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New country record of a planthopper (*Pyrops viridirostris*) from Bangladesh

Bangladesh is home to a vast array of floral and faunal species, showcasing amazing biodiversity, including a wide variety of insects. However, the full extent of this diversity remains largely unexplored. In particular, the planthopper diversity of the country has received minimal scientific attention. Most research on planthoppers has focused primarily on species, considered to be agricultural pests (Kar *et al.* 2024), neglecting the broader ecological roles that many of these insects play. This limited focus has left remarkable gaps in our understanding of the overall planthopper diversity of the country, which could hold untapped ecological and economic value.

The beautiful planthoppers, the lanternflies, belong to the family Fulgoridae Latreille, 1807, consisting of 769 species belonging to 142 genera (Flow 2024). *Pyrops* Spinola, 1839 is a genus under Fulgoridae, with 70 described species distributed in Southeast Asia (Flow 2024). Despite their intriguing appearance, the biology and natural history of this genus remain poorly documented on a global scale. In Bangladesh, the planthopper diversity is similarly unexplored, although the country has a rich insect diversity. Since the country's diversity is neglected, only the agriculturally significant pests are usually studied (Hossain *et al.* 2024, Kar *et al.* 2024). To date, three species of the genus *Pyrops*, *P. clavatus* (Westwood, 1839), *P. spinolae* (Westwood, 1842), and *P. lathburii* (Kirby, 1818) have been reported from Bangladesh (Ahmed *et al.* 2008, Constant & Pham 2017). Another species, *P. viridirostris* (Westwood, 1839), is known to occur in Southeast Asian countries but has not yet been recorded from Bangladesh.

During a faunal survey at Madhutila Eco Park (25°12'20"N, 90°09'11"E), a protected area located in the Sherpur district of Bangladesh, a planthopper species was observed. Due to restrictions on specimen collection, the team was unable to capture any physical sample of the specimen. Instead, the planthopper was photographed using a digital camera (Canon 700D). The species was found on a *Lagerstroemia speciosa* (L.) Pers. plant at an elevation of 76.2 m. After documenting the observation, we left the place with minimal disturbance. A subsequent taxonomic analysis was conducted based on the existing relevant literature (Wang *et al.* 2018, Jiaranaaisakul & Constant 2021, Constant & Pham 2022, Jiaranaaisakul *et al.* 2024) to accurately identify the species.

The cephalic process of the observed planthopper was found to be long, slender, and upcurved (Fig. 1). The color of the cephalic process is greenish blue with numerous small white spots. Its forewings, the tegmina, are dark green, adorned with yellow spots bordered by a thin layer of white area. A distinctive "X"-shaped marking appears on each forewing, formed by yellow dots encircled in white. The hind wings are yellow with a black region at the apical margin. The anterior and median legs of the insect are largely black. Based on these morphological features and a comparison with existing literature (Constant & Pham 2022, Jiaranaaisakul *et al.* 2024), the species was identified as *Pyrops viridirostris*.

Order: Hemiptera Linnaeus, 1758

Family: Fulgoridae Latreille, 1807

Pyrops viridirostris (Westwood, 1848)

The species has been previously reported widely in Asia, i.e., from Cambodia, India (Assam),

Malaysia, Myanmar, Thailand, and Vietnam (Flow 2024). The species was not previously recorded in Bangladesh, and according to our understanding, this is the first documentation of the species in Bangladesh. Moreover, this is also the first documented occurrence of a new plant association of the species.

The planthopper diversity is still poorly studied in this country. Few studies have been conducted regarding managing planthoppers, which are destructive agricultural pests (Hossain *et al.* 2023, 2024, Kar *et al.* 2024). As such, this finding highlights the need for extensive field surveys to further explore the unknown diversity of the planthoppers of Bangladesh. Expanding these studies will improve our understanding of this insect group and contribute to better conservation and management strategies for both beneficial and pest species.

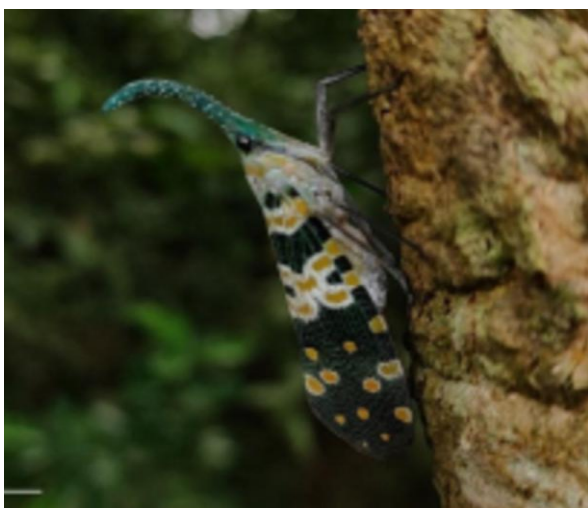


Figure 1. Lateral view of the *Pyrops viridirostris* at Madhutila Eco Park, Sherpur District, Bangladesh

Acknowledgments. We thank the Bangladesh Forest Department for granting permission to conduct a faunal survey in Madhutila Eco Park as part of the Sustainable Forest and Livelihoods (SUFAL) project; colleagues from CEGIS for field assistance; Mick Webb (Natural History Museum, London), Kawin Jiaranaisakul (Kasetsart University, Thailand), and Zhi-Shun Song (Jiangsu Second Normal University, China) for reviewing the manuscript.

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Submitted: 29 Dec 2024, Accepted: 21 Jun 2025

Subject Editor: Mick Webb

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