

A New Record for Rajasthan: The Splendid Dartlet (*Agriocnemis splendidissima*) Recorded in Udaipur, Rajasthan, India

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ABSTRACT

The Splendid Dartlet (*Agriocnemis splendidissima*) is reported as a new state record for Rajasthan, India. This significant discovery was made during a wetland health assessment conducted in Udaipur. This communication provides description of the new locality record, description of habitat with distribution range are discussed.

Key words: *Agriocnemis splendidissima*, Habitat Description, New Record, Udaipur, Rajasthan.

The Splendid Dartlet (*Agriocnemis splendidissima*) is a slender damselfly native to South Asia. We report the first record of this species in the state of Rajasthan, India. A single individual was observed perched on emergent vegetation in a small rivulet near Kundal ka Guda village, Udaipur district. This discovery expands the known distribution of *A. splendidissima* in Rajasthan and highlights the importance of further surveys to document the state's odonate diversity.

A total of 13 genera and 11 species of the Coenagrionidae family have been reported in India (Subramanian & Babu, 2017). Of these, only two species of the *Agriocnemis* genus, *A. femina* and *A. pygmaea*, are found in Rajasthan (Sharma 2024). *A. femina* has a limited distribution in Udaipur, Bhilwara, and Chittorgarh (Koli et al. 2014), while *A. pygmaea* has a wider distribution in Rajasthan, including Barmer, Bharatpur, Jaipur, Jodhpur, Kota, Rajsamand and Sirohi districts (Sharma 2024).

During a biodiversity survey of the rivulet on April 24, 2024, at 1:30 PM, 2.5 kilometres downstream from the rivulet origin near a concrete anicut (24.751246N 73.656337E), an *A. splendidissima* was observed perched on a sedge blade emerging from the shallow water in the middle of the rivulet. Comprehensive searches were conducted both upstream and downstream of the area, and no other individuals of this species have been observed. This individual was photographed in the field using a 100 mm fixed canon lens along with Canon 5D Mark III DLR camera. The species was identified using the identification key provided by Ramachandran & Raju (2020) and Nair (2011) (Fig.1).

The *A. splendidissima* is a slender damselfly belonging to the Coenagrionidae family. This species is endemic to South Asia, with its range limited to India (Subramanian & Babu 2017) and Pakistan (Khaliq & Siddique 1995; Kalkman et al. 2020; Zia et al. 2010). The *A. splendidissima* distribution in India includes the states of Assam, Tripura, West Bengal, Uttar Pradesh, Himachal Pradesh, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Maharashtra, Karnataka, Kerala, Gujarat, and West Bengal (Subramanian & Babu 2017; Rathore et al. 2021; Bhowmick 2021).

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Figure 1. An adult male *Agriocnemis splendidissima* species in natural habitat ©Anil Sarsavan.

Habitat Description

The rivulet is perennial and originates from a small natural spring in Kundal ka Guda village, after flowing approximately 9 kilometres towards south-west near the Dangiyon Ka Hunda village, where it merges with the Bedach River. The rivulet, approximately 3-5 meters wide, is nestled amidst the Aravalli hill ranges and bordered by agricultural fields. Its banks, rising 0.2-1.0 meters high, are adorned with bushes and shrubs. While there are lines

of wild date palm (*Phoenix sylvestris*) few small trees of cluster fig (*Ficus racemosa*) are near the bank (approximately 2 meters away), the rivulet lacks a shaded area. Dense submerged sedge and reed grow in the rivulet, reaching a height of 0.5 to 1.2 meters. The bank also has a good cover of grass, ranging in height from 0.5 to 1.2 meters. Emergent vegetation, including grass and herbs, can be found along the shallow water at the edge of the rivulet, reaching a height of 0.5 to 0.8 meters (Fig. 2).



Figure 2. Preferred habitat of *Agriocnemis splendidissima* with submerged Vegetation ©Anil Sarsavan

The presence of this species is providing crucial information about the habitat quality in community managed areas in the regions. This information will further help to prioritize the targeted conservation strategies of these important common lands patches. Despite its limited distribution in Rajasthan, the *A. splendidissima* discovery highlights the region's rich biodiversity.

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