



Range extension of *Ictinogomphus decoratus* (Selys, 1854) (Insecta: Odonata: Gomphidae) to India

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Abstract

Ictinogomphus decoratus (Selys, 1854) (Insecta: Odonata: Gomphidae) is widely distributed in South East Asia. Here we report the range extension of the species to Indian Territory and new addition to the Indian Odonate fauna from the Little Andaman, Andaman and Nicobar Islands.

Keywords: Andaman Islands, Biodiversity, Gomphidae, India

Introduction

The family Gomphidae (Odonata: Anisoptera) is diverse and globally distributed with 1012 species in 101 genera, of this Indian fauna is represented by 85 species in 29 genera (Subramanian and Babu, 2017). The Andaman and Nicobar group of islands (India) in the Bay of Bengal is a group of 572 tropical islands with high biodiversity and endemism. Biogeographically, the Andaman group of islands has affinity to Indo-Burmese biodiversity hotspot and the Nicobar group of islands to Sundaland biodiversity hotspot. The Odonata fauna of these islands were studied by Fraser (1924), Lahiri (1975, 1998), Chhotani *et al.* (1983), Lahiri and Mitra (1993), Mitra (1995), Hämäläinen *et al.* (1999), Ram *et al.* (2000), Hämäläinen (2002), Yeh and Veenakumari (2000), Nandy and Babu (2009, 2012), Mitra *et al.* (2013), Rajeshkumar *et al.*, (2017) and Rajeshkumar and Raghunathan (2018) and reported 72 species, of this 11 species are endemic to the islands (Babu *et al.*, 2013, Rajeshkumar *et al.*, 2017, Rajeshkumar and Raghunathan, 2018). Several species reported from these islands have distribution in south East Asia.

Globally, 18 species of genus *Ictinogomphus* Cowley, 1934 are known, of this five species are reported from India, namely *Ictinogomphus angulosus* (Selys, 1854), *Ictinogomphus distinctus* Ram, 1985, *Ictinogomphus kishori* Ram, 1985, *Ictinogomphus pertinax* (Hagen

in Selys, 1854) and *Ictinogomphus rapax* (Rambur, 1842) (Subramanian and Babu, 2017). Based on our recent collection from Little Andaman here we report *Ictinogomphus decoratus* (Selys, 1854) (Gomphidae) as a new addition to the Odonata fauna of India. Selys (1854) described *Ictinogomphus decoratus* from Java, and which is widespread in Southeast Asia (Manh, 2011). With this current report of the species, the geographic range is extended to 92.5°E in Indian Territory in the Bay of Bengal.

Ictinogomphus decoratus (Selys, 1854)

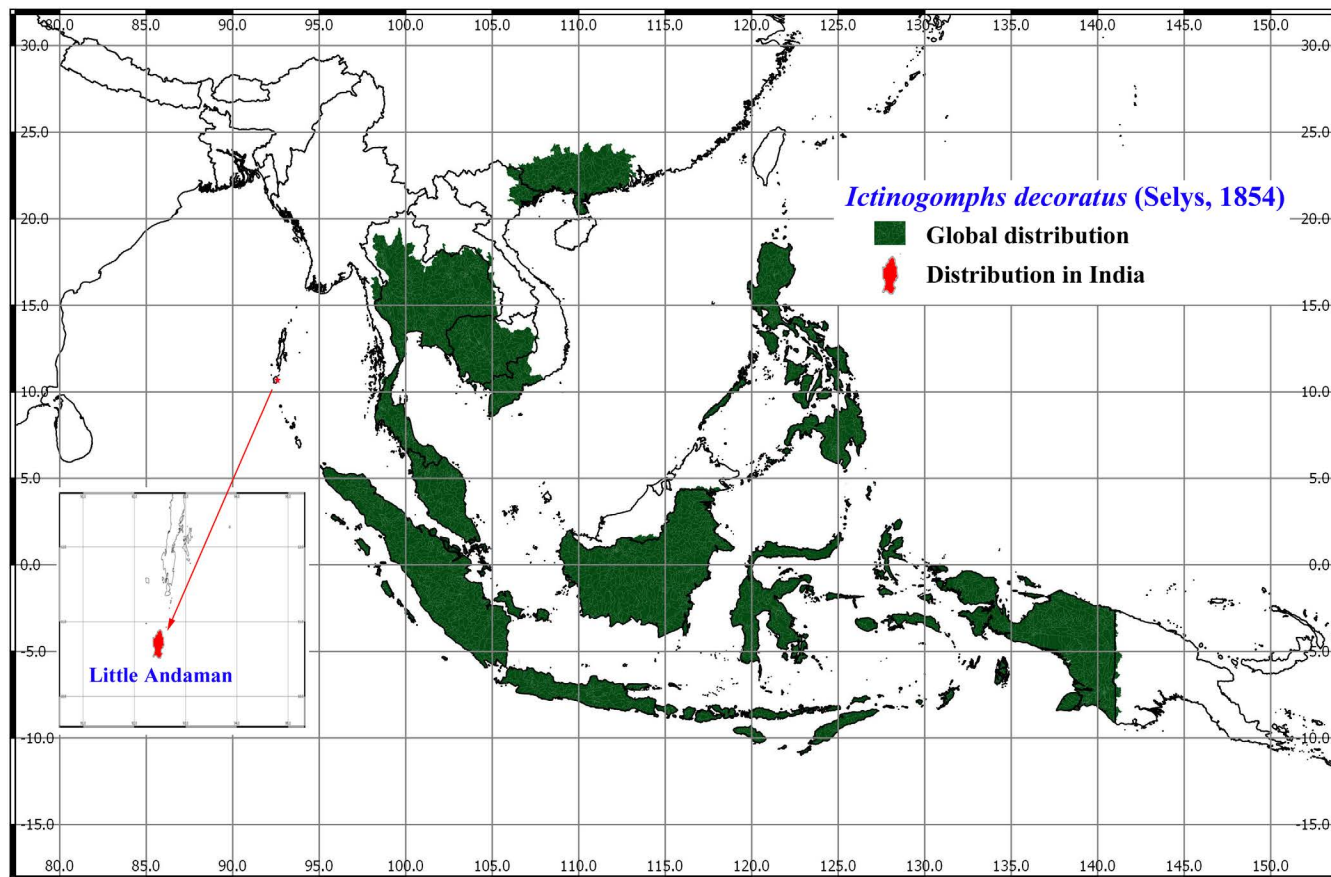
1854. *Ictinus decoratus* Selys, *Bull. Acad. Belg.*, **21**(2): 89
1936. *Ictinogomphus decoratus* Lieftinck, *De Trop. Natuur*, **25**: 103.
1939. *Indictinogomphus decoratus* Fraser, *Proc. R. Ent. Soc. London*, **8**: 21.

Global distribution: Brunei Darussalam, Cambodia, China (Guangxi, Yunnan), Indonesia (Bali, Jawa, Kalimantan, Sumatera), Lao People's Democratic Republic, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Philippines, Singapore, Thailand, Vietnam (Manh, 2011).

IUCN Redlist Status: Least Concern (LC) (Manh, 2011).

Material examined: 1♂, V.K. Pur Nallah (Lat. 10.73260°, Long. 092.56889°), Little Andaman, Andaman and

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Map 1. Global and Indian distribution of *Ictinogomphus decoratus* (Selys, 1854).

Nicobar Islands, 09.iii.2016, Coll. G. Srinivasan. Field photograph of adult male was taken from same locality. The global distribution map (Map-1) was prepared from data provided by Manh (2011).

Diagnostic characters: Abdomen 48mm, Forewing 41mm, Hindwing 40mm, Nodal index: FW 13-23/26-13, HW 14-18/17-14.

The *Ictinogomphus decoratus* is large dragonfly with a wingspan of 13 to 14 cm. This species is heavily built with very distinctive strong greenish yellow bands and spots on its thorax and abdomen. The eyes are widely separated and grayish green in colour. Prothorax black, thorax broadly black marked with greenish yellow bands and spots. Wings transparent, extreme base tinted with brown, pterostigma black and covering 6-7 cells, Primary antenodals 1st & 7th in left fore and hind wing, 1st and 8th in right forewing, 1st and 6th in right hind wing. Abdomen black marked with greenish yellow, base of S3 to S7

marked with yellow, dorsal carina of S8 and S9 black with basal yellow spot on each side. Epiproct black, very long and terminate in a sharp point, paraproct very short.

Ictinogomphus decoratus can be distinguished from widespread *I. rapax* (Rambur, 1842), by a black stripe traversing the lower part of the frons and not expanding upwards at its middle, a humeral stripe represented only by an upper greenish yellow spot, thorax with very broad black stripes on the lateral side and the absence of yellow stripe on the median lateral black band. Dorsal carina of S-8 is completely black and with only basal lateral yellow spot on each side. In *I. rapax*, the black stripe traversing the lower part of the frons and expand upwards at its middle to divide the yellow area into two large triangular spots. In thorax, the humeral stripe is represented by an upper greenish yellow triangular spot and a lower yellow broad streak. A vestige of a third yellow stripe on the median lateral black band is also present but never complete band. The yellow band on S8 is more than half

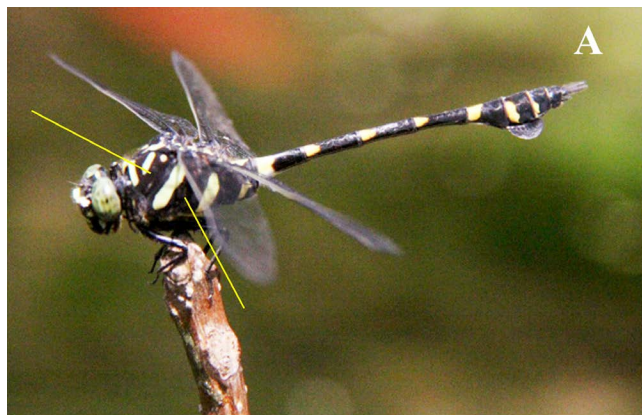


Figure A. *Ictinogomphus decoratus* (Selys, 1854) Adult male.



Figure B. *Ictinogomphus rapax* (Rambur, 1842) Adult male.

of the segment and S9 with lateral basal strip and small apical lateral spot (Fig. A-E).

Discussion

The Odonata fauna of Andaman and Nicobar Islands (Nandy and Babu, 2012), discovery of *I. decoratus* from Little Andaman and other recent addition such as *Nososticta nicobarica* (Rajeshkumar *et al.*, 2017) *Nosoticta nancowra* (Rajeshkumar and Raghunathan, 2018) and *Anax panybeus* (Mitra *et al.*, 2013) from Nicobar highlight that the Odonata fauna of islands are more closely related to south East Asia than the Indian subcontinent. The Andaman and Nicobar group of islands are relatively under explored for Odonata and several islands



Figure C-E. *Ictinogomphus decoratus* (Selys, 1854) C. Head ventral view, D. Secondary genitalia lateral view, E. Anal appendages dorsal view.

remain unexplored largely due to their remoteness and inaccessibility. These recent new discoveries emphasize the importance to detailed explorations to unexplored islands for complete documentation of biodiversity of these tropical islands.

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