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K.J. Rison & A. Vivek Chandran

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Observations of the damselfly *Platylestes* cf. *platystylus* Rambur, 1842 (Insecta: Odonata: Zygoptera: Lestidae) from peninsular India

K.J. Rison [1] & A. Vivek Chandran [2]

[1] Konkoth House, Thumboor P.O, Thrissur District, Kerala 680662, India.
[2] Department of Geology and Environmental Science, Christ College, Irinjalakuda, Thrissur, Kerala 680125, India.
[1]risonkj@gmail.com, [2]avivekchandran@gmail.com (corresponding author)

Lestidae is a rather small family of cosmopolitan, relatively large-sized, slender damselflies (Insecta: Odonata: Zygoptera) commonly known as spreadwings. One-hundred-and-fifty-three species of Lestidae from nine genera are known from around the world and India has 25 species belonging to five genera (Subramanian 2018). *Platylestes platystylus* was described by Jule Pierre Rambur in 1842. Earlier collections of the species are from Bengal and Myanmar (Fraser 1933). The extant range of *Platylestes platystylus* is depicted by the IUCN Red List as India (West Bengal), Lao People's Democratic Republic, Myanmar, Thailand, and Iraq. Though it is listed as a Least Concern species, there is an urgent need for research regarding its taxonomy, population size, population trends, distribution, life history, ecology, and threats (Sharma 2010).

Multiple individuals of unidentified female damselflies were observed and photographed by RKJ from Thommana region (10.342^{0}N & 76.250^{0}E) of the Kole wetlands and Thumboor (10.297^{0}N & 76.256^{0}E), a nearby village during the period 2015–2017. Close observations of the insect's general body structures, wing postures, and wing positioning habits helped us confirm that the damselflies belonged to the family Lestidae. However, the observed individuals could not be assigned to any species as they did not match the description, illustration or photographs of any *Lestes* species known from the region. A male individual was photographed from Thumboor Village in September 2018 by RKJ. A female was observed and photographed from Uppungal region (10.692^{0}N & 75.997^{0}E) of the Kole wetlands by a volunteer, Renjith R.V. during the first Kole Odonata survey organized jointly by the Society for Odonate Studies, Kerala Agricultural University and Kerala Forest and Wildlife Department in October 2018. Both male and female individuals were observed from Thommana and Thumboor during August 2019 to December 2019 by RKJ and VCA. The species was confirmed as *Platylestes* cf. *platystylus* after referring to Fraser (1933) and discussing with Noppadon Makbun (10 April 2018). Since the species was observed from one of the southernmost (Thommana) and northernmost (Uppungal) points of the Kole wetlands, it is reasonable to assume that the species occurs in various locations in and around Kole wetlands.

Description of adult male: *Platylestes platystylus* is a small, dull-coloured damselfly of the size of *Lestes* species. Like other members of Lestidae family, it holds

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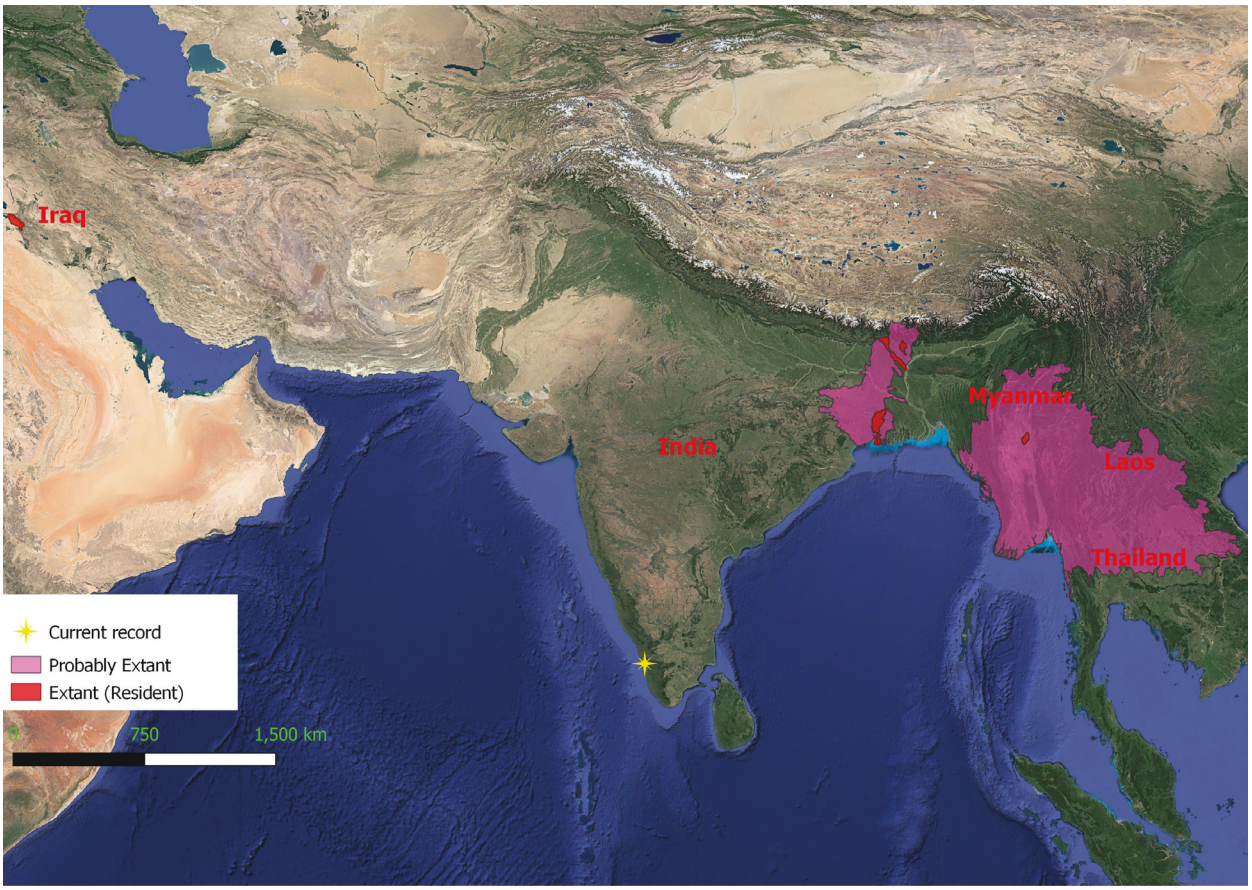

Image 1. Distribution of *Platylestes platystylus*

its stalked, clear wings spread out at rest. Eyes are of bright green colour. The labium is dirty yellow and the labrum, bases of mandibles and cheeks are olivaceous in colour. Its prothorax and thorax are light green, paler at the sides and pruinosed white beneath. The thorax has several black spots. Its wings are palely enfumed. The quadrate pterostigma (wing spots) of *Platylestes platystylus* with pale or white inner and outer ends help distinguish it from *Lestes* species for which the more elongate pterostigma are of uniform colouration (Table 1). Its abdomen is olivaceous to warm reddish-brown in colour with black apical rings on each segment. Anal appendages are whitish with the superiors black at base, curling in at apices to meet each other. Inferior appendages are about half the length and thick at base.

Description of adult female: Female closely resembles the male in most aspects. Anal appendages are yellow, blackish-brown at the base, and as long as segment 10 of the abdomen.

Immature individuals have pale khaki brown thorax and eyes, but the black spots on thorax are distinctive.

Odonatological studies in the Western Ghats have not recorded *Platylestes platystylus* till date (Emiliyamma 2014; Subramanian 2018). We made 20 observations of the species during the period 2015–2020, all from submerged paddy fields. We made field visits twice every month, but could observe the adults only during the period of June–December. Mating and egg-laying were observed in the months of October and November. The females after mating laid their eggs in grasses emerging from water, unguarded by the males. Teneral individuals (newly emerged adults) were also observed, highlighting the importance of this wetland as their breeding habitat. The species is highly seasonal and no adult could be observed during the period from January to June. Fraser (1933) has stated that it is possible that more than one species exists among the four specimens he examined, emphasizing the need for further taxonomic study of the species.

The Kole wetlands is a low-lying area that remains submerged under floodwater for about six months in a year. Wetland agriculture, mainly paddy cultivation is the most important activity undertaken here (Johnkutty & Venugopal 1993). Kole is a globally important

Table 1. Differences between *Platylestes platystylus* and other members of Family Lestidae found in the region.

Species	*Platylestes platystylus*	*Lestes* species	*Indolestes davenporti*
Position of wings at rest	Spread out	Spread out	Held close to the body
Thoracic markings	Large number of black spots	Metallic/non-metallic stripes, few spots in some	Striped thorax, no spots
Pterostigma	Quadrate with pale or white inner and outer ends	At least twice as long as broad, uniform dark colours	Bicolorous, three times as long as broad

Image 2. *Platylestes* cf. *platystylus* adult male from Kole wetlands.

Image 3. Anal appendages of adult male (ventral view) *Platylestes* cf. *platystylus*.

Image 4. Anal appendages of adult male (dorsal view) *Platylestes* cf. *platystylus*.

Image 5. Ovipositing *Platylestes* cf. *platystylus* adult female.

Image 6. *Platylestes* cf. *platystylus* teneral female.

Image 7. Wings of *Platylestes* cf. *platystylus* showing distinctive quadrate pterostigma with pale inner and outer ends.

Image 8. *Platylestes* cf. *platystylus* female photographed at Uppungal

wetland designated as a Ramsar site since 2002 (Islam & Rahmani 2008), but it faces multiple threats in the form of encroachments, waste dumping and excessive use of pesticides. The observation of the rare *Platylestes* cf. *platystylus* adds to the conservation value of this wetland.

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