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FIRST CONFIRMED RECORD OF *PLATYGOMPHUS DOLABRATUS* SELYS, 1854 (ODONATA: ANISOPTERA) IN BANGLADESH

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Bangladesh is rich with huge biological diversity having enormous areas of forests as well as wetlands including rivers, lakes and ponds, haor, baor beel etc. These diversified water bodies forested areas and climatic conditions shelter many odonate species in the country (Chowdhury and Mohiuddin 1994, Khan 2015a and Habib *et al.* 2016). Odonates are comprised of both dragonfly and damselfly, which is the smallest and oldest amphibious insect group with 6337 species, recorded world-wide (Paulson *et al.* 2021). Until now, a total of 102 species (57 species Anisopteran and 45 species Zygopteran) have recently been described in Bangladesh (Shah and Khan 2020). Additionally, experts believe that more than 150 species of odonates might be found in the country with a possible occurrence of many new species in this territory (Khan 2015 a,b, Habib *et al.* 2016; Khan 2018). For example, the discovery of an unusual gynandromorfic specimen of dragonfly from Bangladesh in 2019 was noteworthy (Shome *et al.* 2019). However, these animal groups are a good ecological indicator of wetland health, important elements of the food chain and controlling mosquito population (Cheshire 2005, Andrew 2009, Khan 2015b).

The dragonfly, *Platygomphus dolabratus* is under Gomphidae family. Gomphidae have only five species (*Ictinogomphus rapax*, *Macrogomphus montanus*, *Macrogomphus robustus*, *Megalogomphus smithii* and *Paragomphus lineatus*) in Bangladesh out of the total 57 documented species of dragonflies in the country (Kalkman *et al.* 2020, Shah and Khan 2020). This is the confirm record of *Platygomphus dolabratus* from Bangladesh with photographic documents. Previously, it was recorded from India and Nepal and Pakistan with vouchers specimen and photographic records (Fig. 1A) (Kalkman *et al.* 2020, Fresher 1934, GBIF 2019, and Anonymous 2020).

An expeditions on odonates was made from March to June 2020 in

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Jamalpur and Dinajpur district, Bangladesh (Fig. 1B). On 21 June 2020, aspecimen of *Platygomphus dolabratus* spotted from a nearby ditch of Jamalpur and collected with an insect net. Other species of dragonflies observed around the ditch (e.g., *Crocothemis servilia, Orthetrum Sabina, Neurothemis fulvia, Neurothemis tullia* and *Brachythemis contaminate*).

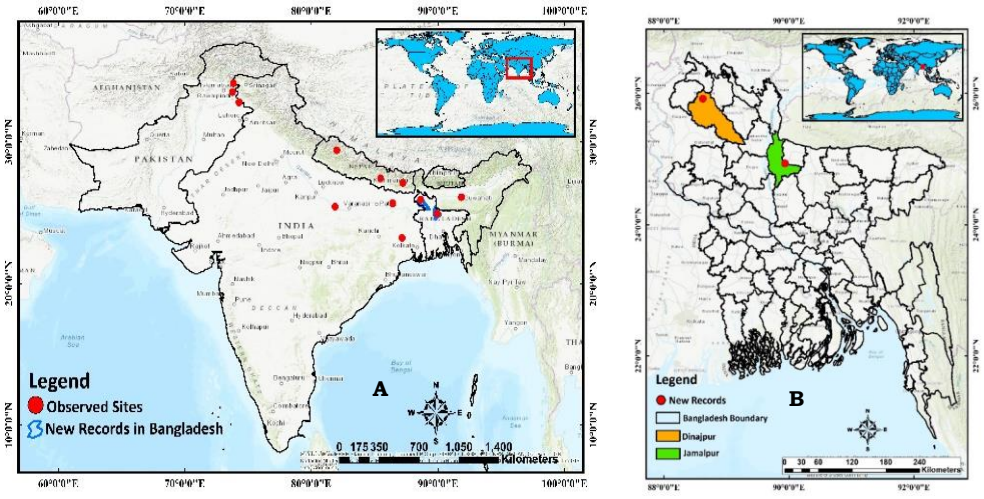

Fig. 1. (A) Global records of *Platygomphus dolabratus* (B) Records from Bangladesh.

On 22nd June 2020, the second individual was sighted and collected from Birganj, Dinajpur. These specimens were observed and identified carefully using a literature available in Fraser (1934). Photographs of the specimens were taken using a SAMSUNG A50 mobile phone camera and deposited the photographic vouchers to Professor Md. Kazi Zaker Husain Museum at the Department of Zoology, University of Dhaka, Bangladesh.

The observed specimen was an adult male of *Platygomphus dolabratus.* This individual had yellowish body colour with black spot. The head region was large in size; eyes were bottle green with yellow face. Vertex was black and a large round yellow spot behind ocelli with yellow frons. Labrum and labium were bright yellow in colour. Pro-thorax was also yellow with black dorsum. Thorax was yellow with black mark present in dorsum without a ventral markings. Hyaline wings were little tinted with yellow occasionally and pterostigma yellow between the black nervures (Fig. 2A). Legs are slender, yellow in colour with black marked. The 5, 6 and 7 segments of abdomen have yellow spots which confluent with the basal yellow rings (Fig. 2B,C). These were the key identification features of *Platygomphus dolabratus* and distinguish this species from *Platygomphus feae* which have entirely black legs and no mid dorsal yellow

spots in 5, 6 and 7 segments of abdomen (Fraser 1934). The anal appendages were yellowish-brown with black border and deeply forked. Lamina were depressed with short, slim anterior hamules while posterior one was much robust, projecting and small like hook was present on its end (Fig. 2D). The observed morphological characters were found to be similar with the description with Fresher 1934.

An anecdotal occurrence of *Platygomphus dolabratus* was found before independence of Bangladesh around 1967 (Alam 1967, Ahmed and Sarker 2008). But, this record did not ensure any vouchers photographs or specimen and exact geographical distribution in Bangladesh. Recent studies on Odonata also shows no distribution record of this species in the country (Kalkman *et al.* 2020). Therefore, this study confirms the first record of *Platygomphus dolabratus* in Bangladesh and provides voucher specimen and photographs. This new record is an important contribution to enrich knowledge on the diversity of the odonate fauna of Bangladesh. This finding also urges the scientific community to enhance research on the ecology, behavior, and other aspects of different species of odonates in the country.

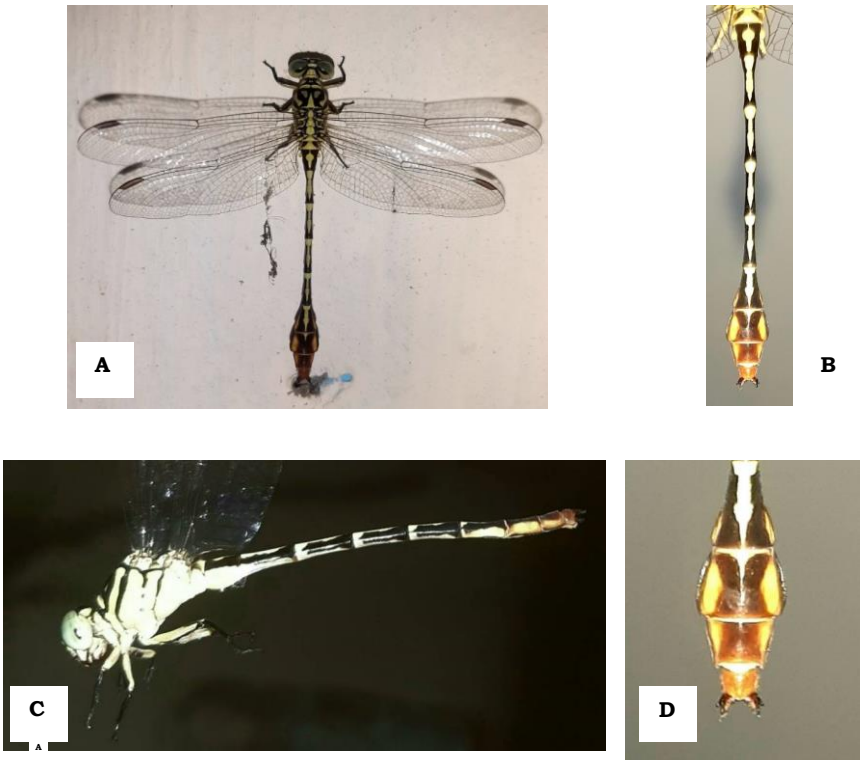

Fig. 2. Morphological features of *Platygomphus dolabratus*. A. Whole body; B. Abdomen; C. Legs; and D. Anal appendages with genitalia (Photos by: A. R. Shome).

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