



Record of *Apochrysa evanida* Gerstaecker, 1893 (Neuroptera: Chrysopidae) from the Western Ghats, India

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ABSTRACT: *Apochrysa evanida* Gerstaecker, 1893 belonging to the Chrysopidae family of Neuroptera is reported for the first time from the Western Ghats and Kerala state. The species is described with its distribution.

KEYWORDS: Report, *Apochrysa evanida*, Kerala, distribution

The order Neuroptera includes 5,813 species worldwide (Oswald and Machado, 2018; Oswald, 2021) and 327 species reported from India, under 115 genera and 12 families (Singh *et al.*, 2020). Chrysopidae (green lacewings) is the second-largest family of Neuroptera with over 1,200 species belonging to 80 genera (Brooks and Barnard, 1990) from the world, of which 70 species under 22 genera have been reported from India (Singh *et al.*, 2020). Chrysopidae comprises three extant subfamilies: Nothochrysininae, Chrysopinae and Apochrysininae. Apochrysininae (delicate lacewings) is the smallest subfamily, globally comprises 26 species under six genera. Only three species under two genera are known from India (*Joguina nicobarica* (Brauer, 1864) from Assam, *Joguina unimaculata* Winterton, Balakrishnan and Chenthamarakshan, 2021 from Kerala and *Apochrysa evanida* Gerstaecker, 1893 from Karnataka) (Ghosh, 2000; Winterton and Brooks, 2002; Chandra and Sharma, 2009; Winterton and Gupta, 2020; Winterton *et al.*, 2021). *Apochrysa* Schneider is the predominant

genera of Apochrysininae with 10 species reported worldwide (Winterton and Gupta, 2020). Species under this genus are distributed throughout the world, including Afrotropical, Palaearctic, Oriental and Oceanian realms. *A. evanida* (vanishing delicate lacewing) is the only species reported under *Apochrysa* from India, but it is not reported so far from the Western Ghats region (Ankita Gupta, Pers. comm.) (Winterton and Gupta, 2020). *A. evanida* was collected from the Western Ghats as well as from Kerala and details presented.

Specimens were collected using a sweep net from Valliyoorkavu, Wayanad. The surrounding habitat is semi-closed forest with large trees and thick vegetation. Later the collected specimens were killed with 2 to 3 drops of ethyl acetate using a killing jar. After this, specimens were dried and held on entomological pins with proper labelling. The specimens were examined under Labomed Luxeo 6Z Stereomicroscope. The terminology of wing venation and identification followed Breitkreuz *et*

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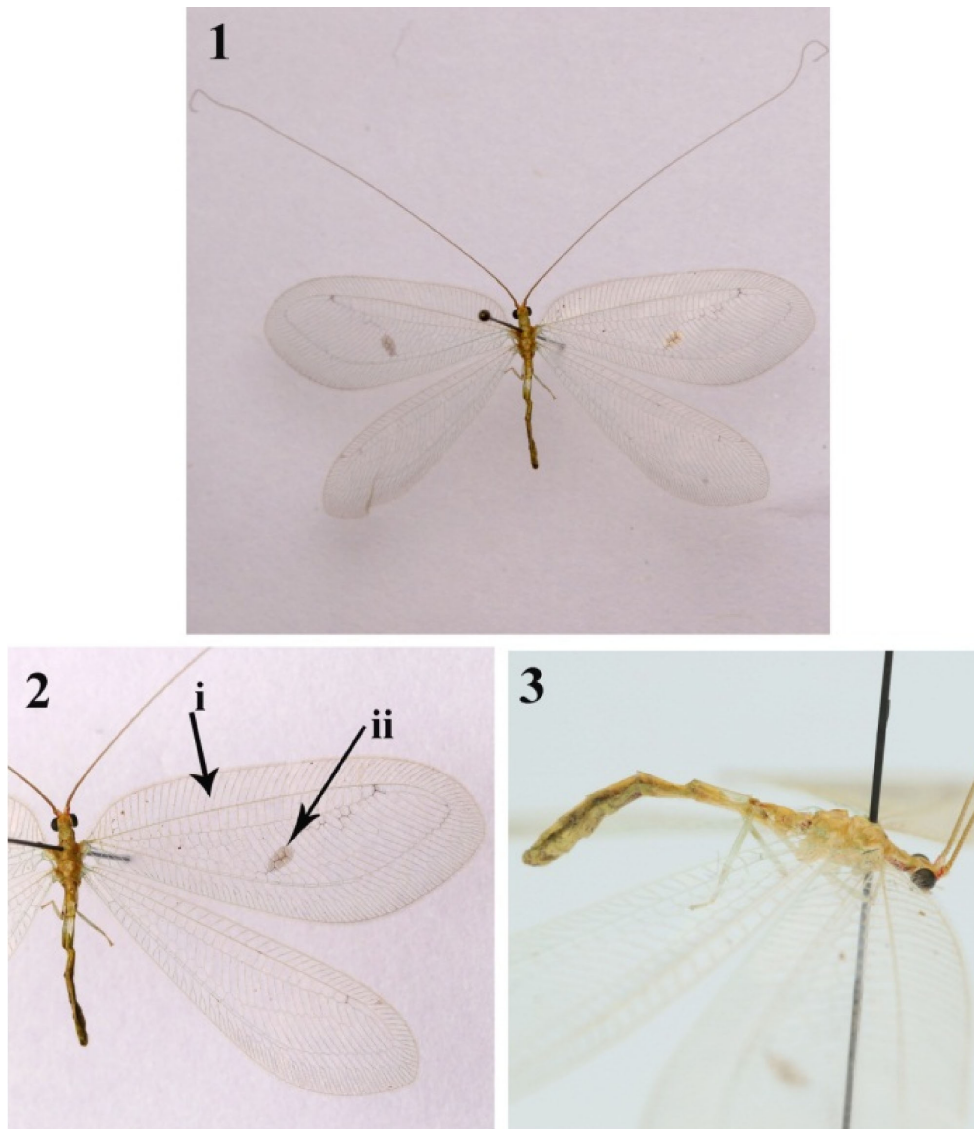


Fig. 1: Habitus of *Apochrysa evanida*

Fig. 2-i: Costal area with un-forked subcostal veinlets; Figure 2-ii: Dark ovoid spot along inner gradate series

Fig. 3: Lateral view of *Apochrysa evanida*

al., (2017) and Winterton and Gupta (2020). The digital photos of the specimens were taken with Canon 7D Mark II digital camera with a 100 mm F/2.8L macro lens. The specimens were deposited in the insect collections of Shadpada Entomology Research Lab (SERL), Kerala, India.

***Apochrysa* Schneider, 1851**

1851. *Apochrysa* Schneider, *Bers. Ent. Ztschr.*, **5** (20):16.

Diagnosis: Costal area of forewing simple, lacking interconnecting cross-veins and subcostal veinlets not forked (Fig. 2-i); markings in wings only along inner gradate series and (sometimes) pterostigma.

Distribution: India, South Africa, Tanzania, Australia (including Norfolk Island), Comoros Islands, Sao Tome, Madagascar, Japan, China (including Taiwan), eastern Indonesia, Papua New Guinea, Rwanda, Kenya, New Caledonia, Vanuatu, Solomon Islands.

***Apochrysa evanida* Gerstaecker, 1893**

1893. *Synthochrysa evanida* Gerstaecker, *Mitteilungen des Naturwissenschaftlichen Vereins für Neu-Vorpommern u. Rugen* 25: 154.

Diagnosis: Forewing with three gradate series; a dark ovoid spot midway along inner gradate series (Fig. 2-ii); hindwing with two gradate series without markings.

Description: Male: Head and two basal segments of antennae dark yellow and rest of antennal segments light yellow (Figs. 1, 3). Length 19 mm from head to abdomen and 2 mm wide. Pronotum, mesonotum and metanotum light green. Hyaline broad wings with green veins. Costal area with subcostal veinlets mostly simple, unforked and lacking interconnecting cross-veins. Forewing 23 mm long and 9 mm wide. Dark ovoid spot in middle of inner gradate series of forewing. Pterostigma long with light green veins. Hindwing narrower than forewing (22 mm long and 6 mm wide) with two gradate series without any markings. Abdomen greenish yellow with small white hairs. Males are easily distinguished from females by their sternite 8+9 fused and absence of microtholi.

Materials examined: 2♂♂, India: Kerala: Wayanad: Valliyoorkavu, 11.8044° N, 76.0300° E, 12-II-2021, Altitude 747m, Suryanarayanan T. B., SERLNR110, SERLNR111.

Distribution: Karnataka (Bengaluru) and Kerala (Wayanad)

Considering the geographic position of Western Ghats and its diverse ecosystem, the recorded faunal richness of Chrysopidae with only 23 species belonging to 10 genera (Singh *et al.*, 2020) indicates a need of further exploration. *A. evanida* was recorded for the first time from the Western Ghats as well as from Kerala.

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