

First record of exotic alligator gar, *Atractosteus spatula* (Actinopterygii: Lepisosteiformes: Lepisosteidae), from Ganga River system, India: A possible threat to Indigenous riverine fish diversity

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Abstract

A new record of an exotic alligator gar, *Atractosteus spatula* (Lacepede, 1803), from an open wetland of the Ganga River was presented in this paper and discussed along with the environmental parameters. Entry of the exotic fish into the natural system was probably a result of uncontrolled ornamental fish trading. Considering threats of this predatory fish to become invasive and disturb riverine fish diversity, possible ways to avoid such risk have been discussed.

Keywords

alligator gar, exotic fish, Ganga River, wetland

Introduction

Large river basins harbor a significant share of the world's aquatic biodiversity, providing important goods and services to the society, including fisheries. Ganga basin is the largest and most important river basin in India. The wetlands of the Ganga basin are mostly formed as a result of the meandering of the river or sloughs or tectonic depressions receiving huge surface runoff or freshwater from the river. The connection of the wetland to the river promotes aquatic biodiversity, especially a higher abundance of small indigenous fishes (Manna et al. 2018). However, the intrusion of exotic fishes into associated wetland exerts invariable threats upon native riverine fish biodiversity (Singh and Lakra 2006). The

Ganga basin, which supports a wealthy fish diversity of more than 266 fish species (Talwar and Jhingran 1991), has already been invaded by more than 10 species of exotic fishes in almost its entire freshwater stretch (Sarkar et al. 2012) resulting in considerable damage to riverine fish diversity. The entry of exotics into the riverine system has been presumed mainly to have come about due to illegal or unwanted introduction from aquaculture practices or by other anthropogenic activities, including extreme climatic events like floods, etc. (Raj et al. 2021). Besides exotic carps, which have been legally brought for aquaculture enhancement in India, the Ganga River has experienced in recent years the appearance of a few exotic aquarium species like *Gambusia affinis* (Baird et Girard, 1855), *Pterygoplichthys pardalis* (Castelnau, 1855), and