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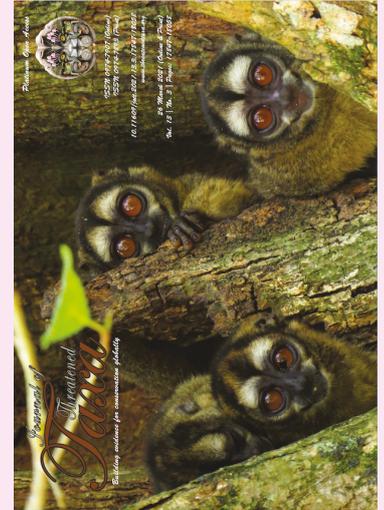
### NOTE

#### REDISCOVERY OF THE RARE DESERT GRIZZLED SKIPPER *SPIALIA DORIS EVANIDA* BUTLER, 1880 (HESPERIIDAE: PYRGINAE) FROM THE THAR DESERT, RAJASTHAN, INDIA

Shyam Sundar Meena, Anil Tripathi, Vijay Kumar Koli & M. Akram Awan

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## Rediscovery of the rare Desert Grizzled Skipper *Spialia doris evanida* Butler, 1880 (Hesperiidae: Pyrginae) from the Thar Desert, Rajasthan, India

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The Desert Grizzled Skipper *Spialia doris*, also known as the Aden Skipper, prefers an arid and rocky environment and was first described from ‘Tajora’ (Tadjoura, Djibouti) by Walker (1870). It is distributed in northern Africa, the Arabian peninsula, Turkmenistan, Iraq, Iran, Pakistan, and India (Tshikolovets & Pages 2016; Veronik et al. 2018). The species is further identified at four subspecies levels (Cock 2016): 1) *Spialia d. doris* (Walker, 1870); 2) *S. d. amenophis* (Reverdin, 1914); 3) *S. d. daphne* (Evans, 1949), and 4) *S. d. evanida* (Butler, 1880) (Evans 1949; de Jong 1978; Larsen 2005). Although globally listed as ‘Least Concern’ on the IUCN Red List (van Swaay et al. 2014), it is rare, sporadically distributed and has not been seen in the past 67 years (see below) in India. In this paper we report the rediscovery of this species from the Thar Desert, Rajasthan (western India) with a note about its habitat and collate all available information to provide a complete database for *S. d. evanida*.

On 7 October 2016, around 17.55h, SSM spotted and photographed a butterfly sitting on top of an inflorescence of *Dactyloctenium aristatum* grass (Image 1) about 30cm high, near a power sub-station Lodurva,

Jaisalmer (26.942°N & 70.875°E), Rajasthan. The weather was dull and pleasant with ambient temperature of about 30°C when the butterfly was spotted. As the butterfly was photographed just prior to sunset, the individual may have been there to stay for the night and was sitting at an optimal height above the ground that may have helped it avoid ground predators such as lizards, skink, and snakes. Later it was identified as *Spialia doris evanida* with the help of the literature (Evans 1932, 1949; de Jong 1978; Roberts 2001; Tshikolovets & Pages 2016), and the images available on the world wide web. The area where the individual was spotted had shrub and bushy, sparse grassland habitat. The main plant species were *Acacia* sp., *Calotropis procera*, *Laptodania pyrotechnica*, *Euphorbia* sp., *Zizyphus* sp., *Crotalaria burhia*, *Heliotropium bacciferum*, and *Convolvulus* sp. (Image 2). As it was the monsoon season, there was a temporary water channel at about 100m distance with a few puddles in its bed.

The *S. doris* is different from *S. galba* (the only other species of this genus known in India), having a smaller size with a forewing length of 9–11 mm (vs 11–13 mm

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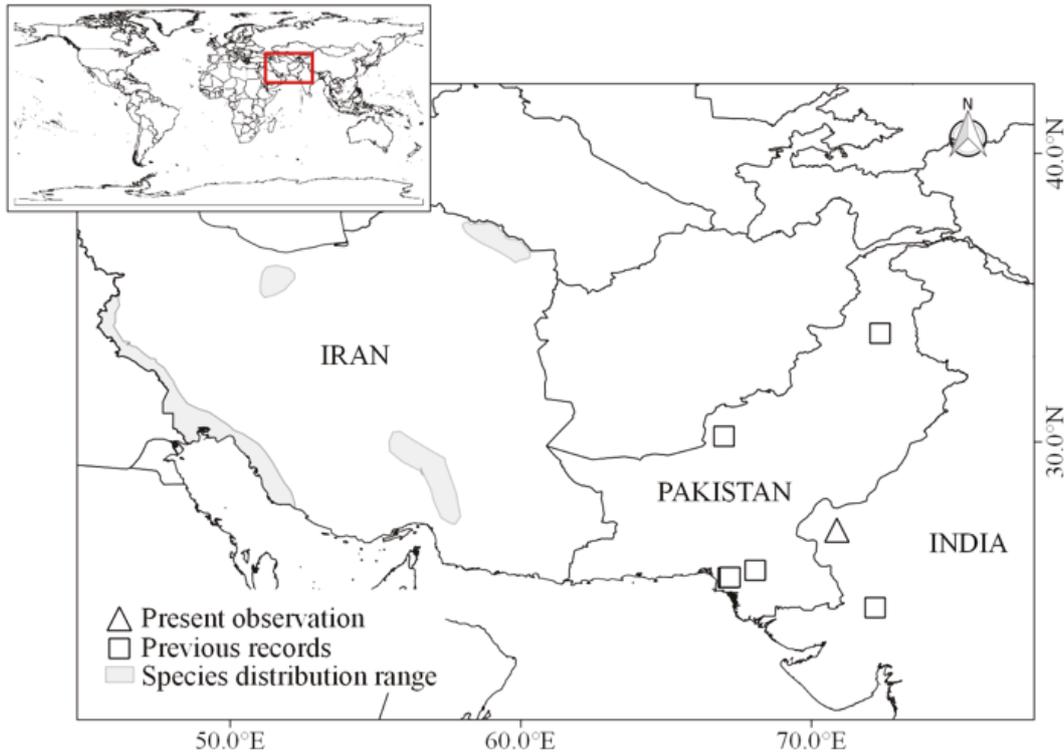


Figure 1. Eastern distribution of the Desert Grizzled Skipper *Spialia doris evanida* Butler with present record ( $\Delta$ ) from the Thar Desert, western India.

in *S. galba*), under hindwing ground colour being paler greyish-brown with a faint yellow tint (vs darker brown in *S. galba*) and bands on under hindwing being broken into spots (vs prominent basal and discal bands being present in *S. galba*) (Tshikolovets & Pages 2016) (Image 1). The *S. galba* is seen in grasslands as well as in forests up to 1,300m in the Himalaya and 2,700 m in the hills of southern India, but which is found absent in arid and wet dense habitats (Kehimkar 2008). Its identified larval food plants are *Hibiscus* sp., *Sida rhombifolia* (Malvaceae), and *Waltheria indica* (Sterculiaceae), while plants of Malvaceae and Convolvulaceae (include *Corchorus* sp., *Convolvulus* sp.) preferred by *S. doris* (Pittaway 1980; Benyamini 1984; Pittaway 1985; Pittaway et al. 2006; Cock 2016; Norfolk & Dathe 2019). Robert (2001) identified Rosaceae family members, particularly *Potentilla supina*, and possibly *Neurada procumbens* as species of larval food plants particularly to *S. d. evanidus*.

The subspecies of *S. doris* found in Iran, Pakistan and India are known as *S. d. evanida* (Butler 1880). It was first discovered (and described as a new species) from Sao, near Hubb River, Balochistan, Pakistan (type specimen was collected on 20 November, 1879 and figured in Tshikolovets & Pages (2016)). This subspecies was later collected from Deesa, Rajputana (currently located in



Image 2. Typical habitat overview where the Desert Grizzled Skipper *Spialia doris evanida* was spotted.

the state of Gujarat, India), and Campbellpur, Punjab (Pakistan) (Evans 1949). In Iran, this taxon has been recorded extensively from Tehran, Alborz, Khorasan, Kerman provinces and southern drier provinces from Ilam to Busher (Tshikolovets et al. 2014; Naderi 2019) (Figure 1). Evans (1932) retained its specific status (*Spialia evanidus*) and named it also the Sindh Skipper. Evans (1949) then synonymized *evanida* with the nominate subspecies. We follow de Jong (1978), Tshikolovets et al. (2014), Tshikolovets & Pages (2016), Naderi (2019), Van



**Image 1.** A—The Desert Grizzled Skipper *Spialia doris evanida* photographed at Jaisalmer, Rajasthan on 7 October 2016 | B—Indian Skipper *S. galba* for comparison.

Gasse (2018), and Anonymous (2020a) and accept *Spialia doris evanida* (Butler 1880) as a valid subspecies.

The *S. d. evanida* is recently rediscovered from Pakistan (Anonymous 2020b). As, only a male of the species was for the first and last time collected from India by Evans (1949), the present finding is an important record of this rare species and after 67 years, it is a rediscovery. Further, more attention of researchers and detailed survey in the Thar Desert may help to track this species and its natural history in future.

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