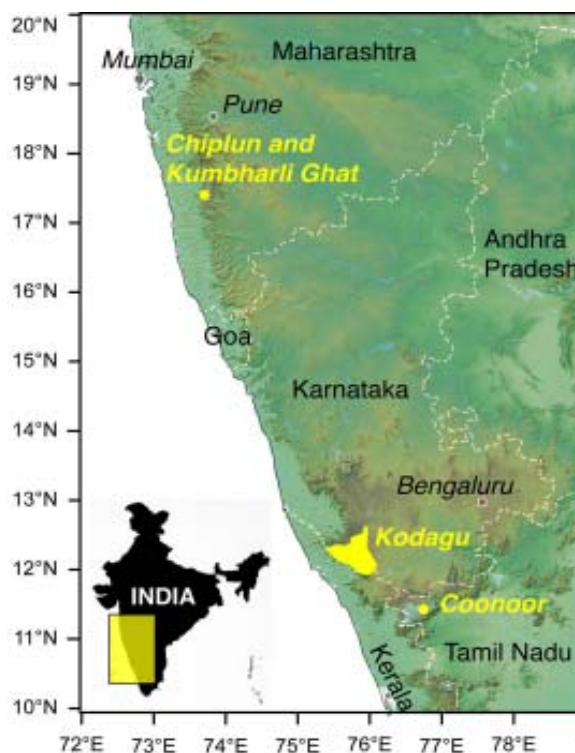


Fig. 1: Map showing localities in the Western Ghats where *Spindasis abnormis* has been recorded so far (prepared by Krushnamegh Kunte).

(17.53°N, 73.52°E), Ratnagiri District, is one of the frequently used passes over the northern Western Ghats (Fig. 1). It is part of a state highway that connects Chiplun on the Konkan (coastal) side of the Western Ghats to Karad, on the eastern plains. The area is still somewhat forested, hill slopes with some small evergreen forest patches interspersed among secondary deciduous and scrub forests. The plateaus, owing to the shallow layer of soil and high-velocity winds, are covered with wind-swept short grass savannahs, with a few shrubs and very stunted trees.

On 5 November 2007, RL initially saw a male *Spindasis*, presumably of *S. abnormis*, resting on low grass on the Kumbharli Ghat (precise location of the sighting taken from Google Maps: 17°23'33.99"N, 73°40'09.33"E, elevation 742m asl). However, it flew out of sight before it could be photographed and its identity confirmed. At 1.30pm, RL and GA soon spotted, photographed and observed a female for five to 10 minutes on this plateau (Fig. 2). It was not a very fresh specimen, its hindwings having lost the tornal portions,

presumably survivor of a predator attack. It was laying eggs on the bark of a *Cassia fistula* L. tree (Fabaceae) at about 2m above the ground, far from any foliage (Fig. 2A). Afterwards it flew to a nearby bush and basked there for a few minutes with the wings 3/4th spread (Fig. 2B). Like the male before, it also soon disappeared, its extremely swift flight being too difficult to follow.

KK later identified the species based on the photographs sent by RL and GA. On learning the identity and rarity of the species, RL and GA visited the spot once again on 7 November 2007 to try to locate the eggs and in the hopes of raising butterflies from eggs. However, they failed to locate any eggs or caterpillars, and the opportunity to study the early stages of this very rare species was lost. *Cassia fistula* remains an unconfirmed larval host plant for this species. However, similar to other *Spindasis*, caterpillars of *S. abnormis* may turn out to be polyphagous since *Spindasis* seem to rely more on the presence of specific ants rather than specific plants to complete their life cycle.

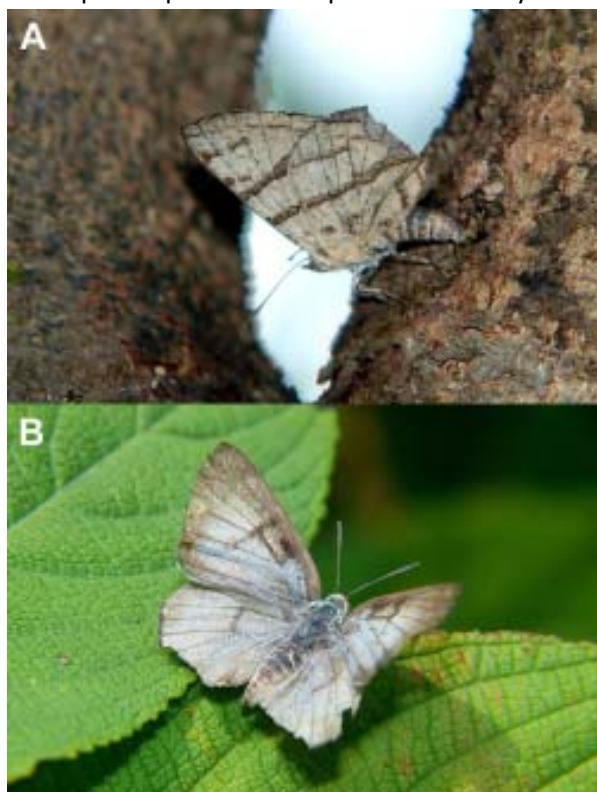


Fig. 2: *Spindasis abnormis* female at Kumbharli Ghat near Chiplun, Maharashtra, northern Western Ghats, on 5 November 2007; A: ovipositing on the bark of *Cassia fistula* tree (Fabaceae), and B: basking. Photographs by Gaurav Agavekar.

Importance of this sighting: This sighting is significant for several reasons. First, it is the first published sighting of the species in the past at least 70 years since Florence's record, as quoted above from Larsen's paper. Second, this is only the third locality from where the species is now known, the other two being Coonoor and Kodagu (Fig. 1). Importantly, this is the first confirmed spot record outside the Nilgiris-Kodagu area (the specifics of Gaonkar's Maharashtra record being unknown to us), which shows that the species is not highly restricted within the Western Ghats as previously believed. We have also reported its specific habitat, although it likely uses other habitat types. *Spindasis*, as a generality, use open, sunny patches, frequenting shrubs and low herbs on the edges of deciduous and evergreen forests. Our sighting of *S. abnormis* suggests that it uses similarly secondary habitats.

Although this sighting adds to the scanty information on this species, our pursuit of this species, specifically its males that we have not yet been able to photograph, continues. Our top priority is to study its early stages. We surely hope, however, that the next sightings will not be as far apart as our sighting has been from that of Florence.

Acknowledgements: This is Publication No. 1 of the Indian Foundation for Butterflies.

References:

- Antram, C. B. 1924. *Butterflies of India*. Thacker, Spink & Co., Calcutta (Kolkata).
- Bell, T. R. 1919. The common butterflies of the plains of India (including those met with in the hill stations of the Bombay Presidency). Part 22. *Journal of the Bombay Natural History Society*, 26: 438-487.
- Bingham, C. T. 1907. *The Fauna of British India, including Ceylon and Burma (Butterflies)*, vol. 2. Taylor and Francis, London.
- d'Abbrera, B. 1986. *Butterflies of the Oriental Region. Part III: Lycaenidae and Riodinidae*. Hill House, Melbourne.
- de Nicéville, L. 1890. *The Butterflies of India, Burmah and Ceylon. Volume III. Lycaenidae*. The Calcutta Central Press Co., Calcutta (Kolkata).
- Evans, W. H. 1932. *The Identification of Indian butterflies. 2nd ed.* Bombay Natural History Society, Mumbai.
- Gaonkar, H. 1996. *Butterflies of the Western Ghats with notes on those of Sri Lanka*. Report to Centre for Ecological Sciences, Indian Institute of Sciences, Bangalore.
- Kehimkar, I. 2008. *The Book of Indian Butterflies*. Bombay Natural History Society and Oxford University Press, Mumbai.
- Kunte, K. 2000. *Butterflies of Peninsular India*. Universities Press (Hyderabad) and Indian Academy of Sciences (Bangalore),
- Larsen, T. B. 1987. The butterflies of the Nilgiri Mountains of Southern India (Lepidoptera: Rhopalocera). *Journal of the Bombay Natural History Society*, 84: 291-316.
- Moore, F. 1883. Descriptions of new Asiatic diurnal Lepidoptera. *Proceedings of the Zoological Society, London*, 1883: 521-534.
- Robinson, G. S., P. R. Ackery, I. J. Kitching, G. W. Beccaloni and L. M. Hernández. 2001. *Hostplants of the Moth and Butterfly Caterpillars of the Oriental Region*. Natural History Museum, London.
- Satyamurti, S. T. 1966. *Descriptive Catalog of the Butterflies in the Collection of the Madras Government Museum*. The Commissioner of Museum, Chennai.
- Swinhoe, C. 1911-1912. *Lepidoptera Indica. Vol. IX. Rhopalocera. Family Lycaenidae (continued). Sub-families Horaginae, Deudorixinae, Hypolycaeninae, Zesiusinae, Aphnaeinae, Biduandinae, Cheritriinae, Loxurinae. Family Hesperiiidae. Sub-families Ismeneinae, Achararinae*. Reeve & Co, London.
- Wynter-Blyth, M. A. 1944. The butterflies of the Nilgiris (part II). *Journal of the Bombay Natural History Society*, 45: 47-61.
- Wynter-Blyth, M. A. 1945. Addenda and corrigenda to 'The butterflies of the Nilgiris' published in vols. XLIV and XLV of the journal. *Journal of the Bombay Natural History Society*, 45: 613-615.
- Wynter-Blyth, M. A. 1957. *Butterflies of the Indian Region*. Bombay Natural History Society, Mumbai.

More of this species on : <http://ifoundbutterflies.org/10-lycaenidae/abnormal-silverline>