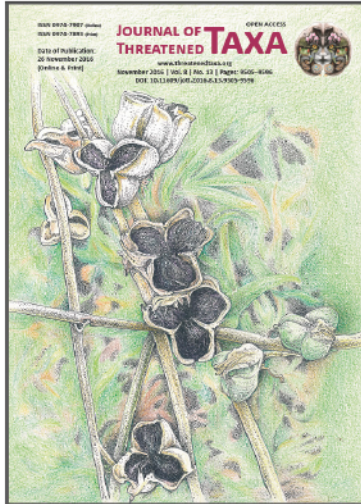


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NOTE

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Amila P. Sumanapala & Nuwan C. Jayawardana

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RANGE EXTENSION OF *LYRIOthemis defonsekai* VAN DER POORTEN, 2009 (ANISOPTERA: LIBELLULIDAE), AN ENDEMIC ODONATE IN SRI LANKA

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Lyriothemis defonsekai van der Poorten, 2009 (Image 1) is an endemic dragonfly in Sri Lanka. It is a distinct species among the Sri Lankan odonates with a striking morphology of red, golden-yellow and black and is the only representative of its genus in the country (Bedjanič et al. 2014). Even though it has a very colorful morphology it was first recognized only in the year 2007 and taxonomically described in 2009. Since then the species has been recorded many times but only from its type locality and its vicinity, near Kudawa (Ratnapura District: 6.4333N & 80.4167E) inside the Sinharaja Man and Biosphere Reserve (van der Poorten 2009a,b; Bedjanič et al. 2014) thus it was considered to be found only within a restricted area (van der Poorten & Conniff 2012). This limited distribution range of the species has led it to be recognized as a Critically Endangered species of Odonata (MOE 2012; Bedjanič et al. 2014).

Although the species has been known for several years, only a limited amount of knowledge is available

on its natural history and ecology. The available information covers some aspects of its distribution, flight seasonality, habitat, habits and some immature stages (egg and a four-month old larva). According to known information the flight season of the species is between April and November (Bedjanič et al. 2014) and it has been reported from semi-disturbed hilly dipterocarp forests with bamboo, tree ferns (van der Poorten 2009a) and pitcher plants near a perennial stream (van der Poorten 2009b; Bedjanič et al. 2014) and close to abandoned paddy fields (van der Poorten 2009a). The elevation range of the localities occupied by the species is between 500–700 m (Bedjanič et al. 2014). The larvae of some members of the genus *Lyriothemis* are known to inhabit phytotelmata (van der Poorten 2009a; Das et al. 2013) while others inhabit muddy ditches and marshlands (van der Poorten 2009a). The larval habitat of *L. defonsekai* has never been discovered but it has been suggested that the larvae might also inhabit phytotelmata (Bedjanič et al. 2014).

An immature male (Image 2) and a mature female *L. defonsekai* (Image 3) were observed at Yagirala Forest Reserve (6.36236N & 80.17666E; elevation: 42m) on 01 August 2015 at about 10:30hr. They were perched on bamboo plants next to a road running within the buffer zone of the forest. The immature male had a yellow abdomen unlike the red abdomen of a mature male and was perched about 2m above the ground. The adult female was perched about 1.5m above the ground level. The surrounding vegetation in the forest buffer



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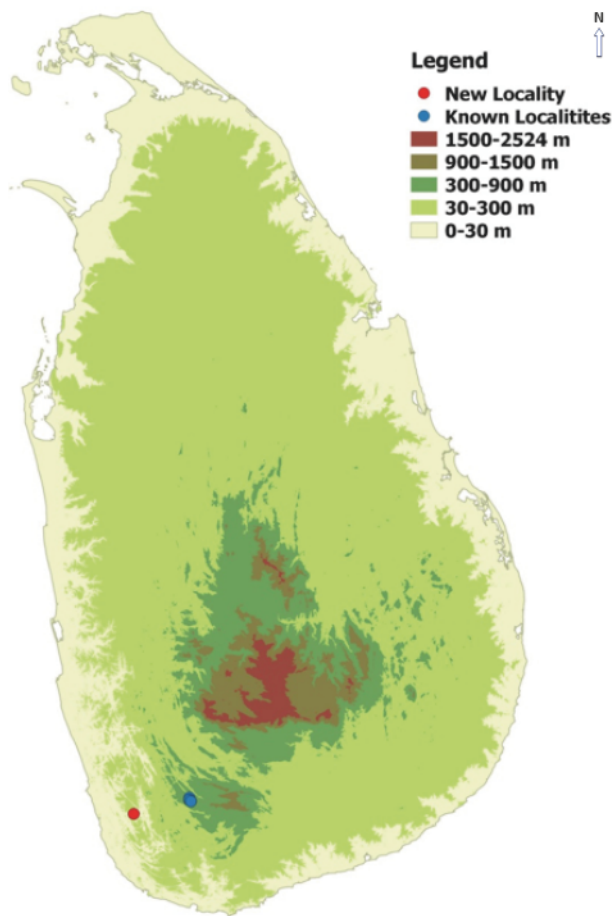


Figure 1. Distribution range of *Lyriothemis defonsekai* with the new locality record



Image 1. *Lyriothemis defonsekai* male from Sinharaja Forest Reserve



Image 2. *Lyriothemis defonsekai* immature male

zone comprises a *Pinus* stand naturally being succeeded by native vegetation. The undergrowth was dominated and densely covered by bamboo plants (Image 4). A marshy area and a small seep were present within about 100m from the locality. A female *L. defonsekai* was observed at the same locality at 09:00hr and 15:00hr on the following day (2 August 2015).

Hitherto, *L. defonsekai* was only known from semi disturbed dipterocarp forests in the Sinharaja Man and Biosphere Reserve. At Yagirala Forest Reserve, it was recorded from a *Pinus* plantation being succeeded by natural vegetation. However, in all these localities, the species has been recorded in places adjoining forest pathways with partial canopy cover and close to marshlands, long abandoned paddy fields, rain water pools inside forest or forest streams with sluggish banks. So far it has not been recorded in forest gaps that are far from marshy habitats or stagnant water pools. This habitat preference towards partially open areas in the vicinity of marshes or similar aquatic habitats could



Image 3. *Lyriothemis defonsekai* mature female



Image 4. Habitat of the locality where *Lyriothemis defonsekai* was observed in Yagirala Forest Reserve

be linked with its breeding habitat requirement as adult odonates are more frequently seen close to their ovipositing and larval habitats. Further observations and ecological studies are required to understand the habitat requirements of adult and larval stages of *L. defonsekai*.

The range extension record of *L. defonsekai* to Yagirala Forest Reserve indicates that the species has a wider distribution range than previously recorded. The new locality is located about 27.5km southwestward from the type locality of the species. As there are several lowland rainforest habitats between the type

locality of the species and the newly recorded locality, it is possible that *L. defonsekai* might occupy at least one of these. It can only be confirmed by further surveys in potential habitats in south western Sri Lanka which includes Morapitiya-Runakanda Forest Reserve, Kalugala Forest Reserve and Haycock Forest Reserve. The results of further distribution surveys would provide an important input for any future conservation actions for this critically endangered species and its habitat.

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