

## Rupnarayan River Basin : A Promising Area to Support Winter Migration of Birds

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Rupnarayan River basin has been visited by several species of water birds in good numbers every year. Due to growth of a mudflat in recent past a huge congregation of shorebirds are seen along with several records of rare winter migrants and pelagic birds (during cyclone). With the notion that this area is used by the migrating birds as a passage and roosting site during different time of the year, a study was conducted to estimate the waterfowls during past two years. After 50 surveys (100+ sampling hours) covering 20 km stretch of the river, 87 Waterbird species (total 202 bird species) were recorded including Indian Skimmers, Slender Billed Gull, Short-tailed Shearwater, Wedge-tailed Shearwater, Frigatebird etc. It is seen that the greatest number of birds (Large congregations of oriental pratincole and lesser sand plovers in 2020 and 2021) visit this area during early winter, doesn't stay for long and the species composition drastically changes in few days, which suggest that these birds are only using this area as a passage during migration. This stretch of Rupnarayan river (also the habitat for Gangetic Dolphin and Fishing Cat) needs immediate attention for protection as it is vulnerable to growing anthropogenic threats.

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## Understanding Behavior and Microhabitat Preference of Dragonfly Larvae Could Help to Control Insect Vectors in Urban Landscapes

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### Abstract

Odonata larvae are voracious predators and play an important role as bio-control agents for mosquitoes and flies; thus, can be used to combat vector-borne diseases. Hence it is important to understand the larval behavior and know the microhabitat preferences for species of interest under laboratory conditions. Different dragonfly larvae occupy different microhabitats and are known to be classified as claspers, burrowers, sprawlers and hiders according to their concealment behavior. The odonata species composition of any waterbody depends on the number of microhabitats present in it. This study was designed to identify the preferred microhabitats by common dragonfly species and to find out the generalist species that can exploit maximum available niches and can be used to control mosquito populations in-urban lakes or water-tanks if needed. Larvae of two species of family Libellulidae, *Crocothemisservilia* and *Urothemissignata* was studied under laboratory conditions, in aquariums replicating different possible microhabitats of an urban pond ecosystem. Larvae of both species showed a combination of Claspings and Sprawling behavior. They usually spent time securing themselves attached against substrate like submerged vegetation; stayed immobile when disturbed or kept hiding between leaf litter or submerged leaves. Occasionally the larvae foraged around and grabbed prey actively.

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## Introduction of Nylon Mosquito Nets in Traditional Fishing Practice: A Rising Threat to Indigenous Fish Diversity

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### Abstract

Presently increased use of mosquito-nets in fishing practice have caused a drastic change in the traditional fishing gears and are of global concern. Traditional bamboo-stick made Ghuni (Box-trap used for fishing throughout lower Bengal floodplains having slitwidth of e"3mm) is seen to be replaced by Ghuni made up of non-biodegradable nylon Mosquito-nets with smaller mess size (d"3mm). These modern Ghunis are easier to make and cheaper, thus number of Ghuni used by people have also increased than earlier. This study was conducted to identify if there is any significant difference in the number, size and species of fishes and other organisms caught in traditional and mosquito-net Ghuni. 30 samples (24 hours each) by both type of Ghuni keeping other factors constant, indicated that mosquito net Ghuni traps more smaller fishes (high juvenile capture rate), shrimps, juvenile molluscs, crabs and occasionally snakes whereas traditional bamboo-stick Ghuni only traps comparatively bigger fishes and shrimps. Market survey proves people prefers economical mosquito-net Ghuni more, making the traditional bamboo-stick Ghuni obsolete, to expedite the overharvesting of juvenile indigenous shrimps and fishes and other organisms at the breeding grounds hampering the local biodiversity risking the future food security of the community.

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